2002-2003

McMASTER UNIVERSITY
Undergraduate Calendar

This Calendar covers the period from September 2002 to August 2003.

The McMaster University Undergraduate Calendar is available in alternate media format. For copies in a format other than print, contact the Centre for Student Development in McMaster University Student Centre, Room B107. The calendar is also available on the Web at: http://www.mcmaster.ca.

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

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

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

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

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

The following is a list of University offices (with the appropriate postal code) and administrative staff members that are most frequently contacted. Other offices and services, with their addresses, telephone numbers, and e-mail 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. 23650; Fax: (905) 524-3550

Student Financial Aid and Scholarships
Director: Elizabeth Seymour, ext. 24528
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 Reservations
Assistant 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)
Associate Vice-President (Student Affairs): TBA
Gilmour Hall, Room 207, L8S 4L8, ext. 27455

School of Graduate Studies
Dean of Graduate Studies: Fred L. Hall
Togo Salmon Hall, Room 111, L8S 4M2, ext. 23679

Centre for Continuing Education
Director: Dale C. Schenk
Downtown Centre, Second Floor, ext. 24321

Alumni Association
Director of Alumni Advancement: Scott Koblyk (until April 12, 2002)
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. 24229

Off-campus Housing
McMaster University Student Centre, Room B112, L8S 4K1, ext. 24096

Hospitality Services
Director: Albert Ng, ext. 24336
Commons Building, Room B101B, L8S 4K1
Mac Express Inquiries: ext. 27448

Centre for Student Development
Team Leader: Marje Marriott
McMaster University Student Centre, Room B107, L8S 4K1, ext. 24711

Services for Students with Disabilities
Programme Coordinator (Disability Specialist): Tim Nolan
Programme Coordinator (Disability Specialist): Marje Marriott
Programme Coordinator (Learning Specialist): Caroline Cayuga
McMaster University Student Centre, Room B107, L8S 4K1, ext. 24711

Career Planning and Employment Centre
Manager: TBA
Gilmour Hall, Room 110, L8S 4L8, ext. 24253

Advice for Overseas and Exchange Students
International Students' Advisor: Cheryl-Ann Jackson
Gilmour Hall, Room 104, L8S 4L8, ext. 24748

Grievances
Secretary of the Senate: Joan Morris
Gilmour Hall, Room 210, L8S 4K1, ext. 24337

Ombuds Office
Ombuds: Shelley Lancaster
McMaster University Student Centre, Room 210, L8S 4K1, ext. 24151; Fax: (905) 529-3208; E-mail: 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 programmes through six Faculties. The extensive activity in research, supported by $110 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 programme. 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 Programme offers B. Arts Sc. and Honours B. Arts Sc. degrees. It is possible to combine the programme leading to the Honours B. Arts Sc. degree with programmes that fulfill the requirements for Honours degrees in a number of different disciplines.

The Michael G. 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 programme in Chemical Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, Engineering Physics, Materials Engineering, Mechanical Engineering and Software Engineering.

Students may register in the Faculty of Engineering to take the five-level Engineering and Management programme, which is offered jointly by the School of Business and Faculty of Engineering, or the five-level Engineering and Society programme.

Beginning in September 2002, a new five-year programme in Chemical Engineering and Bioengineering leading to a Bachelor of Engineering and Biosciences degree will be introduced.

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

The Faculty of Health Sciences has gained an international reputation for its innovative educational programming, and offers, through the School of Medicine, the M.D. programme, and through the School of Nursing, the B.Sc.N. degree programme. 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.) programme is also offered.

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

Bachelor of Science programmes are available in the Faculty of Science at the B.Sc. and B.Sc. Honours levels. Programmes 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, Molecular Biology, Neural Computation, Physical Science, Physics, Psychology and Science.


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 1867 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 University College.

More than 15,000 full-time students attend McMaster University, 1,800 of whom are pursuing advanced degrees offered through the School of Graduate Studies. In addition, over 3,000 part-time students are registered in the Fall/Winter session, from September to April, and 3,500 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 950 members of the University faculty hold doctoral degrees in their areas of specialization. Faculty members are expected to teach both graduate and undergraduate courses and may be involved in the academic counselling of students.

The University's diverse academic programmes are supported by some fine, and even unique, facilities. The University Library is a member of the Association of Research Libraries and contains 1.9 million volumes, and has subscriptions to over 25,500 periodical titles, 8,800 of which are currently subscribed. The Library has an extensive special collections section which includes the Bertrand Russell Archives, 18th Century materials and major Canadian collections. Facilities for programmes 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 six undergraduate computing labs on campus which contain Pentium computers, as well as numerous departmental computing clusters containing a mixture of PCs and NT workstations.

Students in residence have convenient access to the McMaster network and the internet from their rooms.

The recreation, fitness and intramural programmes offer more than 30 different sports in which over 8,000 students participate.

The Interuniversity Athletic Programme features 33 varsity sport opportunities—18 for men and 15 for women. The department also offers a full range of instructional and outdoor education programmes throughout the calendar year. The athletic facilities include a 50-metre swimming pool, an eight-lane, 400-metre, all-weather track, eight hard surface all-weather tennis courts, and a state-of-the-art fitness and conditioning facility known as the Pulse.

McMaster's campus, which is restricted to pedestrian traffic, is adjacent to the Royal Botanical Gardens at the western end of Lake Ontario. On-campus co-educational and single-sex residences are available for approximately 2,780 students.

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

The academic year is divided into sessions, as shown on the chart below.

Most undergraduate students register for the **Fall/Winter Session**, which runs from September to April. The **Spring/Summer Session** starts at the beginning of May and ends in early-August.

### The 2002-2003 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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</tr>
</thead>
<tbody>
<tr>
<td><strong>FALL/WINTER</strong></td>
<td>Term 1</td>
<td>5</td>
<td>17</td>
<td>6</td>
<td>28</td>
<td>28</td>
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<td></td>
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<td></td>
<td>Term 2</td>
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<td>Term 3</td>
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<tr>
<td><strong>SPRING/SUMMER</strong></td>
<td>Term 1</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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</tbody>
</table>

### CONVOCATIONS

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

- **Friday, July 19, 2002**
  - Last day to file a Graduation Information Card and declare a minor for Fall 2002 Convocations
- **Friday, November 8, 2002**
  - Fall 2002 Convocations (all Faculties)
- **Friday, February 7, 2003**
  - Last day to change Programmes for Spring 2003 Convocations
- **Friday, February 7, 2003**
  - Last day to file a Graduation Information Card and declare a minor for Spring 2003 Convocations
- **Friday, May 16, 2003**
  - Health Sciences Convocation
- **Wednesday, June 4 to Friday, June 6, 2003**
  - Spring Convocations
- **Friday, July 25, 2003**
  - Last day to file a Graduation Information Card and declare a minor for Fall 2003 Convocations
- **Friday, November 14, 2003**
  - Fall 2003 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 programme at any level.

The University will not be liable for any interruption in, or cancellation of, any academic activities as set forth in this Calendar and related information where such interruption is caused by fire, strike, lock-out, inability to procure materials or trades, restrictive laws or governmental regulations, actions taken by the faculty, staff or students of the University or by others, civil unrest or disobedience, or any other cause of any kind beyond the reasonable control of the University.

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

### University Policies

Acceptance of the University’s policies, and changes that may be approved from time to time by the Board of Governors and the Senate, is a condition of being accepted in any capacity in any University-controlled laboratory or programme. This includes, but is not limited to, the McMaster University Intellectual Property Policy (http://www.mcmaster.ca/intelprop).
Sessional Dates for 2002-2003
The following schedule applies to both full- and part-time students.

Fall/Winter Session 2002-2003

<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>Thursday, September 5</td>
<td>To Be Announced</td>
</tr>
<tr>
<td>Classes begin</td>
<td>Friday, September 13</td>
<td>Friday, January 6</td>
</tr>
<tr>
<td>Last day for registration and adding courses</td>
<td>Monday, October 14</td>
<td>Friday, January 10</td>
</tr>
<tr>
<td>Thanksgiving Day: No classes</td>
<td>Friday, November 8</td>
<td>Friday, February 14</td>
</tr>
<tr>
<td>Last day for withdrawal without failure by default</td>
<td>—</td>
<td>Monday, February 17</td>
</tr>
<tr>
<td>Mid-term recess</td>
<td>—</td>
<td>to Saturday, February 22</td>
</tr>
<tr>
<td>Good Friday: No classes</td>
<td>Tuesday, November 26</td>
<td>Friday, April 18</td>
</tr>
<tr>
<td>Test and Examination ban: No tests or examination may be held</td>
<td>to Tuesday, December 3</td>
<td>Wednesday, April 2</td>
</tr>
<tr>
<td>Classes end</td>
<td>Monday, December 2</td>
<td>to Wednesday, April 9</td>
</tr>
<tr>
<td>Mid-Session Tests (Level 1)</td>
<td>—</td>
<td>Wednesday, December 4</td>
</tr>
<tr>
<td>Final Examinations</td>
<td>Wednesday, December 4</td>
<td>to Tuesday, December 17</td>
</tr>
<tr>
<td>Last day to confirm intent to write deferred examinations</td>
<td>to Tuesday, December 17</td>
<td>Thursday, April 10</td>
</tr>
<tr>
<td>Deferred Examinations</td>
<td>Friday, January 31</td>
<td>to Monday, April 28</td>
</tr>
<tr>
<td></td>
<td>Thursday, April 10</td>
<td>Monday, July 14</td>
</tr>
<tr>
<td></td>
<td>to Monday, April 28</td>
<td>to Thursday, July 17</td>
</tr>
</tbody>
</table>

Spring/Summer Session 2003

<table>
<thead>
<tr>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classes begin</td>
<td>Monday, May 5</td>
<td>Monday, June 23</td>
</tr>
<tr>
<td>Last day for registration and changes in registration</td>
<td>Friday, May 9</td>
<td>Friday, June 27</td>
</tr>
<tr>
<td>Victoria Day: No classes</td>
<td>Monday, May 19</td>
<td></td>
</tr>
<tr>
<td>Last day for withdrawal from a course without failure by default</td>
<td>Wednesday, June 4</td>
<td>Wednesday, July 23</td>
</tr>
<tr>
<td>Canada Day: No classes</td>
<td>—</td>
<td>Tuesday, July 1</td>
</tr>
<tr>
<td>Civic Holiday: No classes</td>
<td>—</td>
<td>Monday, August 4</td>
</tr>
<tr>
<td>Classes end</td>
<td>Friday, June 20</td>
<td>Friday, August 8</td>
</tr>
<tr>
<td>Examinations</td>
<td>—</td>
<td>During class time, as arranged by instructor</td>
</tr>
<tr>
<td>Last day to confirm intent to write deferred examinations</td>
<td>Friday, October 17</td>
<td>Friday, October 17</td>
</tr>
<tr>
<td>Deferred Examinations</td>
<td>December 2003 Examination period</td>
<td>December 2003 Examination period</td>
</tr>
</tbody>
</table>
### DEGREES, PROGRAMMES AND COURSES

#### DEGREES AND PROGRAMMES
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><strong>ARTS &amp; SCIENCE PROGRAMME</strong></td>
<td></td>
</tr>
<tr>
<td>B.A. Arts Sc.</td>
<td>3</td>
</tr>
<tr>
<td>B.A. Arts Sc. (Honours)*</td>
<td>4</td>
</tr>
<tr>
<td>* (With the exception of the Combined Honours degrees in Biology, Chemistry and Physics which require five years of study.)</td>
<td></td>
</tr>
<tr>
<td><strong>SCHOOL OF BUSINESS</strong></td>
<td></td>
</tr>
<tr>
<td>B.Com.</td>
<td>4</td>
</tr>
<tr>
<td><strong>FACULTY OF ENGINEERING</strong></td>
<td></td>
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<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>1</td>
</tr>
<tr>
<td><strong>FACULTY OF HEALTH SCIENCES</strong></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.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. (Nurse Practitioner Stream)</td>
<td>2</td>
</tr>
<tr>
<td>M.D. (Doctor of Medicine)</td>
<td>3</td>
</tr>
<tr>
<td>* (In these programmes, an academic year extends beyond the regular Fall/Winter session.)</td>
<td></td>
</tr>
<tr>
<td><strong>FACULTY OF HUMANITIES</strong></td>
<td></td>
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<tr>
<td>B.A.</td>
<td>3</td>
</tr>
<tr>
<td>B.A. (Honours)</td>
<td>4</td>
</tr>
<tr>
<td>B.A./B.S.W.</td>
<td>4</td>
</tr>
<tr>
<td><strong>FACULTY OF SCIENCE</strong></td>
<td></td>
</tr>
<tr>
<td>B.Sc.</td>
<td>3</td>
</tr>
<tr>
<td>B.Sc. (Honours)</td>
<td>4</td>
</tr>
<tr>
<td>B.Sc. (Honours)</td>
<td>5</td>
</tr>
<tr>
<td>* (These are Co-op programmes.)</td>
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</tr>
<tr>
<td><strong>FACULTY OF SOCIAL SCIENCES</strong></td>
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<tr>
<td>B.A.</td>
<td>3</td>
</tr>
<tr>
<td>B.A. (Honours)</td>
<td>4</td>
</tr>
<tr>
<td>B.Kin. Major</td>
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</tr>
<tr>
<td>B.Kin. (Honours)</td>
<td>4</td>
</tr>
<tr>
<td>B.A./B.S.W.</td>
<td>4</td>
</tr>
<tr>
<td>B.S.W.</td>
<td>2</td>
</tr>
<tr>
<td>* (Follows completion of prior undergraduate degree)</td>
<td></td>
</tr>
</tbody>
</table>

#### Second Undergraduate Degree
Provision exists for a university graduate to take a second bachelor's degree. This programme is normally shortened (except for the B.H.Sc. Midwifery Education programme). An application for admission is necessary for entry to a second degree programme, and it should be submitted by the application deadlines. (See Application Procedures and General Academic Regulations sections of this Calendar.)

#### Combined Programmes
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 (Studies).

### ELECTIVE COURSES AVAILABLE TO LEVEL I STUDENTS
The following is a list of courses available as Electives to Level I students, provided that the students have met any prerequisites, and subject to enrolment limitations. Normally, students may select up to six units in any particular subject (excluding Mathematics, of which up to 12 units may be taken). A brief description of each course can be found under the appropriate Department within the Course Listings section in this Calendar.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ANTHROP 1A03, 1B03, 1Z03</td>
<td>Anthropology</td>
</tr>
<tr>
<td>ART 2G03, 2H03</td>
<td>Art History</td>
</tr>
<tr>
<td>ART HIST 1A03, 1A3</td>
<td>Art History</td>
</tr>
<tr>
<td>ASTRON 1F03</td>
<td>Astronomy</td>
</tr>
<tr>
<td>BIOLOGY 1A03, 1A3, 1I03, 1K03</td>
<td>Biology</td>
</tr>
<tr>
<td>CATAIN 2A03, 2A3, 2B03</td>
<td>Canoeing</td>
</tr>
<tr>
<td>CAYUGA 1I03</td>
<td>Cayuga (Iroquois) Language</td>
</tr>
<tr>
<td>CHEM 1A03, 1A3, 1I03</td>
<td>Chemistry</td>
</tr>
<tr>
<td>CHINESE 2A03, 2A3</td>
<td>Chinese</td>
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<td>MOCHAWK 1I03</td>
<td>Mohawk (Iroquois) Language</td>
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<td>OJIBWE 1C03</td>
<td>Ojibwe (Chippewa) Language</td>
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<td>STATS 1A03, 1C03, 1I03</td>
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<td>THTF&amp;FLM 1A03, 1B03</td>
<td>Theatre and Film Studies</td>
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<tr>
<td>WOMEN ST 1A06</td>
<td>Women's Studies</td>
</tr>
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</table>

* Not acceptable for the six-unit complementary studies elective required in Engineering I.

** Note: Engineering I students interested in entering the Engineering and Management programme must take ECON 1B03 as one of their complementary studies electives.

+ These courses may not be taken for credit by students in Science I.
### Upper-Level Courses Available to All Students

<table>
<thead>
<tr>
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### Upper-Level Courses Registered in Level II or Above in Any Programme

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### Upper-Level Courses Registered in Level III or Above of Any Programme

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### Upper-Level Courses Available to Students

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<td>SUBJECT</td>
<td>BACHELOR'S DEGREE</td>
<td>HONOURS DEGREE</td>
<td>COMBINED HONOURS</td>
</tr>
<tr>
<td>---------</td>
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</tbody>
</table>

* The University also offers Thematic Areas of Study and a large number of Minor programmes. 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 programme 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 programme at McMaster, subject to the applicant having met the minimum requirements prescribed by the University.

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

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

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

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

Course Numbers (e.g., 1A03) can be interpreted as follows: the initial digit indicates the Level of the course; the letter(s) in the middle identifies the specific 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 programme of study (e.g., Bachelor of Arts, Bachelor of Kinesiology, Master of Science, Doctor of Philosophy).

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

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

Extra Courses are those courses designated as "Extra", which are not included as units toward completion of a student's programme. The grades obtained in such courses are not included as units toward completion of a student's programme or degree. Will 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 programmes 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 programme (e.g., Astrophysics, Level II: 31 units). If the Calendar does not specify the programme requirements by individual levels, divide the total units for all levels by the number of levels, discarding the remainder. Full-time students must carry a full load of McMaster courses to be eligible for Undergraduate In-Course Academic Awards. A full load is not required to be eligible for gradand awards.

Full-load Average (FA) is the weighted average used for Undergraduate In-Course Academic Awards. It 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 programmes 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 programme.

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

Mature Student is at least 21 years old prior to his or her first day 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 programmes. 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 programme 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.

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

Programme Probation, which may be assigned to students whose CA falls within the probationary band below the minimum CA required to remain in the programme in good standing, will allow a student to continue in his/her programme 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 programme 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 programme.

Result of Session is the statement of the academic standing of a student at the end of a reviewing period. May continue in programme, 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 programme 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 programme of study and selected courses.

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

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

Weighted Average is calculated by multiplying the grade points achieved in each course by the number of units in each course, 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 programme.
ADMISSION REQUIREMENTS

ENGLISH LANGUAGE PROFICIENCY

Each student granted admission to McMaster must be proficient in the use of the English language. Students will be expected to speak and write clearly and correctly in English.

If your first language is not English, you must have:

1. achieved a score of at least 220 on the computerized test (or 550 on TOEFL), or the equivalent on other recognized tests, or
2. achieved a score between 197 and 219 (530-559) on TOEFL, or the equivalent on other recognized tests and EITHER a score of at least 4.0 on the TWE (Test of Written English) OR present other evidence of English language proficiency such as English courses, ESL programmes, letters of support from guidance counsellors, etc., or
3. attended a Canadian educational institution for at least three years, or
4. resided in an English speaking country for at least four years.

It is your responsibility to make all arrangements regarding the writing of the TOEFL test and to have the official score report forwarded to the Admissions Office.

ADMISSION FROM ONTARIO SECONDARY SCHOOLS

Note:
The following abbreviations or acronyms are used throughout this section. For your convenience they are defined as follows:

OSIS Ontario Schools, Intermediate and Senior Divisions (Grades 7-12/OACs): Programme and Diploma requirements. (former curriculum)

OSS Ontario Secondary Schools, Grades 9-12: Programme and Diploma requirements. (new curriculum)

OSSD Ontario Secondary School Diploma, awarded to graduates of the OSIS and the OSS systems.

OAC Ontario Academic Course - Part of the OSIS system, required for university admission

U course University Preparation Course - Part of the OSS system, required for university admission

U/C course University/College Preparation Course - Part of the OSS system, required for university admission

OUAC Ontario Universities' Application Centre

General Requirements
(For All Level I Programmes):

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

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

1. An OSSD with acceptable standing: AND
2. An overall average in completed OACs (or Grade 12 U and U/C courses), which meets or exceeds the minimum set by the specific programme to which you applied: AND
3. Satisfactory completion of 6 OACs (or Grade 12 U and U/C courses) including the subject requirements for your chosen programme.

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

Planning for Admission and Ontario Secondary School Reform

With the implementation of secondary school reform and the phasing out of OAC courses, it has been necessary for the university to re-define its admission requirements relative to the Grade 12 U and U/C courses. We are aware that some secondary school students, during the early stages of the transition, may present courses from both the former (OSIS) and the new (OSS) diploma programmes. McMaster is committed to ensuring that all applicants shall be considered fairly. Therefore, in the sections below you will find statements and guidelines regarding admission requirements for both the former OSIS and new OSS programmes.

Supplementary Application Forms and Personal History

Certain Level I programmes 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 mailed directly to applicants in April if they do not receive an offer of admission. Forms must be completed by a deadline date which is specified on the form. Normally, these forms are reviewed by Faculty admission committees to aid in making decisions regarding applicants who are approximately 3% below the cutoffs in May.

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

Early Admission from Ontario Secondary Schools

Early conditional admission is granted annually beginning in mid-April to qualified applicants, depending on your academic standing at that time. Early conditional admission is based on:

For applicants following the OSIS curriculum:

1. six appropriate midterm/interim OAC grades, OR
2. a combination of at least three final OAC grades and grade 11/12 advanced grades PLUS enrolment in the appropriate additional three OAC courses.

For applicants following the new OSS curriculum:

1. six appropriate midterm/interim Grade 12 U and U/C grades, OR
2. at least three final Grade 12 U and U/C grades combined with Grade 11 U and U/C grades PLUS enrolment in the appropriate additional three Grade 12 U and U/C courses.

If you do not receive an offer of admission in April, you will automatically be reassessed for admission after additional OAC (or Grade 12 U and U/C) grades are received from your secondary school in May.

Admission offers made in May will be based on updated OAC (or Grade 12 U and U/C) grades and information you may have provided on a supplementary application form which will be mailed directly to you in April.

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 Programmes) 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 programme; OR
2. If you do not meet the minimum OSSD; OR
3. If you do not complete six OACs (or Grade 12 U and U/C courses) including all required subjects; OR
4. If you do not respond to the OUAC within the response period indicated on your offer letter.
Minimum Final Average

All secondary school applicants who receive a conditional offer of admission on interim grades will be required to achieve overall averages on final grades no more than 5% (or its equivalent), lower than the minimum average established for conditional offers in that programme.

Applicants whose final averages fall below this level (or its equivalent) or whose final overall averages fall below 70%, will have their offers of admission and/or registrations rescinded.

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

Final Admission from
Ontario Secondary Schools

If you fulfill the requirements for your OSSD, including the subject requirements for your chosen programme by the end of February, you may be granted an offer of Final Admission prior to April.

If you do not receive a conditional offer of admission by June 6, you may still be considered for final admission, once final marks are received, depending on availability of space in your chosen programme.

Deferral of Admission for
Ontario Secondary School Students

Students who receive both an offer of scholarship and an offer of admission may defer their entry for one year. Otherwise, McMaster does not normally grant a deferral of an admission offer unless special circumstances exist. Each case is evaluated on its own merits. All requests for deferral of both admission and scholarship should be made in writing to the Admissions Office at McMaster by September 1, 2002, citing the reasons for the request.

Normally, decisions regarding deferral requests are not made until early August, after the receipt of all final grades.

Programme Transfer After Admission

If you are admitted to one programme 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 programme. Contact the Admissions Office to request a programme transfer.

SUBJECT REQUIREMENTS FOR
SPECIFIC LEVEL I PROGRAMMES

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


ARTS AND SCIENCE I

You are required to submit a completed supplementary application. 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 OAC requirements under the OSS curriculum:

1. One of OAC English I, OAC English II or OAC English III
2. OAC Calculus
3. Completion of additional OACs to total six credits. At least three of the additional OACs must be selected from: Algebra and Geometry, Biology, Chemistry, English, Finite Mathematics, French, Geography, History, Music, other languages, and Physics.

The following are the minimum Grade 12 U and U/C requirements under the OSS curriculum:

1. English U
2. Advanced Functions and Introductory Calculus U
3. Completion of additional U or U/C courses to total six credits.

At least three of the additional U or U/C courses must be selected from: Geometry and Discrete Mathematics, Biology, Chemistry, English, Mathematics of Data Management, French, Geography, History, Music, other languages, and Physics.

BUSINESS

The following are the minimum OAC requirements under the OSS curriculum:

1. One of OAC English I, OAC English II or OAC English III
2. OAC Calculus
3. One of OAC Algebra and Geometry or OAC Finite Mathematics
4. Completion of additional OACs to total six credits.

The following are the minimum Grade 12 U and U/C requirements under the OSS curriculum:

1. English U
2. Advanced Functions and Introductory Calculus U
3. One of OAC Algebra and Geometry or OAC Finite Mathematics
4. OAC Chemistry
5. OAC Physics
6. Completion of one additional OAC to total six credits.

In recent years, an average in the high-70s or 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.

ENGINEERING

The following are the minimum OAC requirements under the OSS curriculum:

1. One of OAC English I, OAC English II or OAC English III
2. OAC Calculus
3. OAC Algebra and Geometry
4. OAC Calculus
5. OAC Physics
6. Completion of one additional Grade 12 U or U/C course to total six credits.

A minimum overall average in the high 70s to low 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

The following are the minimum OAC requirements under the OSS curriculum:

1. One of OAC English I, OAC English II or OAC English III
2. OAC Biology
3. OAC Chemistry
4. OAC Calculus
5. One OAC from Social Sciences (Geography, History, Law, Psychology, Sociology) or Humanities (Art, Drama, English, French, Music, other languages)
6. Completion of additional OAC to total six credits.

The following are the minimum Grade 12 U and U/C requirements under the OSS curriculum:

1. English U
2. Biology U
3. Chemistry U
4. Advanced Functions and Introductory Calculus U
5. One Grade 12 U course from Social Sciences (Geography, History, Law, Psychology, Sociology) or Humanities (Art, Drama, English, French, Music, other languages)
6. Completion of additional U or U/C courses to total six credits.

The selection method is by consideration of academic qualifications (minimum overall average in the mid 80s) and a mandatory Supplementary Application.
### Ontario Secondary School Course Equivalents for Students from Other Canadian Provinces

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<td>English 405 Two Credits</td>
<td>English 0035</td>
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<td>Calculus 12 (LD) (Locally Developed)</td>
<td>Math 31</td>
<td>Calculus 30</td>
<td>Calculus 45A and Adv Math 45A</td>
<td>Calculus I and II</td>
<td>Pre-Calculus Math 12, Advanced Math 12 or Calculus 12</td>
<td>Calculus 120</td>
<td>Math 611A (previously Advanced Math 621 - Locally Developed)</td>
<td>Math 4225 (AP) or 3105</td>
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<td>Math 12</td>
<td>Math 30</td>
<td>Math 30 B and C</td>
<td>Math 405</td>
<td>Linear Algebra I</td>
<td>Math 12 (Academic)</td>
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<td>Math 3200 or 3201</td>
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<td>Physics</td>
<td>Physics 12</td>
<td>Physics 30</td>
<td>Physics 30</td>
<td>Physics 405</td>
<td>2 Physics courses coded 203</td>
<td>Physics 12</td>
<td>Physics 121 or 122</td>
<td>Physics 621</td>
<td>Physics 3204</td>
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<td>Biology</td>
<td>Biology 12</td>
<td>Biology 30</td>
<td>Biology 30</td>
<td>Biology 405</td>
<td>Biology 401</td>
<td>Biology 12</td>
<td>Biology 121 or 122</td>
<td>Biology 621</td>
<td>Biology 3201</td>
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</tbody>
</table>

* Topics related to Finite Math are found in several Math courses.

+ Applicants to Engineering I without Calculus at the time of application will be considered conditionally, providing an appropriate Calculus course is completed prior to September registration.

++ Six Grade 12 credits numbered 60-65 may be substituted

### HUMANITIES I (0700)

The following are the minimum OAC requirements under the OSIS curriculum:

1. One of OAC English I, OAC anglais I or OAC anglais II
2. Completion of additional OACs to total six credits.

The following are the minimum Grade 12 U and U/C requirements under the OSS curriculum:

1. English U
2. Completion of additional U or U/C courses to total six credits.

In recent years, an average in the mid-70s 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.

The Faculty of Humanities strongly recommends that you select at least one OAC (or Grade 12 U or U/C course) from Humanities subjects (Art, Drama, English, French, francais, other languages, History and Music) in addition to Requirement 1 above.

ART 1F06: The prerequisite for ART 1F06 requires permission of the department based on a required portfolio interview. If you intend to take ART 1F06 which is required for entrance into any Honours Art programme, you must make an appointment with the department for a portfolio interview in February/March. The portfolio should contain a variety of original work in different media including work derived from both first-hand observation and the imagination. Aptitude in art and academic ability are both considered in the selection process. In exceptional circumstances, in which distance does not allow for an interview, portfolios may be submitted in the form of colour slides or photographs. Late applications will be considered subject to space availability and merit after the first allocations have been confirmed in June. Acceptance into ART 1F06 is contingent upon receiving written confirmation from the School of Art, Drama and Music. Please use the MHA OUAC Code to ensure proper consideration of your application.
KINESIOLOGY  (0308)
Students must apply for admission to Level I. Students considering entry into the B.Sc. stream in Kinesiology in Level II are strongly urged to carefully review the course requirements for entry to Science I.

The following are the minimum OAC requirements under the OSIS curriculum:
1. One of OAC English I, OAC anglais I or OAC anglais II
2. One of OAC Algebra and Geometry, OAC Calculus or OAC Finite Mathematics
3. Completion of additional OACs to total six credits

The following are the minimum Grade 12 U and U/C requirements under the OSS curriculum:
1. English U
2. One of Geometry and Discrete Mathematics U or Advanced Functions and Introductory Calculus U
3. Completion of additional U or U/C 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:
1) It is strongly recommended that one OAC (Grade 12 U course) in Biology, Chemistry or Physics be included in the applicant's subjects.
2) Completion of a Supplementary Application is recommended for those students whose average is near the cut-off.
3) Please see Level I Science courses for specific Ontario Secondary School prerequisites.
4) Effective September 2003, admission to Kinesiology I will require satisfactory completion of OAC Biology or Biology U.

MATHMATICS AND STATISTICS  (0320)

The following are the minimum OAC requirements under the OSIS curriculum:
1. One of OAC English I, OAC anglais I or OAC anglais II
2. OAC Calculus
3. One of OAC Algebra and Geometry, or OAC Finite Mathematics
4. Completion of three additional OACs to total six credits
5. An average acceptable to the Faculty in the best six OAC credits (which must include the three OACs specified in points 1, 2 and 3 above)

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

It is strongly recommended that OAC Algebra and Geometry (or Geometry and Discrete Mathematics U) be completed as the second math.

MIDWIFERY  (6501)
As places in the Midwifery programme are very limited, the admission process is competitive. For Ontario Secondary School applicants only, application forms are due by February 1. For Midwifery application including a personal letter is due March 15. For non-Ontario Secondary School applicants a Midwifery application including a personal letter are required and must be received at McMaster by February 1. No exceptions will be made.

The following are the minimum OAC requirements under the OSIS curriculum:
1. One of OAC English, OAC anglais I or OAC anglais II
2. One of OAC Biology or OAC Chemistry (both are recommended)
3. An OAC in Social Science (History, Sociology, Psychology, Geography, Law)
4. Completion of additional OACs to total six credits
5. 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 OACs including the required courses.

MUSIC  (0370)
The academic requirements are the same as for Humanities I. In addition, applicants to Music I or to the B.A. in Music must successfully complete a music audition/examination consisting of:
1. Demonstration of technique (a level equivalent at least honours standing in Grade 8 of the Royal Conservatory of Music)
2. Performance (approximately 20 minutes duration) of two or three varied pieces of your choice (approximately Grade 8 honours level), including at least one from the 20th century
3. Ear test appropriate to the Grade 8 performance level
4. Written examination on rudiments of theory (Grade 2 level)
5. Interview
Auditions take place between February and April. You must make arrangements with the School of the Arts for your audition.

NURSING  (6390)
Students interested in a McMaster (BScN) Nursing degree have three location options: McMaster University, Mohawk College or Conestoga College. Each of the three sites will offer the 4-year programme which uses the problem-based learning and small group tutorial educational model. For general information refer to the Collaborative B.Sc.N. (D) Stream references throughout the School of Nursing in the Faculty of Health Sciences section of the Calendar. For application instructions see the Application Procedures section of the Calendar.

The following are the minimum OAC requirements under the OSIS curriculum:
1. One of OAC English I, OAC anglais I or OAC anglais II
2. One of OAC Calculus, OAC Algebra and Geometry or OAC Finite Mathematics
3. Two of OAC Biology, OAC Chemistry or OAC Physics
4. Two additional OACs to total six credits

The following are the minimum Grade 12 U and U/C requirements under the OSS curriculum:
1. English U
2. One of Advanced Functions and Introductory Calculus U, Geometry and Discrete Mathematics U or Mathematics of Data Management U
3. Two of Biology U, Chemistry U or Physics U
4. Two additional U or U/C courses to total six credits

The admission average will be calculated on the best six OAC (Grade 12 U and U/C) subjects, including the four required subjects. In recent years, an average in the high 70s 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: You must apply to the programme within two years of completion of the Ontario Secondary School requirements.

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 programme.

SCIENCE  (0710)
The following are the minimum OAC requirements under the OSIS curriculum:
1. One of OAC English I, OAC anglais I or OAC anglais II
2. OAC Calculus
3. Two of OAC Algebra and Geometry, OAC Biology, OAC Chemistry or OAC Physics
4. Completion of two additional OACs to total six credits
5. An average acceptable to the Faculty in the best six OAC credits (which must include the four OACs specified in points 1, 2 and 3 above)
ADMISSION REQUIREMENTS

The following are the minimum Grade 12 U and U/C requirements under the OSS curriculum:
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 U/C courses to total six credits
5. An average acceptable to the Faculty in the best six credits (which must include the four U courses specified in points 1, 2 and 3 above)

In recent years, an average in the low 70s 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: OAC Finite Mathematics (or Mathematics of Data Management U) is recommended for students interested in the Life Sciences. OAC Algebra and Geometry (or Geometry and Discrete Mathematics U) is recommended for students proceeding to the Mathematical or Physical Sciences.

SPECIAL SCIENCES (0720)
The following are the minimum OAC requirements under the OSS curriculum:
1. One of OAC English I, OAC English II or OAC English III
2. Completion of all six credits in one OAC subject

The following are the minimum Grade 12 U and U/C requirements under the OSS curriculum:
1. English U
2. Completion of additional U or U/C courses to total six credits

Although the stated minimum is 70%, in recent years, an average in the mid-high 70s 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.

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

ADMISSION WITH OTHER QUALIFICATIONS

A. Admission from Other Canadian Provinces

McMaster welcomes applications from other provinces and territories. Applicants are required to meet the following minimum requirements:
• Quebec - CEGEP (minimum one year)
• All other Canadian provinces - Grade 12 Diploma

Satisfactory completion of the specified subject requirements for the programme to which you applied is also required. Please refer to the Ontario Secondary School Course Equivalents Chart in this section for more details.

B. Admission from Other Countries

McMaster welcomes applications from international students. See the admission requirements for applicants from selected countries below. Applicants should contact the Admissions Office for information on how to obtain an application form.

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 programmes. Clear notarized photocopies of certificates in a language other than English should be accompanied by notarized English translations. Clear photocopies of English language certificates must be notarized.

You are strongly advised not to come to the University until you have been informed of your acceptance.

• General Certificate of Education

Applicants from the General Certificate of Education system require:
1. Five GCE subjects at least two of which must be at the Advanced Level;
2. Advanced Level subjects appropriate for your chosen programme, (refer to Subject Requirements for Specific Level I Programmes in this section). For Science and Engineering programmes, 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 Advanced Level subjects. Some programmes may 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.

• Hong Kong

Applicants from Hong Kong must meet the Hong Kong Advanced Level Examinations and the Hong Kong Certificate of Education or the GCE requirements as listed above.

• International Baccalaureate Diploma

Applicants who have a complete International Baccalaureate Diploma will be considered for admission to Level I, provided the completed diploma programme includes the subject requirements of the programme desired. An overall minimum score of 28 must be achieved in order to be eligible for admission. Some programmes will be included in the overall score. Some programmes require a higher score than the minimum for admission.

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

• Advanced Placement Courses

Applicants who have completed Advanced Placement Courses will be considered for admission to a Level I programme.

• United States of America

Applicants from the United States of America must satisfactorily complete a secondary school diploma with an overall average of 80% in the Grade 12 programme of an accredited American high school. Alternatively, applicants may qualify for admission by completing one year of college-level work with standing acceptable to the University.

S.A.T. scores are reviewed on a selective basis only and are generally not required.

C. General Policy on the Transfer of Course Credits

To facilitate programme 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 programme requirements, any course offered for credit by an accredited university shall be accepted for credit by McMaster when there is an essential equivalence in course content. However, no course for which a grade of less than C- (60%) has been achieved will be considered.

D. Advanced Credit

As noted in sections (E), (F), (G), (L), (M) and (N) below, advanced credit may be granted if you have completed work at another university or college, and you have met the minimum requirements prescribed. Advanced credit may shorten your degree programme at McMaster.
E. 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).

Challenges are 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. Any courses in all disciplines for which a challenge is not available. Each Faculty and departments are free to determine which, if any, of their courses are open for special assessment. Challenges are assessed on a pass/fail basis. The passing grade for a challenge appears on the transcript as COM (Complete) and is not used in computing averages, or evaluating honours or scholarship standing, but is counted as a course attempt. Unsuccessful attempts will be noted on the transcript. Special Assessment is not available for a course taken previously and a course may be attempted only once by special assessment. Once you have registered for a course by such means (known as challenge exams) the registration may not be cancelled and you may not withdraw from the course.

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

F. Transfers from Other Universities

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 forth in the 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.

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

G. Graduates Applying for a Second Bachelor's Degree

Admission is by selection. If you have a first degree, you may apply to take an Honours second degree in the same subject area or a second degree in another discipline. Please note two exceptions: B.Com. and B.Comm. (Honours) cannot be done as second degree programmes. Applicants who already hold a B.Eng. Degree may not apply to any B.Eng. discipline as a second degree. The requirements are set out in the General Academic Regulations section of this Calendar.

If you wish to enter a Second Bachelor's Degree in a subject area from the Faculty of Science, please consult the additional regulations for such a programme in the Faculty of Science section, Second Bachelor's Degree Programmes. If you are a McMaster graduate or potential graduate, you may be able to use the McMaster University Returning Student application. (See Application Procedures section of this Calendar.)

H. Continuing Students

If you are a graduate of a McMaster degree programme and wish to become a continuing student, you do not need to apply through Admissions, but need to submit a Registration form.

As a continuing student with a non-McMaster degree, you need only apply formally through Admissions in the first instance. In subsequent sessions, only submission of a Registration form is necessary.

You will be expected to have at least a C (third-class standing) average, with no failures, in your final year's work (or the equivalent, in the case of a degree taken in part-time studies), and academic records which are satisfactory to the Department and the Office of the Associate Dean (Studies) of the appropriate Faculty.

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

I. 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 enrol as a post-degree student, you must apply to the appropriate departments and have your admission and registration approved by the School of Graduate Studies for each session in which you wish to take courses. You will register and pay fees as an undergraduate.

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 normally be granted for the work previously taken.

J. Re-admission

If you are a former McMaster student who voluntarily withdrew from an undergraduate programme more than five years ago and wish to return to your studies, you must apply for Re-admission through the Admissions Office. Students from the School of Nursing must apply for Re-admission 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 Re-admission. Normally, you will be permitted to register in your previous programme or another programme for which you qualify. If you were formerly registered in the Faculty of Science you should see the heading Former Science Students in the Faculty of Science section of the Calendar.

K. 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 Admissions Office. 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 re-instatement at this time.
3. Reasons for selection of courses/programme indicated.
4. Activities since last registered at the University, including academic work.

Some Faculties may require a supplementary application form or letters of reference. Consult the appropriate Faculty section in this Calendar.

L. Admission from Ontario Colleges of Applied Arts and Technology

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

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

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

Business
1. Completion of a two or three-year diploma.
2. A GPA of 3.0 or better.
3. Successful completion of a Grade 12 Advanced Mathematics course or equivalent.
ADMISSION REQUIREMENTS

Engineering
1. Completion of a three-year technology diploma programme.
2. A first-class honours standing in the last two years of study (you will be considered for admission to the second level of a relevant Engineering programme).
3. Adequate preparation in Calculus (if this is lacking students may be required to complete one full-course in first-year university Calculus prior to admission).

Mature Students
1. Completion of one year of college work in a diploma programme.
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.

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

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.

Science
1. Completion of a three-year technology diploma programme.
2. A GPA of 3.2 or better.

Social Sciences
1. Completion of at least one year of work in a diploma programme.
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 programme).

Bachelor of Technology
Satisfactory completion of a three-year Mechanical Engineering Technologist programme. Applications for admission can be obtained by contacting: (905) 525-9140, ext. 27013.

Advanced Credit
Normally, if you are a well-qualified graduate of a three-year programme and the college work is appropriate to your chosen university programme, you could receive up to 30 units of advanced credit. If you have completed a two-year programme 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 programmes are in similar areas, and where your academic record warrants special consideration.

P. 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. programme, 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. programme, you must apply to that programme and participate in the regular admission process.
**Q. Enrichment Programme for Secondary School Students**

If you are an outstanding secondary school student and wish to complete university level work while in your final year of study completing OACs or Grade 12, you may apply for the Enrichment Programme. For more information contact the Admissions Office.

**R. 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.

Students must initially apply through the OUAC and send their 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 their home institution is required for each new session.

**S. Listener**

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 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, 1280 Main Street W., 2nd Floor, Downtown Campus, Hamilton, Ontario, L8S 4L8 or drop by; 2nd Floor, 50 Main St. E., Hamilton, 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.

**T. Seniors**

If you are 65 years of age or over, subject to meeting admissions and prerequisite requirements, you may register without payment of tuition and supplementary fees. The required full-time or part-time application fee must be paid and must accompany the appropriate application to the OUAC.
APPLICATION PROCEDURES

1. Determine the appropriate application form to use when applying for admission. (See charts 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.

Use the OUAC 101 Application if:
- You are now taking one or more Ontario Academic Courses (OACs) or 12 U and U/C courses in day school and wish to enter a Level I degree programme as a full-time student.
- Please obtain the OUAC 101 form from your secondary school guidance office and follow the instructions therein. You will receive an acknowledgement mailing from McMaster's Admissions Office once your application has been received.

Use the OUAC 105D Application if:
- You are not currently taking one or more Ontario Academic Courses (OACs) in day school, have not previously attended McMaster and wish to enter Level I or above of an undergraduate degree programme as a full-time student.
- You are currently registered at another university or college and wish to transfer to McMaster for full-time studies.
- You have previously attended McMaster, but you have since registered at another university or have completed a college diploma and now wish to enter an undergraduate degree programme as a full-time student.
- You have completed a degree at a university other than McMaster and wish to attend McMaster full-time to take courses as a Continuing student.
- You have completed a degree at a university other than McMaster and wish to pursue a second undergraduate degree on a full-time basis.
- You are currently registered at a university other than McMaster and wish to attend McMaster full-time to take courses on a Letter of Permission for Credit at Another University.
- Please obtain the OUAC 105D form from the Admissions Office of any Ontario university or from the Ontario Universities' Application Centre, 170 Research Lane, Guelph, Ontario, Canada, N1G 5E2, and follow the instructions therein.

Note: 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 have to obtain the transcript of secondary school marks from the Ministry or Department of Education in that province.
- If you are a graduate of a McMaster degree programme and wish to become a Continuing student, you do not need to apply through Admissions, but need to submit a registration form.

Use the McMaster University Returning Student Application for the following categories:
- Readmission: You are a former McMaster student* who voluntarily withdrew from an undergraduate programme more than 5 years ago. Former Nursing students must apply for readmission regardless of the amount of time that has elapsed.
- Reinstatement: You are a former McMaster student* who was previously ineligible to continue studies at McMaster University.
- 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 University, Please obtain the Reinstatement Application form from the Office of the Registrar, Gilmour Hall, Room 108, McMaster University, Hamilton, Ontario, L8S 4L8. You will be provided with more information on application procedures at that time. See application deadlines as listed in this section of the Calendar. The Nursing deadline is February 15 for September entry.

Use the McMaster University Part-time Degree Application if:
- You are currently registered at another university or college and wish to transfer to McMaster for part-time studies.
- You have not been previously registered at McMaster and wish to pursue an undergraduate degree on a part-time basis.
- You have completed a degree at a university other than McMaster and wish to attend McMaster on a part-time basis to take courses as a Continuing student.
- You are currently registered at a university other than McMaster and wish to attend McMaster on a part-time basis to take courses on a Letter of Permission for Credit at Another University.
- Please obtain the Part-time Degree Application from the Office of the Registrar, Gilmour Hall, Room 108, McMaster University, Hamilton, Ontario, L8S 4L8. You will be provided with more information on application procedures at that time.

Use the McMaster University Post-Degree Studies Application if:
- You wish to register as a post-degree student.
- Please obtain the Post-Degree Application from the Graduate Studies Office, Togo Salmon Hall, Room 111, McMaster University, Hamilton, Ontario, L8S 4M2 and use it to apply to the appropriate academic department(s).

Note: Your admission and registration must be approved by the School of Graduate Studies for each session in which you wish to take courses. If you are a graduate from a university other than McMaster, you must provide McMaster with official transcripts of marks from all post-secondary institutions you have attended.
DEADLINES

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.

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 language, French, will be accepted.

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

FALL/WINTER SESSION (SEPTEMBER 2002 ENTRY)

Undergraduate programmes which are not specified below: July 15

- Limited Enrolment Programmes
  - Above Level I ........................................ February 1
  - International Applications .......................... June 1
  - International Documentation ........................ June 1
  - Domestic Applications ................................ July 15
  - Domestic Documentation ............................. July 15
  - CEGEP Applications .................................. March 1

- Supplementary Applications for Level I Programmes ................................... May 15
- Arts & Science Applications .......................... February 14
- Supplementary Applications .......................... February 14
- Biochemistry (Co-op) .................................. February 1
- Biology and Pharmacology (Co-op) .................... February 1
- Gerontology Applications .................................. March 31
- Supplementary Applications .......................... May 15
- Health Sciences (Honours) Applications ............. February 14
- Supplementary Applications (LVI 1) .................. February 14
- Supplementary Applications (Above LVI 1) .......... April 30
- Health Studies ........................................... March 31
- Kinesiology ................................................ May 15
- Labour Studies ............................................ March 31
- Medicine ................................................. October 15
- Midwifery Applications ................................ February 1
- Official Transcripts .................................... February 1
- Supplementary Applications for non-Ontario Secondary applicants ........................ February 1
- Supplementary Applications for Ontario Secondary School applicants ..................... March 15
- Nursing (Ontario Secondary School) .................. May 1
- Nurse Practitioner ....................................... February 1
- NP Supplementary Applications ........................ February 1
- Transfers from other university Nursing Programmes .............................................. June 30

- All Other .................................................. February 15
- Supplementary Applications .......................... February 15

- Social Work
  - McMaster Applicants .................................. March 1
  - All Others .............................................. December 1
- Supplementary Applications ........................... March 1

- Women’s Studies ......................................... April 15

- Only university transfer and Second Degree applicants need to complete the supplementary application forms.
- Please contact the Ontario Universities’ Application Centre for a supplementary application.

- Only non-Ontario secondary school students need to complete the mandatory supplementary applications. Please contact the Ontario Universities’ Application Centre for a supplementary application.

** The Admissions Office will forward supplementary packages once applications are received from the OUAC.

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

FALL/WINTER SESSION (JANUARY ENTRY)

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

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

Deadlines for Reinstatement or Readmission

The application deadline for September entry for all programmes, except Nursing is June 30. The Nursing deadline is February 15. Application deadlines for January or May or June entry are as indicated above.

Retention of Documents

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

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

Academic Counselling for Those Offered Admission

If you are offered full-time admission to Level I, you will be asked to confirm that you have accepted the offer of admission and will attend the University.

Your admission package will include a Registration Kit with information about the University, academic counselling and registration procedures.

Your Faculty may also arrange a visit to the University so you may meet with a Faculty advisor to set up your programme. 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 at September registration.

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

Enquiries

Please direct your enquiries about Application Procedures to:

OFFICE OF THE REGISTRAR
Gilmour Hall, Room 108
McMaster University
Hamilton, Ontario, L8S 4L8
Telephone: (905) 525-4600
E-mail: macadmit@mcmaster.ca
GENERAL ACADEMIC REGULATIONS

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;

or

2. by completing the final level (approximately 30 units of work) at another university, including at least 18 units of programme-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 record officially your selection of programme and courses. This is done before each session, and information on how to register will be sent to eligible students. Counselling is available to assist you in course selections.

Approval of Programmes: You are responsible to ensure that your registration documents are complete and accurate. Your programme and course selections — and deletions — must be approved by the Office of the Associate Dean (Studies) of your Faculty. If you try to register in a programme or courses from which you are restricted, your registration will not be approved.

Selection of Courses: Before you select the courses you wish to take, please read the requirements for your programme in the appropriate Faculty sections of this Calendar. If you fail to meet the programme requirements, you will not be eligible to graduate.

Select the courses required for your programme; then select your electives. Ensure that you have completed the courses which are listed as prerequisites and have completed or chosen courses that are listed as corequisites. If you have not passed the prerequisite courses, you will not be able to take the course selected.

Limit on Level I Courses: In most Faculties, credit may be obtained in no more than 42 units of Level I courses in a three-level programme, and in no more than 48 units in a four-level programme.

Eligibility for Awards: (See Section 5 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 (Studies) 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.)

Repetition of Courses: To repeat a course for which credit has been obtained, you need approval of the Office of the Associate Dean (Studies). There is no limit on the number of repetitions of a failed course. The grades for all attempts appear on the transcript and enter into the computation of the Cumulative Average. However, only one successful attempt will enter into the computation of credit earned towards your degree.

Auditing Courses: If you do not wish to have credit for a course, you may, with the approval of the Chair of the Department and the Office of the Associate Dean (Studies), audit the course. You must satisfy the prerequisite for the course, but will not complete assignments or write the final examinations. You will not be permitted to register for credit in the course after the registration deadline has passed.

Letters of Permission: If you are in good academic standing at McMaster and you wish to attend another university to take courses which will carry credit towards your McMaster degree, you must obtain permission ahead of time. To do this you must seek a Letter of Permission from the Office of the Associate Dean (Studies). Please take note of any conditions that might apply, including the requirement of a grade of at least C- for transfer credit. You should note that the grades obtained in courses taken at another university will not be included in the Cumulative Average. Full-time students taking courses on a Letter of Permission must continue to carry a full load at McMaster during the Fall/Winter session if they wish to be considered for Undergraduate In-course Academic Awards; i.e. courses taken on a Letter of Permission do not count toward your load for purposes of academic awards.

Changes to Registration: The last day for changing registration and adding courses for each term is approximately one week after classes begin for the term. (Please see the tables in the Sessional Dates section for the relevant dates for this academic year.) You may add new courses, or drop courses which you originally selected. After the above-mentioned period, you may drop a class until the last day to withdraw without failure by default. After this date, you will remain registered in the course whether or not you attend. Your transcript will show a grade of F for any course not successfully completed.

Withdrawal from the University: If you wish to withdraw from the University, you must consult the appropriate Office of the Associate Dean (Studies). Your student identity card must be surrendered to the Office of the Associate Dean (Studies). Your record in the courses being taken will be handled as outlined above in Changes to Registration.

Transfer of Credit between Faculties: Transfer of credit between Faculties is handled by the Office of the Associate Deans (Studies) 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.

Calculation of Cumulative Average Following Reinstatement After Poor Academic Performance: Effective September 1997, if you are reinstated at the University, your Cumulative Average will be reset to 0.0 on zero units, although you may at Faculty discretion retain credit for prior work. If you are reinstated, you will be on academic probation. You 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.
International Study
If you wish to engage in international study, you may do so either by participating in one of the formal exchange programmes that exist between McMaster and a number of universities in other countries, or by participating in one of the programmes available through specific Faculties; or by independent study abroad.

Formal exchange programmes are those in which McMaster has an agreement with another institution, involving a temporary exchange of students. As an exchange student, you register and pay your tuition fees, and supplementary fees at McMaster. No tuition is paid at the foreign institution. If you are interested in participating in a formal exchange programme, you can obtain further information and an application form from the Student Exchanges Officer, Hamilton Hall, Room 405. Applications are normally due February 1 for exchanges expected to begin the following September. Admission is by selection. A registration checklist is available to assist you in making all necessary arrangements.

For information concerning the Canadian Scholars Exchange Programme (CANEX), please refer to the Academic Facilities, Student Services and Organizations section of this Calendar under the heading Student Exchanges.

McMaster also offers other programmes which allow you to spend all or part of your third year of a four-year programme at another institution. You register but do not pay tuition at McMaster. These programmes are not available at universities with which McMaster University has a formal exchange agreement. For more information on these programmes, please see your Faculty advisor or the Student Exchanges Officer.

Students must recognize and accept the fact that, in many countries of the world, especially the newly-emerging nations, change may be the only constant. There are no guarantees that certain courses will be offered or that housing will be as one might expect. Spending time on an exchange programme or an independent study abroad provides an opportunity to develop one's adaptability and resourcefulness in the face of new situations. McMaster University cannot be held accountable for unforeseen changes in the host country.

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

2. ACADEMIC STANDING AND PROGRAMME REQUIREMENTS

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

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

Minimum Requirements to Continue at the University
All students must maintain a CA of at least 3.5 at each review to continue at the University. Under certain circumstances, as described below, students may be allowed to continue on academic probation for one reviewing period with a CA of 3.0 to 3.4.

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

Level I Registration and Academic Standing Requirements
When you are admitted to McMaster University for a first degree, you will register in one of the following Level I programmes: Arts and Science I, Business I, Engineering I, Health Sciences I, Humanities I, Kinesiology I, Mathematics and Statistics I, Midwifery I, Music 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 (Studies) 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.

When you register during Level I, you must 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 any review during Level I when 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 programme, 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 programme in another Faculty.

If, at the end of the next reviewing period, you again do not qualify for admission to a programme, you may not continue at the University. If your CA is less than 3.0 you may not continue at the University.

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

Minimum Requirements for Entering and Continuing in a Programme Beyond Level I

Admission to the programmes 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 programme-specific requirements of each Faculty, as described in this Calendar.

ARTS & SCIENCE PROGRAMME

B. Arts Sc. (Honours) and B. Arts Sc. Programmes: You must have a CA of at least 6.0 to continue in the programme. If your CA is from 5.5 to 5.9, you may remain in the programme, but will be placed on programme probation for one reviewing period. You may be on programme probation only once.

If your CA is 3.5 to 5.4, you must transfer to another programme for which you qualify, or register in the Arts & Science programme as an irregular student for one reviewing period. During that period you cannot take Arts & Science programme courses. At the end of that period you may apply for re-admission to the Arts & Science programme.

If your CA is 3.0 to 3.4, you will be placed on academic probation. You may continue in the programme for one reviewing period as an irregular student but cannot take Arts & Science programme courses. The purpose of this period is to prepare yourself for a programme outside the Arts & Science programme. 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 Programme Notes under the heading Programmes in the School of Business section of this Calendar.

If you are 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, you may not continue into a Commerce programme either now or in the future, you are still in good standing at the University. You may continue at the University in a programme outside the School of Business or as an irregular student in Business. To continue in a programme outside the School of Business, you must apply for admission to that programme through the Office of the Associate Dean (Studies), appropriate for that programme. You should consult that office for more details.
If you are not admitted to another Faculty you may register in the School of Business as an irregular student for one reviewing period. During that period you cannot take Commerce courses and you will not be eligible for consideration for admittance to Commerce II or readmittance to Business I. The purpose of your registration as an irregular student is to make yourself eligible for admission to a programme outside the School of Business.

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

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

- Commerce II: Upon satisfactory completion of Commerce II, qualified students may continue in one of the following programmes:
  - Honours B.Com. Programme: You must have a CA of at least 6.0 to enter the Honours B.Com. programme in Level III or IV or to continue in the Honours B.Com. programme. If your CA is 5.5 to 5.9, you may continue in the Honours B.Com. programme, but will be placed on programme probation. You may be on programme probation for only one reviewing period (as specified in the Glossary section of this Calendar). If your CA is 3.5 to 5.4, you may transfer to the B.Com. programme. If your CA is less than 3.5, you may not continue at the University.
  - B.Com. Programme: You must have a CA of at least 4.0 to continue in the B.Com. programme. If your CA is 3.5 to 3.9, you are permitted to continue in the B.Com. programme on programme 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.

- B.Com. Programme: You must have a CA of at least 4.0 to continue in the B.Com. programme. If your CA is 3.5 to 3.9, you are permitted to continue in the B.Com. programme on programme probation for one reviewing period. If your CA is 3.0 to 3.4, you may remain in the Honours B.Com. programme, but will be placed on programme probation. If your CA is 3.0 to 3.4, you may remain in the programme, 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.

- Honours B.A. Programmes: You must have a CA of at least 6.0 to continue in an Honours B.A. programme. If your CA is 5.5 to 5.9, you may remain in the Honours B.Sc. programme, but will be placed on programme probation. If your CA is 3.0 to 3.4, you may continue on academic probation for one reviewing period. If your CA is 3.0 to 5.4, you must transfer to another programme for which you qualify. If your CA falls below 3.0 you may not continue at the University.

- B.Sc. Programmes: You must have a CA of at least 3.5 to continue in a three-level B.Sc. programme. If your CA is 3.0 to 3.4, you may continue on academic probation for one reviewing period. If your CA is 3.0 to 6.0, you may continue in an Honours programme. If your CA is less than 3.0, you may not continue at the University.

FACULTY OF ENGINEERING

- B.Eng. Programmes: To be admitted to a Level II Engineering programme, you must have completed all Engineering programme requirements and have obtained 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 programme. If your CA is at least 4.0 and includes one failure since your last review, and you were not placed on probation at the last review, you will be placed on programme probation. If your CA is at least 3.5 and includes two failures since your last review, you will not be placed on probation at the last review, you will be placed on programme probation. Your probation will be lifted if you complete the year with a Sessional Average of 4.0 with no failures. You may only be on probation twice. If you have a CA of 4.0 to 4.9 with two failures, you may not continue in the Faculty. If you have more than two failures since the last review, you may not continue in the Faculty. If you have a CA of 3.0 to 3.9, you may not continue in the Faculty. If your CA is less than 3.0, you may not continue at the University.

FACULTY OF HEALTH SCIENCES

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

FACULTIES OF HUMANITIES AND SOCIAL SCIENCES

- Honours B.A. Programmes: B.Mus. Programme; Honours B.Kin. Programme; B.A./B.S.W.; B.S.W.: You must have a CA of at least 6.0 to continue in an Honours programme. If your CA is 5.5 to 5.9, you may remain in the Honours B.Kin. programme, but will be placed on programme probation for one reviewing period. You may be on programme probation only once. If your CA is 3.0 to 3.4, you must transfer to another programme for which you qualify. If your CA is less than 3.0, you may not continue at the University.

GENERAL ACADEMIC REGULATIONS

- B.Kin. Major Programme: You must have a CA of at least 4.0 to continue in the B.Kin. Major programme. If your CA is 3.5 to 3.9, you may remain in the programme, but will be placed on programme probation for one reviewing period. You may be on programme probation only once. If your CA is 3.0 to 3.4, you must transfer to another programme for which you qualify, and be placed on academic probation. If your CA is less than 3.0, you may not continue at the University.

- B.A. Programmes: You must have a CA of at least 3.5 to continue in, or graduate from, a three-level B.A. programme. If your CA is 3.0 to 3.4, you may remain in the programme, 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.

- B.Sc. Programmes: You must have a CA of at least 3.5 to continue in a three-level B.Sc. programme. If your CA is 3.0 to 3.4, you may continue on academic probation for one reviewing period. If your CA is 3.0 to 5.4, you must transfer to another programme for which you qualify. If your CA is less than 3.0, you may not continue at the University.

FACULTY OF SCIENCE

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

Transfer Between Programmes

If you wish to transfer from one programme to another, you should discuss the possibility with the appropriate Office of the Associate Dean (Studies) 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 programme, 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 programme. You should check the calendar requirements statement for your programme in the case of Science programmes, or check with your Faculty in the case of other programmes, for subject areas that are excluded from consideration as a Minor in your programme.

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

You may apply for only one Minor. Minors cannot be revoked once approved. (See Note 4 under 'Second Bachelor's Degree Programmes.')

Second Bachelor's Degree Programmes

For admission to a second undergraduate degree programme you must hold a first undergraduate degree whether it be a three-level, four-level or five-level degree. The minimum admission requirements and programme 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 programme is required. If admitted, you must take at least 30 units beyond the first degree, including all Honours requirements specified for the programme. 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 programme. If admitted, you must complete at least 30 units beyond the first degree including all programme requirements. In some Faculties, this includes a minimum number of units of work in the discipline.

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

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

B.H.Sc. (Honours): A Cumulative Average of at least 7.0 (minimum overall average of B-) will be required for admission. In addition, students will be admitted to Second Degree studies only if their studies involve a significant additional component of work in the subjects of concentration in the B.H.Sc. (Honours) Programme and certain subject combinations may not be permitted.

B.Kin. Major: For entry, you must meet the admission requirements for the programme. If admitted, you must complete at least 60 units beyond the first degree including all programme requirements. (Honours) Programme and certain subject combinations may not be permitted.

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 to 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 programme, or courses completed as a Continuing Student, may be applied to the approval of the Faculty, be applied to the second degree programme.
6. You must meet the same standards for continuation and graduation as are applied to students registered in a first degree programme.
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 programme. 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.

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

3. Petitions for Relief for Missed Term Work and for Deferred Examinations
The University wishes to assist students with legitimate difficulties. It also has the responsibility to ensure that degree, programme and course requirements are met in a manner that is equitable to all students. Students may petition the office of the Associate Dean of their Faculty (Faculty office) for special consideration when there are compelling medical, personal or family reasons to justify an exception to University regulations. Supporting documentation will be required but will not ensure approval of the petition. The authority to grant petitions lies with the Faculty office and is discretionary. It is imperative that students make every effort to meet the originally-scheduled course requirements and it is a student's responsibility to write examinations as scheduled.

Procedure 1: Petitions for Relief for Missed Term Work
1. A student may submit a Petition for Special Consideration through the Faculty office for relief from the academic consequences of missed term work based on compelling medical, personal or family reasons before or immediately after the work is missed, normally within five working days.
2. If the reason is medical, the approved McMaster University Medical Form must be used. The student must be seen by a doctor at the earliest possible date, normally on or before the date of the missed work and the doctor must verify the duration of the illness. Relief will not be available for minor illnesses.
3. If the reason is non-medical, appropriate documentation with verifiable evidence 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 Student Health Services.
7. It is the student's responsibility to check with the Faculty office for a decision on the petition.
8. If the petition is granted, the Faculty office will notify the instructor(s) recommending relief.
9. The student must contact the instructor promptly to discuss the appropriate relief.

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 - 4. 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 MUSSI) and on the student's grade report.
5. Deferred examinations are written during the next official University examination period. Default of the deferred examination will result in a failure for that examination except in 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 Associate Deans or delegates will consider petitions from students registered in any undergraduate programme. 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 their 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 each term 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 one percent of a final course grade cannot be assigned during this ban period, and take-home examinations worth more than ten percent of a final course grade cannot be due during the ban period. Tests that are exempt from the ban must:

a) be a part of a process of continuous or periodic assessment through the term;

b) be held in the normally scheduled class or lab slot; and

c) be worth no more than ten percent of the final course grade.

See the Sessional Dates section of this Calendar.

Examinations Conducted by the Office of the Registrar

- McMaster student photo identification cards are required at all examinations. If you arrive at an examination without a proper I.D. card, you will be required to have a substitute card made before being seated. There is a fee for this service. No additional time is given to compensate for examination time missed.

- You may only use books, papers or instruments during an examination if they are specifically prescribed on the examination paper.

- You may leave an examination only after the first 45 minutes have elapsed.

- If you become ill during an examination, you may be excused by a presider.

- If you miss or leave an examination for medical reasons you must submit a Petition for Special Consideration form with supporting documentation of illness, personal or family reasons, to the Office of the Associate Dean (Studies) 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 Examinations Section of the Office of the Registrar. 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 (Studies) 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. You must confirm your intent to write by submitting an application to the Examinations Section of the Office of the Registrar.

In the case of examinations written at an off-campus location, any fees incurred are the responsibility of the student. This includes the fee to courier the written examinations back to the Examinations Section of the Office of the Registrar.

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

For further information, please see Petitions for Deferred Examinations in this section of the Calendar.

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 programmes for which a higher grade is specified in the programme regulations.

- 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>A-</td>
<td>10</td>
<td>80-84</td>
</tr>
<tr>
<td>B+</td>
<td>9</td>
<td>77-79</td>
</tr>
<tr>
<td>B</td>
<td>8</td>
<td>73-76</td>
</tr>
<tr>
<td>B-</td>
<td>7</td>
<td>70-72</td>
</tr>
<tr>
<td>C+</td>
<td>6</td>
<td>67-69</td>
</tr>
<tr>
<td>C</td>
<td>5</td>
<td>63-66</td>
</tr>
<tr>
<td>C-</td>
<td>4</td>
<td>60-62</td>
</tr>
<tr>
<td>D+</td>
<td>3</td>
<td>57-59</td>
</tr>
<tr>
<td>D</td>
<td>2</td>
<td>53-56</td>
</tr>
<tr>
<td>D-</td>
<td>1</td>
<td>50-52</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
<td>0-49 — Failure</td>
</tr>
</tbody>
</table>
6. UNDERGRADUATE ACADEMIC AWARDS

To retain Entrance Scholarships and to qualify for major In-Course Awards, full-time students must complete, during the Fall/Winter session, a full load of course units, as defined by the programme and level. A Full-Load Average will be computed to determine your eligibility for these awards.

Terms and conditions of awards for full-time and part-time studies are defined in the section Undergraduate Academic Awards section.

7. GRADUATION

Graduation With Distinction standing may be awarded if a minimum CA of 9.5 is achieved.

The following Cumulative Averages are required to graduate:

<table>
<thead>
<tr>
<th>Course</th>
<th>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>
<td></td>
</tr>
<tr>
<td>C+</td>
<td>6</td>
<td>3</td>
<td>= 18</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>8</td>
<td>6</td>
<td>= 48</td>
<td></td>
</tr>
<tr>
<td>B+</td>
<td>9</td>
<td>3</td>
<td>= 27</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>153</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To calculate Average: 153 / 18 = 8.5

8. RECORDS POLICY

Transcripts

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

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.

Effective September 1, 2000 there is no charge for transcripts, but an additional charge of $5.00 applies to transcripts which are faxed from McMaster ($10.00 outside Canada). 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 and name 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 and 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 programmes at the University, you accept the University’s right to collect pertinent personal information. The information is needed to assess your qualifications for entry, to establish your performance in programmes and courses, to 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 information is normally destroyed at the end of each admission 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 in this manner 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 website 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.
**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

- Statement on Academic Ethics
- Sexual Harassment Policy
- Anti-Discrimination Policy
- Code of Conduct
- Welcome Week Regulations
- Alcohol Policy and Residence Community Alcohol Policy
- General Regulations for McMaster University Libraries
- Policy Statement on Applicants and Students with Disabilities
- Senate Resolutions on Academic Dishonesty
- 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)
- Student Appeal Procedures
- Petitions for Relief for Misused Term Work and for Deferred Examinations

(See also Section 3 in General Academic Regulations section of the Calendar.)

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

**Academic Ethics**

The Senate Statement on Academic Ethics explains the expectations the University has of its students. Some departments and instructors have 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.

It is the responsibility of each student to adhere to the Senate Statement on Academic Ethics (and any additional rules and regulations developed by Departments and instructors), not only in course work, tests and examinations, but also in other scholarly activities such as laboratory research, and the use of computing and library resources.

Breach of academic ethics fall into two general categories:

a) a disregard for the norms of scholarly integrity, without necessarily intending to deceive, and

b) academic dishonesty, which is an intentional disregard for the norms of scholarly integrity.

Minor breaches of academic ethics that fall into category a) are normally drawn to students' attention by instructors and may result in penalties such as a reduced mark or a zero for the piece of work.

Academic dishonesty is not qualitatively different from other types of dishonesty. It consists of misrepresentation by deception or by other fraudulent means. The General Regulations on Academic Dishonesty define academic dishonesty and specify the procedures to be followed in the event that a student is charged with academic dishonesty. Penalties include expulsion from the University.

**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.

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 re-admission 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 re-admission 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 programme 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 these expected 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 states:

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.

**Anti-Discrimination Policy**

McMaster University affirms the right of every member of its constituent bodies to study and remain 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.

**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 exists or 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 programmes.

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 GSL, and secondary schools.

Transcripts are issued only with the consent of the student. Addresses will not be released except under provisions noted above.
FINANCIAL INFORMATION

Upon receiving official acceptance from the Registrar's Office and upon submission of registration, you are responsible for the payment of all fees as defined in this Calendar.

Payment of academic fees does not imply your acceptance to the University or approval of your registration. Academic requirements have to be fulfilled before your registration is completed. If you are a new student, you may not forward academic fees to Financial Services until you have received your Letter of Acceptance. You should not send residence fees unless you have received notification of acceptance.

You are responsible for the fees for each academic session. No fee credits can be transferred from one academic session to another. It is the policy of the University not to accept registrations until all previous accounts are paid in full. Any payments received are, therefore, first applied to previous debts and any balances to the most recent debts.

The following fees and regulations were in effect at the time of publication of this Calendar. The University reserves the right to amend the fees and regulations at any time.

UNDERGRADUATE FEES

If you are a full-time student, fees cover your portion of the tuition cost, registration, library, diplomas, campus health services, student organizations, and athletics, and are payable by all students. No caution deposits are required, but students will be assessed for any unwarranted loss or breakage.

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

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


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

Base Per Unit Tuition Per Faculty

<table>
<thead>
<tr>
<th>Faculty/Programme</th>
<th>Canadian/Permanent</th>
<th>Visa Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts &amp; Science</td>
<td>131.05 per unit</td>
<td>415.00 per unit</td>
</tr>
<tr>
<td>Business and</td>
<td>143.52</td>
<td>500.00</td>
</tr>
<tr>
<td>Commerce</td>
<td>141.69</td>
<td>360.00</td>
</tr>
<tr>
<td>Engineering</td>
<td>143.52</td>
<td>415.00</td>
</tr>
<tr>
<td>Health Sciences (Honours)</td>
<td>131.05</td>
<td>415.00</td>
</tr>
<tr>
<td>Humanities</td>
<td>131.05</td>
<td>365.00</td>
</tr>
<tr>
<td>Kinesiology and</td>
<td>131.05</td>
<td>365.00</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>131.05</td>
<td>415.00</td>
</tr>
<tr>
<td>Nursing</td>
<td>131.05</td>
<td>415.00</td>
</tr>
<tr>
<td>Science</td>
<td>131.05</td>
<td>415.00</td>
</tr>
</tbody>
</table>

Supplementary Fees

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

Athletics and Recreation Activity Fee: $4.20
Administrative Services Fee: $0.90

McMaster Association of Part-Time Students Fees:

Organization Fee: $5.00
University Centre Capital Fee: $2.00
Total Charge per unit: $12.10

Nursing Students Add:
One-time Immunization Fee: $20.00
Learning Resource Fee: $6.63

STUDENTS TAKING 18 UNITS OR MORE PAY:

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

Athletics & Recreation Activity Fee: $87.48
Student Health Service: $44.75
Ontario Public Interest Research Group (OPIRG): 5.91

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

McMaster Student Union Fees:

Student Organization Fee: $93.14
Health Plan Premium: 45.00
H.S.R. Bus Pass: 58.00
WUSC Student Refugee Fee: 1.17
Ancillary Fee for CFMU-FM: 13.67
Ancillary Fee for MARMOR Yearbook: 7.12
Incite Publication: 0.75

Sub Total: $356.99

Plus:

- McMaster Student Union's University Student Centre Capital Fee ($2.52 per unit), to a maximum of $75.60
- Student Services Fee ($2.74 per unit), to a maximum of $82.20
- Administrative Services Fee ($0.50 per unit), to a maximum of $27.00.

And Faculty Specific Society/Support Fees as Follows:

- Arts & Science: 28.00
- Bachelor of Health Sciences (Honours): 26.00
- Commerce: 141.00
- Engineering: 132.00
- Humanities: 15.00
- Nursing Level I: 169.84
- Nursing: 149.84
- Science: 35.00
- Social Sciences/Kinesiology: 50.00

Canadian Citizens and Landed Immigrant Students

(Examples of fees for full academic load.)

<table>
<thead>
<tr>
<th>Faculty/Programme</th>
<th>Tuition Fee*</th>
<th>Supplementary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts &amp; Science</td>
<td>3,931.50</td>
<td>569.79</td>
</tr>
<tr>
<td>Business and</td>
<td>4,305.60</td>
<td>667.79</td>
</tr>
<tr>
<td>Commerce</td>
<td>141.00</td>
<td>360.00</td>
</tr>
<tr>
<td>Engineering</td>
<td>4,508.29</td>
<td>673.79</td>
</tr>
<tr>
<td>Health Sciences (Honours)</td>
<td>3,931.50</td>
<td>673.79</td>
</tr>
<tr>
<td>Humanities</td>
<td>3,931.50</td>
<td>566.79</td>
</tr>
<tr>
<td>Kinesiology and</td>
<td>3,931.50</td>
<td>591.79</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>3,931.50</td>
<td>591.79</td>
</tr>
<tr>
<td>Medicine I</td>
<td>13,500.00</td>
<td>536.99</td>
</tr>
<tr>
<td>Medicine II, III</td>
<td>13,500.00</td>
<td>516.99</td>
</tr>
<tr>
<td>Midwifery I</td>
<td>3,915.35</td>
<td>219.75</td>
</tr>
<tr>
<td>Midwifery II</td>
<td>3,915.35</td>
<td>199.75</td>
</tr>
<tr>
<td>Nursing I</td>
<td>3,931.50</td>
<td>711.63</td>
</tr>
<tr>
<td>Nursing II</td>
<td>3,931.50</td>
<td>691.63</td>
</tr>
<tr>
<td>Science</td>
<td>3,931.50</td>
<td>756.79</td>
</tr>
</tbody>
</table>

* You will be assessed extra fees for units taken over your programme maximum load.
**FINANCIAL INFORMATION**

**Visa Students**

(Examples of fees for full academic load.)

<table>
<thead>
<tr>
<th>Supplementary</th>
<th>Tuition Fee *</th>
<th>Fees</th>
<th>Total Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts &amp; Science</td>
<td>12,450.00</td>
<td>569.79</td>
<td>13,019.79</td>
</tr>
<tr>
<td>Business and Commerce †</td>
<td>15,000.00</td>
<td>667.79</td>
<td>15,667.79</td>
</tr>
<tr>
<td>Engineering and Eng. Mgt. II, IV</td>
<td>12,540.00</td>
<td>673.79</td>
<td>13,213.79</td>
</tr>
<tr>
<td>Engineering and Eng. Mgt. III, V</td>
<td>12,450.00</td>
<td>567.79</td>
<td>13,017.79</td>
</tr>
<tr>
<td>Health Sciences (Honours)</td>
<td>12,450.00</td>
<td>567.79</td>
<td>13,017.79</td>
</tr>
<tr>
<td>Humanities</td>
<td>10,950.00</td>
<td>556.79</td>
<td>11,506.79</td>
</tr>
<tr>
<td>Kinesiology and Social Sciences</td>
<td>10,950.00</td>
<td>591.79</td>
<td>11,541.79</td>
</tr>
<tr>
<td>Nursing I</td>
<td>12,450.00</td>
<td>711.63</td>
<td>13,161.63</td>
</tr>
<tr>
<td>Nursing</td>
<td>12,450.00</td>
<td>691.63</td>
<td>13,141.63</td>
</tr>
<tr>
<td>Science</td>
<td>12,450.00</td>
<td>576.79</td>
<td>13,026.79</td>
</tr>
</tbody>
</table>

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

† NOTE: There is a proposal under review to reduce this fee to $12,450.00 effective September 2002.

**Student Health Services Fees**

The supplementary student health services fee of $44.75 supports the on-campus clinic facilities, which provide the services of doctors and nurses. The McMaster Students Union Health Plan Premium fee of $45.00 includes reimbursement of expenses resulting from an accident incurred during the academic year, where such expenses are not recoverable under the Ontario Health Insurance Plan. These expenses may include X-ray, ambulance, dental treatment, prescribed drugs, wheelchairs or similar appliances. Reimbursement is not made for accident expenses to dental plates, crowns, fillings, glass frames, lenses or similar items. Accidents should be reported to Student Health Service within 10 days.

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

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

**Co-op Fees**

Co-op students attending the full academic term (September-April) should add an $850.00 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 $425.00 Co-op Fee.

**Listeners**

You are classified as a Listener if you wish to attend classes, but are not seeking academic credit. You may be admitted at one-half of the standard fee upon application to the Centre for Continuing Education.

Listeners withdrawing from a course may do so without penalty up to five working days after the first meeting. After that and before the second class, an administrative fee of $30.00 will be withheld. There is no refund after the second class.

Students may register as Listeners in some degree or certificate courses. A Listener is not seeking credit and may be admitted at one-half of the standard fee upon application to the Centre for Continuing Education.

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 are aged 65 or over, you may register without payment of tuition and supplementary fees.

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**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 2001-2002.

**Traditional Residences**

- **Full Payment**
  - Single: $3,520.00
  - Double/Triple: $3,300.00
  - Quad: $3,185.00
  - Bates Apartment Room: $3,900.00
- **Minimum Payment**
  - Single: $1,910.00
  - Double/Triple: $1,800.00
  - Quad: $1,740.00
  - Bates Apartment Room: $2,100.00

**Meal Plans**

If living in a traditional residence you must select one of the following meal plans:

- **Full Payment**
  - Light: $2,250.00
  - Small: $2,475.00
  - Regular: $2,675.00
  - Large: $2,875.00
  - X-Large: $3,075.00
- **Minimum Payment**
  - Light: $2,250.00
  - Small: $2,250.00
  - Regular: $2,250.00
  - Large: $2,250.00
  - X-Large: $2,250.00

- **Basic Account**
  - Light: $225.00
  - Small: $225.00
  - Regular: $225.00
  - Large: $225.00
  - X-Large: $225.00

- **Flex Account**
  - Light: $225.00
  - Small: $225.00
  - Regular: $225.00
  - Large: $225.00
  - X-Large: $225.00

If you wish to change your selection of meal plans for 2002-2003, you may do so up to September 16, 2002. Please contact the Mac Express Centre, ext. 27448, for more information on meal plan options, selection and changes.

**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, Commons Building, Room 129B, telephone (905) 525-9140, ext. 24781.

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**PAYMENT OF FEES**

Tuition fees and residence/meal plan fees are payable in full during the registration period in August/September. Prepayment of fees will significantly simplify the registration process (see Prepayment of Fees). If you are unable to make full payment at the time of registration, you may be registered by paying the minimum first payment at the time of registration. Interest is added monthly to the unpaid balance. (Current rate is 1.2% per month compounded/15.32% annually.) The balance plus interest must be paid no later than January 15. Failure to make payment by January 15 will result in a late payment fee.

Cheques can be made payable to McMaster University. Any cheque not accepted and returned by the bank will be subject to an additional administrative charge of $30.00 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 reinstatement fee.

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

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

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

All tuition, supplementary, residence and meal plan fees and any debts from prior sessions should be received by Financial Services prior to registration.

For payment deadlines, please refer to the registration handbook. You must complete the Payment Arrangement Form and send it with a cheque, which may be post-dated to September 1. Your student identification number should be written on the back of your cheque. By following this procedure you will significantly reduce the time needed to complete registration.

If you expect to receive financial assistance under the Ontario Student Assistance Programme, or will receive scholarships, bursaries or other awards, you may select the appropriate option on the Payment Arrangement Form. All fees are payable upon receipt of financial assistance. Any difference between the amount of the award, and minimum first payment should accompany the Payment Arrangement Form.

If you are unable to pay your fees at the time of registration, please contact Financial Services, Room 209, Gilmour Hall, Ext. 24478, prior to registration.

Refunds

If you are forced, by illness or other personal reasons, to withdraw from courses, you will be charged a partial fee for courses that are cancelled. The charge is determined by the date on which notices of withdrawal in writing are received at the Office of the Dean of the appropriate Faculty. A full refund will be given for courses dropped until the end of the drop and add period.

MISCELLANEOUS FEES

The following fees were in effect for the 2001-2002 academic year, and are over and above assessed academic fees, supplementary fees, and residence fees and meal plan fees.

Academic User Fees

- Applications for re-admission ........................................... 50.00
- Applications to Part-Time Studies................................................ 35.00
- 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 ................................................................. 20.00
- 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
- Supervisor of Examinations at Other Universities ........................ 50.00
- Transcript (per copy) .................................................................... No fee
- Transcript Assessment Fee ......................................................... 50.00

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

Financial/Administrative User Fees

- Certificate Replacement Fee
- Income Tax Receipt/Education Credit Certificate .......................... No fee
- Certification of Fee Payment .......................................................... No fee
- Meal Plan Withdrawal Fee ............................................................ 50.00
- Fine for Meal Card Misuse ............................................................ 5.00
- Returned Cheque Charge (NSF, Stopped Payment) ......................... 30.00
- First Occurrence .......................................................... No fee
- Each Subsequent Occurrence (Additional) .................................. 10.00
- Late Document Fee ................................................................. 50.00
- Late Registration Fee ................................................................. 50.00
- Full-time and Part-time Students .................................................. 50.00
- Late Payment Fee ................................................................. 32.00
- Deferment Fee ................................................................. 32.00
- Monthly Payment Plan Default Fee ............................................. 32.00
- Reinstatement Fee ................................................................. 100.00
- Locker Rentals ............................................................. 16.00
- Library Charges
- Overdue Recalled Books (per day) .................................................. 2.00
- Overdue Reserve Material (per hour) .................................................. 20.00
- Replacement Cost, plus Fine: up to .................................................. 100.00
- Returned Books After Billing ..................................................... 10.00

EXPENSES

Costs Other Than Fees
For Students in Clinical Courses

You must buy uniforms, shoes and uniform accessories, for clinical practice.

If you are a Nursing student, your uniform and accessories are ordered under the direction of the School of Nursing. The approximate cost is $80.00.

Registration Examinations

Graduates of the B.Sc. N. programme can expect to pay fees (approximately $215.00 in 2002) to write the comprehensive registration examinations administered by the College of Nurses of Ontario.

Insurance of Personal Property on University Premises

The University cannot assume any responsibility for the personal property of any employees, faculty members, or students, nor does the University carry any insurance that would cover their personal property.

In most cases, personal fire insurance policies provide an automatic 10% extension covering property away from home. You should inspect your insurance policies to be certain that this is the case.

Death and Dismemberment Insurance

The University considers that the purchase of insurance coverage for death and dismemberment is the individual responsibility of its students.

There are various insurance plans available, and although the University does not specifically endorse any one of these plans, it has no objection to explanatory brochures and literature being posted on bulletin boards or distributed in appropriate places.

If you are involved in laboratory or field work, you are particularly encouraged to investigate such coverage.

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 Programme 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 programme also allows for substantial specialization in a discipline or area through the use of electives. The philosophy of the Arts & Science Programme 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 Programme, 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.

The Programme 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 programme 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 programmes, which are available in many subjects (see below), combine the core curriculum of the Arts & Science Programme 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.

The Arts & Science Programme is governed by the General Academic Regulations of the University, (see the General Academic Regulations section in this Calendar) and the regulations described below. The Programme begins in Level I and leads to the degree, Bachelor of Arts & Science (Honours) on completion of Level IV. The four-level programme provides an opportunity for specialization through electives and through an individual study or thesis course. Students who decide to conclude their studies in the programme on completion of Level III may qualify to graduate with the degree, Bachelor of Arts & Science (B.Arts Sc.).

Students must have a CA of at least 6.0 to continue in the programme. In the case of some Combined Honours programmes, the average must include specified courses.

Registration in Level I of the Arts & Science Programme is limited to approximately 60 students.

INQUIRY SEMINAR REQUIREMENTS

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

COMBINED HONOURS

Students in the Arts & Science Programme may undertake Combined Honours programmes in many disciplines within the Faculties of Humanities, Science and Social Sciences. The combined programmes with Biology, Chemistry and Physics need five years for completion. Combined programmes that are already established are listed below. Students should consult the Director of the Arts & Science Programme for consideration of other possible combinations. Application for Admission to Level II (March) is required for all Combined Honours Programmes.

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

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

INTERNATIONAL/CANADIAN EXCHANGE PROGRAMMES

One calendar year before study abroad: Interested students should consult the Director, Arts & Science Programme.

Calendar year of planned travel: No later than the end of December, students must propose a programme of study for approval by the Director. Credit will be confirmed only after transcripts are received and academic achievements are reviewed. If another programme is approved, the student will be notified.

To be eligible for study abroad students must have completed 60 units with a GA of at least 7.0. The B.Arts Sc. (three-year) degree is not granted on the basis of international study; the 30 final units of work must be done at McMaster.

The International Students' Advisor (Hamilton Hall, room 405) has information on formal exchange programmes as well as independent study abroad. For further information please see International Study in the General Academic Regulations section in this Calendar. Information concerning the Canadian Scholars Exchange Programme (CAMEX) can be found in the Academic Facilities, Student Services and Organizations section of this Calendar under the heading Student Exchanges.
ARTS & SCIENCE PROGRAMME

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, 2D06, 2R06
6 units Electives or Upper-level Inquiry (inquiry may be taken in Level III)
6 units Electives or BIOLOGY 1A03, 1AA3 (if not completed in Level I)

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

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

ARTS & SCIENCE AND ANOTHER SUBJECT

Established Combined Honours programmes are listed below. Students are encouraged to consult the Director of the Arts & Science Programme 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 Programmes. Combined Honours Programme descriptions are available on the web (http://www.mcmaster.ca/artsci) or from the Programme Office.

Combined Honours Programmes, Arts & Science and:

Anthropology (2027010)
Biochemistry (2027040)
Biology (2027050)
Chemistry (2027070)
Comparative Literature (2027142)
Computer Science (2027145)
Economics-Option A (2027151)
Economics-Option B (2027152)
English (2027200)
Environmental Science (2027211)
French (2027230)
Geography (2027240)
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 (formerly Drama) (2027551)
Women's Studies (2027642)
INTERNATIONAL/CROSS-CULTURAL/LANGUAGE MENU

In its revised programmes, the School of Business is stressing the importance of breadth of knowledge. Students are required to take courses in a variety of business disciplines, thus giving them a sound understanding of business functions and their relationships. They also obtain exposure to International and cross-cultural issues. This will provide them with the knowledge needed for the world of global organizations. Prior to graduation, students are required to complete successfully 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 indicated 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, student may choose from those additional courses as well. The menu for 2002-2003 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 with the exception of all Multimedia courses and all English courses except those listed below.
All Indigenous Studies courses.
All Political Science courses, except POL SCI 1G06, 3C03, 3D33, 3F03, 3F83, 3J83, 3903, 4C05, 4S06.
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 3H3 International Trade
ECON 3I03 Economic History of the United States
ECON 3LL3 History of Economic Theory
ECON 3T03 Topics in Economic Development
ENGLISH 1B03 Cultural Studies and Visual Culture
ENGLISH 1BB3 Cultural Studies: History, Theory, Practice
ENGLISH 2C03 Canadian Literature
ENGLISH 2F03 Studies in American Literature
ENGLISH 2J03 Contemporary Popular Culture
GEO 1HS3 Social Geography: The Human Environment
GEO 1HU3 Urban/ Economic Geography
GEO 3HJ3 Geography of Japan
GEO 3HF3 Geography of a Selected World Region: New Zealand and Australia
GEO 3HZ3 Urban Social Geography
SOCIOL 2E06 Racial and Ethnic Group Relations
SOCIOL 3Z03 Ethnic Relations

All courses included under the Peace Studies minor (see, Inter-disciplinary Minors and Thematic areas section of the Calendar).

FULL-TIME/PART-TIME STUDIES

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

CONTINUING STUDENTS

Graduates of McMaster's Commerce programmes or one of the Engineering and Management programmes may take, as part-time students, Level III and IV Commerce courses (not previously taken, to a maximum of 18 units), excluding COMMERCE 4AG3*, 4AH3*, 4AI3*, with the permission of the Academic Programmes Office. Such permission will be given only if normal prerequisites are satisfied and if space permits after meeting the requirements of in-course students. Registrations will be approved after classes start. (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 qualified instructors. For details concerning
these courses, please see the McMaster University Spring/Summer Timetable at the following url: http://www.mcmaster.ca/parttime/

Other than those graduates specified above, Commerce courses are open to Continuing Students.

SECOND UNDERGRADUATE DEGREE

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

CREDIT TOWARDS PROFESSIONAL DESIGNATIONS

Educational requirements toward a variety of professional designations can be met in varying degrees within the Commerce programmes and the Engineering and Management programmes.

The professional accounting designations C.A., C.M.A. and C.G.A. are available to students enrolled in the School of Business, 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 programmes. Additional course work may be taken as Extras (see Extra Courses below) while in the programme. 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 Programmes Office in the School of Business.

MINOR

A minor is an option available to a student enrolled in a four- or five-level programme. A minor normally 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 programme 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

A student enrolled in either of the Commerce programmes, 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 Level III of the Honours Commerce programme, students must have completed at least 24 units of course work for Level II Commerce (as described in the School of Business Programmes 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 programme upon entry to Level III, there is one final opportunity for consideration. To be considered for Level IV of the Honours Commerce programme, students must have completed at least 24 units of course work for Level III Commerce (as described in the School of Business Programmes 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 PROGRAMME

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

Students in good standing in the Engineering and Management programmes may transfer to a Commerce programme with the permission of the Academic Programmes Office. The conditions for eligibility for entrance to the Commerce programmes 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 programme. A part-time student in Business I is permitted to take a maximum of 18 units in any Fall/Winter session.

In any Fall/Winter session, a student may not register for more than 30 units (including Extra courses) without the approval of the Academic Programmes Office. Such approval will not be given to a student with a Cumulative Average (CA) below 7.0. In any Spring/Summer session, a student may not register for more than 12 units.

COURSE CHANGES

It is the responsibility of the student to ensure that the programme of work undertaken meets the requirements of the degree. All course changes must be made through the Academic Programmes Office.

WITHDRAWALS

Failure to complete a course, without obtaining approval to withdraw, will result in a course grade that includes zero on all grade components not completed. All withdrawals require approval from the Academic Programmes Office by the stated deadlines if they are to be made without academic penalty.

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 programme requirements for continuation in the programme 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 programme, or must be repeated or 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 C.A. Voluntary repetitions of non-Commerce courses in which passing grades have been previously attained are designated as Extra courses. (See Extra Courses below and in the Glossary section of this Calendar.)

EXTRA COURSES

Courses in addition to those which constitute the student's programme must be designated Extra at registration. Extra courses may be taken only upon successful completion of Level III of any of the Commerce programmes. No Extra courses may be scheduled in a manner which would delay completion of a student's programme. Commerce courses previously taken cannot be repeated as Extra. The designation of Extra can be neither added nor removed retroactively.

The last day to change the Extra designation is the last day for withdrawal without failure by default of the term to which it pertains.

LEVEL I COURSES

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

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 programme load. Courses must be taken in the sequence specified by the School of Business.

READMISSION

A student in Level II, III or IV of a Commerce programme, who becomes ineligible to continue in the School of Business, may apply for readmission to the Commerce programme 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 Associate Dean by June 30 for entry in September. This application should explain why the applicant would expect to succeed in the programme if readmitted. Forms for this purpose may be obtained from the Academic Programmes Office in the M.G. DeGroote Building, Room 104.

A student who is readmitted after having become ineligible to continue in a Commerce programme 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 programme within the past five years, including those who were in good standing at the time of their most recent registration, must apply for readmission through the Office of the Registrar.

REINSTATEMENT
A student who May Not Continue at the University may apply for reinstatement.

There are two categories of students who may apply for reinstatement to Business I:
1. Applicants who have been registered in Business I within the past five years, and have not been registered in another McMaster programme or at another University during that time, OR
2. Applicants from other Faculties.

Students seeking reinstatement must complete the Returning Student Application form available at the Office of the Registrar. The completed application and the $50 application fee must be submitted to the Office of the Registrar by June 30 for entry in September. Applications 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.

FORMER COMMERCE STUDENTS
If a student was previously registered in a McMaster Commerce programme and was in good standing but did not attend in the preceding year, the student must write to the Academic Programmes Office in the M.G. DeGroote Building, Room 104.

A student who is readmitted after having become ineligible to continue in a Commerce programme 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.

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COMMERCE INTERNSHIP PROGRAMME
This is a programme 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 programme. Students securing positions will be required to register in COMMERCE 3100, Commerce Internship Programme, 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 3100, 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, Michael G. DeGroote School of Business, Room 112.

EXCHANGE PROGRAMMES
There are a number of official exchange programmes offered to undergraduate students registered in the School of Business. The countries involved are: Denmark, England, France, Germany, Norway, Mexico and Singapore. Official exchange programmes 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 to be eligible to participate in an exchange. In most cases, students who participate in exchange programmes go abroad for Level III of their programme. Information is available from Prof. M. Adams, Exchange Programmes Coordinator, M.G. DeGroote Building, Room 320.

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

STUDENT EXCHANGES
HAMILTON HALL, ROOM 405
TELEPHONE: (905) 525-9140, EXTENSION 24748

PROGRAMMES

PROGRAMME NOTES
1. Students in Business I are not eligible to take upper Level Commerce course work.
2. Students have only one opportunity to be reviewed for entry to Commerce II. Other options may be pursued through the Academic Programmes Office.
3. To be considered for entry into Commerce II a Business I student must have met all of the following:
   a) achieved a CA of at least 5.0 on the 30 units of course work for Business I (on first attempts only);
   b) successfully completed on first attempts only all Business I required courses: ECON 1A06; COMMERCE 1E03 or 1S03; COMP SCI 1B03; MATH 1A03 or 1M03; and one of ANTHROP 1A03, GEO 1H03, PSYCH 1A03, SOCIO 1A06.
   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 this 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 study in Business I.
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 and one of ANTHROP 1A03, GEO 1HS3, PSYCH 1A03 or SOCIOL 1A06 as part of the degree requirements. Academic requirements for admission of transfer students will be more demanding than those for Business I students. Students who wish to apply for a transfer to the Faculty of Business must complete an application for transfer during the month of March.

7. Admission to either of the Commerce programmes beyond Commerce Level II is not possible.

**Business I**

**REQUIREMENTS**

**LEVEL I: 30 UNITS**

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

- 3 units COMMERCE 1E03
- 3-6 units from ANTHROP 1A03, GEO 1HS3, PSYCH 1A03, SOCIOL 1A06
- 3 units COMP SCI 1B03
- 6 units ECON 1A06
- 3 units MATH 1K03 or 1A03 (See Note 5 above.)
- 0-3 units MATH 1K05 (for those without OAC Calculus (or Advanced Functions and Introductory Calculus U) or whose credit in same is older than five years)
- 0-3 units STATS 1L03 (for those without OAC Finite (or Mathematics of Data Management U) or whose credit in same is older than five years)
- 9-15 units Electives to total 30 units. See also the International/Cross-Cultural/Language Menu in this section of the Calendar.

**Commercie II**

**REQUIREMENTS**

**LEVEL II: 30 UNITS**

- 24 units COMMERCE 2AA3, 2AB3, 2BA3, 2FA3, 2MA3, 2OA3, 2QB3, 2S03
- 3 units ECON 2X03
- 3 units 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. programme 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 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 Level III or IV Commerce courses or electives from non-Commerce courses
- 9 units 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. programme 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 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 Level III or IV Commerce courses or electives from non-Commerce courses
- 18 units Electives from non-Commerce courses. See also the International/Cross-Cultural/Language Menu in this section of the Calendar.

**Minor in Business**

**NOTES**

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

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

3. For purposes of the Business Minor, KINESIO 3L03 will be accepted as a substitute for COMMERCE 2BA3; ECON 2B03, STATS 1C03 will be accepted as a substitute for COMMERCE 2QA3.

**REQUIREMENTS**

- 6 units ECON 1A06 or 1B03 and 1BB3
- 18 units COMMERCE 2AA3, 2BA3, 2FA3, 2MA3, 2QA3, 2QB3, 3BC3, 3FA3, 3MC3
An engineer, as originally defined, is an ingenious person. The engineer today is concerned with the creation of devices, systems, and structures for human use. In this role of creator and innovator, the engineer finds resourcefulness and capacity for invention at the heart of the practice of engineering. Modern society is challenged to advance from heedless exploitation of our world to an era of exercising responsible stewardship of resources, and the use of the products and wastes of our industries. An engineering education at McMaster provides a host of choices which lead to this creative and fulfilling role in society.

For information concerning the Bachelor of Engineering programme, please see the Programme for B.Eng. Degree section of this Calendar.

Four-year programmes are offered leading to the Bachelor of Engineering Degree in the following fields of specialization:

- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Engineering Physics
- Materials Engineering
- Mechanical Engineering
- Software Engineering

A five-year programme, leading to the Bachelor of Engineering and Society Degree, is offered in:

- Chemical Engineering and Society
- Civil Engineering and Society
- Computer Engineering and Society
- Engineering Physics and Society
- Electrical Engineering and Society
- Materials Engineering and Society
- Mechanical Engineering and Society
- Software Engineering and Society

In addition, and in conjunction with the School of Business, five-year programmes leading to the Bachelor of Engineering and Management degree are offered in:

- Chemical Engineering and Management
- Civil Engineering and Management
- Computer Engineering and Management
- Electrical Engineering and Management
- Engineering Physics and Management
- Materials Engineering and Management
- Mechanical Engineering and Management
- Software Engineering and Management

A new five-year programme leading to the Bachelor of Engineering and Biosciences has been introduced in:

Chemical Engineering and Bioengineering

All five-year programmes have limitations on enrolment. Students are admitted to the programme 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 programmes in Engineering are accredited by the Canadian Engineering Accreditation Board (CEAB) of the Canadian Council of Professional Engineers, except the Chemical Engineering and Bioengineering, Software Engineering and Management and Software Engineering and Society programmes 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 programmes are honours degree programmes.

At McMaster, B.Eng. students take a common Level I programme comprising Mathematics, Physics, Chemistry, Engineering Design, Computation and a complementary studies elective. The specialized programmes are entered at Level II. Students interested in the Engineering and Management programmes must take ENGR 1503 as one of their electives in Level I. Students interested in one of the Engineering and Society programmes are advised to choose the six units complementary studies in Level I to be consistent with their chosen focus of the programme.

Programmes offered by the Faculty of Engineering include four types of elective courses, which are governed by regulations, as follows:

- **Complementary Studies Electives** are broadening courses which are not in subjects that are an integral part of B.Eng. programmes.

  In addition to ENGINEER 4A03 or equivalent and 2B03 or 4B03, complementary studies electives are required in all B.Eng. programmes. Of these, three units must be selected from courses that are designated as being above Level I (http://www.eng.mcmaster.ca/electives/level2.htm).

- The Associate Dean of Engineering must authorize each student's complementary studies elective courses. An approved list is published each spring and is available from the Associate Dean's office (http://www.eng.mcmaster.ca/electives/level2.htm). Engineering I students should refer to the *Degrees and Programmes* section of this Calendar to determine which Level I Complementary Studies electives are possible (http://www.eng.mcmaster.ca/electives/level1.htm).

- **Technical Electives** are Engineering or Applied Science courses in subjects relevant to the particular B.Eng. programme. Commerce Electives are required in Level V of Engineering and Management programmes.

- **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 programme, such that they form a proper sequence of the focus electives. Both the appropriate Department Chair and the Associate Dean of Engineering must approve each student's Technical, Commerce and Engineering and Society Focus Elective Courses.

### INDUSTRIAL INTERNSHIPS

The Faculty of Engineering offers 12 to 16-month full-time paid work placements in industry to provide B.Eng. students with the technical work experience based on their course work. Students who qualify complete ENGINEER 3IN0 which includes career planning preparation, and a competitive application and interviewing process with participating companies. Students must be in their second or third level of a four-level programme, or their fourth level of a five-level programme and be eligible to return to complete their undergraduate engineering degree in order to accept an Internship Placement. Students must have a minimum of 24 units to complete upon returning to studies at McMaster after the work term. An administrative fee is assessed following the start of the Placement. Industrial Internships are open to all disciplines and B.Eng. programmes within the Faculty of Engineering.

### EXCHANGE PROGRAMMES

Formal exchange agreements with a number of universities in other countries are available for B.Eng. students wishing to attend a foreign university and receive credit at McMaster. For further information please see International Study in the General Academic Regulations section in this Calendar. For information on the Canadian Scholars Exchange Programme (CASEX), please refer to the Academic Facilities, Student Services and Organizations section of this Calendar under the heading Student Exchanges.
ACADEMIC REGULATIONS FOR B.ENG. PROGRAMMES

Students enrolled in Engineering programmes, 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 Level I courses with an overall Cumulative Average (CA) of 4.0 or greater. To help students who may have had academic difficulty during the year, the Faculty of Engineering has a remedial studies plan (called the M-Opportunity) that provides the opportunity to repeat failed courses in second term and/or in the summer. The results of these M-Opportunity courses are used to calculate a new CA. (Failed courses are still counted in the CA.)

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

SEQUENCE OF COURSES
Courses must be taken in the sequence specified in the Calendar for the programme. 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 programme or may be replaced if the courses are not explicitly required. Courses must be repeated following failure or if required by the Faculty.

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 35 units for Engineering I students. The workload for other students must be approved by the appropriate Department Chair and the Associate Dean of Engineering. In order to qualify for most scholarships students must register in the full load of work prescribed by programme 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 Returning Student Application available at the Office of the Registrar or the Office of the Associate Dean of Engineering. The completed application and the $50 application fee must be submitted to the Office of the Registrar by June 30. Applications 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 programme 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 programme probation.

PROGRAMME CHANGES
All programme changes must be made through the Office of the Associate Dean of Engineering and will be subject to the deadline dates established by the University (see Sessional Dates section of this Calendar).

LEVEL I PROGRAMME

WEB ADDRESS: http://www.eng.mcmaster.ca/engineering1/

ENGINEERING I: 35 UNITS
3 units CHEM 1E03
8 units ENGINEER 1A00, 1C04, 1D04
12 units MATH 1H03, 1H13, 1N03, 1NN3
6 units PHYSICS 1D03, 1E03
6 units approved complementary studies electives

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

Admission to Level II

Engineering Programmes

Admission to Level II Engineering programmes requires completion of Engineering I with a minimum CA of 4.0. All programmes have limited enrollment; should there be more applicants than the limiting number in any programme admission to that programme will be based on a full load using the Level I CA. Admission to a Level II programme for students registered in a reduced load will be by selection and/or an interview.

In addition, admission to a B.Eng.Mgt. programme requires the completion of ECON 1B03 with a minimum grade of 5.0; an interview may also be required.

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

Students seeking admission to the Engineering and Management programme or the Engineering and Society programme must first be admitted to the relevant department. Thereafter, they will be considered for admission to either of these two programmes.

Chemical Engineering (B.Eng.)

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
5 units approved complementary studies electives

LEVEL III: 36 UNITS
27 units CHEM ENG 3D03, 3E04, 3G03, 3K04, 3L02, 3M04, 3N04, 3P03
3 units CHEM 2E03
6 units from BIOCHEM 2E03, CHEM ENG 3Q03, CHEM 3I03, ENGINEER 2O03

LEVEL IV: 34 UNITS
10 units CHEM ENG 4L02, 4N04, either 4W04 or 4Y04
3 units from ENGINEER 4A03, 4H03, ENG PHYS 4C03
9 units from CHEM ENG 4B03, 4E03, 4G03, 4K03, 4M03, 4T03, 4X03, ENGINEER 4U03
3 units complementary studies electives (above Level I)
9 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.)  

ADMISSION
See Admission to Level II Engineering Programmes.

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

PROCESS SYSTEMS ENGINEERING (PSE) STREAM:
- Required Courses: CHEM ENG 4C03, 4E03, 4G03
- Technical Electives: ELEC ENG 4CL4, ENG PHYS 3W04 or MECH ENG 4H03

POLYMER MATERIALS AND MANUFACTURING (PMM) STREAM:
- Required Courses: CHEM ENG 3Q03, 4B03, 4C03, 4X03, ENGINEER 2003
- Technical Electives: MATLS 3M03, 4P03 or MECH ENG 3C03

LEVEL II: 35 UNITS
15 units: CHEM ENG 2A04, 2D04, 2F04, 2G03
3 units: CHEM 1A3
3 units: COMMERCE 2AA3
6 units: ECON 1B03, 2X03
6 units: MATH 2M06
3 units: STATS 3N03 or 3Y03

LEVEL III: 36 UNITS
24 units: CHEM ENG 3D03, 3E04, 3G03, 3K04, 3L02, 3M04, 3D04
3 units: CHEM 2E03
9 units: COMMERCE 2AB3, 2FA3, 2MA3

LEVEL IV: 37 UNITS
5 units: CHEM ENG 3P03, 4L02
3 units: from CHEM ENG 4K03, 4M03, 4T03, 4X03, ENGINEER 4U03
12 units: COMMERCE 2BA3, 3FA3, 3MC3, 3QC3
3 units: from ENGINEER 4A03, 4H03, ENG PHYS 4C03
2 units: ENGN MGT 3A01, 4A01
3 units: approved complementary studies electives (above Level I)
6 units: from BIOCHEM 2EE3, CHEM ENG 3Q03, CHEM 2A03, 3103, ENGINEER 2003
3 units: Level III or IV technical electives from approved list or permission of the Department of Chemical Engineering

LEVEL V: 35 UNITS
8 units: CHEM ENG 4N04; one of CHEM ENG 4W04 or 4Y04
6 units: COMMERCE 3BC4, 3M03
3 units: ENGN MGT 5A03
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 2GB3
3 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)  

ADMISSION
See Admission to Level II Engineering Programmes.

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
- Technical Electives: ELEC ENG 4CL4, ENG PHYS 3W04 or MECH ENG 4H03

POLYMER MATERIALS AND MANUFACTURING (PMM) STREAM:
- Required Courses: CHEM ENG 3Q03, 4B03, 4C03, 4X03, ENGINEER 2003
- Technical Electives: MATLS 3M03, 4P03 or MECH ENG 3C03
2. A minimum of 18 units of focus elective courses is required for the programme.

LEVEL II: 33-36 UNITS
15 units: CHEM ENG 2A04, 2D04, 2F04, 2G03
3 units: CHEM 1A3
6 units: ENGSOCTY 2X03, 2Y03
6 units: MATH 2M06
3-6 units: Engineering and Society focus electives

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

LEVEL IV: 33-36 UNITS
12 units: CHEM ENG 3E04, 3G03, 3P03, 4L02
3 units: from CHEM ENG 4K03, 4M03, 4T03, 4X03, ENGINEER 4U03
6 units: ENGSOCTY 3X03, 3Z05
6 units: from BIOCHEM 2EE3, CHEM ENG 3Q03, CHEM 3103, ENGINEER 2003
3-6 units: Engineering and Society focus electives
3 units: Level III or IV technical electives from approved list or permission of the Department of Chemical Engineering

LEVEL V: 32 UNITS
8 units: CHEM ENG 4N04; one of CHEM ENG 4W04 or 4Y04
9 units: from CHEM ENG 4B03, 4E03, 4G03, 4K03, 4M03, 4T03, 4X03, ENGINEER 4U03
6 units: ENGSOCTY 4X03, 4Z03
3 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.Biosciences)

Subject to approval by the Ministry of Training, Colleges and Universities, beginning in the 2002-2003 academic year, a B.Eng.Biosciences programme in Chemical Engineering and Bioengineering will be offered.

ADMISSION
See Admission to Level II Engineering Programmes.

LEVEL II: 36 UNITS
15 units: CHEM ENG 2A04, 2D04, 2F04, 2G03
3 units: CHEM 1A3
3 units: BIOLOGY 1A03
6 units: HTH SCI 2L03, 2L13
6 units: MATH 2M06
3 units: STATS 3N03

LEVEL III: 36 UNITS
24 units: CHEM ENG 3C04, 3D03, 3G03, 3K04, 3L02, 3M04, 3Q04
6 units: CHEM 2A03, 2E03
3 units: BIOCHEM 2EE3
3 units: approved complementary studies electives (above Level II)

LEVEL IV: 36 UNITS
18 units: CHEM ENG 3B03, 3BM3, 3E04, 3P03 4L02, 4LL3
3 units: BIOCHEM 3G03
3 units: from ENGINEER 4A03, 4H03, ENG PHYS 4C03
6 units: from CHEM 3103, CHEM ENG 3Q03, ENGINEER 2003
3 units: approved complementary studies electives (above Level II)
3 units: Level III or IV technical electives from approved list or permission of the Department of Chemical Engineering

LEVEL V: 35 UNITS
4 units: CHEM ENG 4N04
4 units: from CHEM ENG 4W04, 4Y04
9 units: from CHEM ENG 4B03, 4E03, 4G03, 4K03, 4M03, 4X03, 4Z03
6 units: CHEM ENG 4T03, ENGINEER 4U03
6 units: approved technical electives from biosciences or bio-engineering
3 units: approved complementary studies electives (above Level II)
3 units: Level III or IV technical electives from approved list or permission of the Department of Chemical Engineering
Civil Engineering (B.Eng.) {4120}

ADMISSION
See Admission to Level II Engineering Programmes.

NOTE
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 a Level IV Registration Form.

LEVEL II: 37 UNITS
20 units CIV ENG 2A02, 2C04, 2E03, 2J04, 2Q04
11 units ENGINEER 2C03, 2P04, 2Q04
6 units MATH 2M06

LEVEL III: 36 UNITS
26 units CIV ENG 3A03, 3B03, 3C03, 3G03, 3J04, 3K03, 3M04, 3S03
3 units ENGINEER 3P03
4 units MATH 3J04
3 units approved complementary studies electives (above Level II)

LEVEL IV: 34-36 UNITS
6 units ENGINEER 4B03; and one of ENGINEER 4A03, 4H03 or ENG PHYS 4C03
25-27 units from Level IV Civil Engineering technical electives or ENGINEER 4U03
3 units approved complementary studies electives (above Level I)

Civil Engineering and Management (B.Eng.Mgt.) {4120325}

ADMISSION
See Admission to Level II Engineering Programmes.

NOTE
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 a Level V Registration Form.

LEVEL II: 39 UNITS
17 units CIV ENG 2A02, 2C04, 2I03, 2J04, 2Q04
6 units COMMERCE 2AA3, 2MA3
6 units ECON 1BB3, 2X03
4 units ENGINEER 2P04
6 units MATH 2M06

LEVEL III: 39 UNITS
13 units CIV ENG 2B03, 3G03, 3M04, 3S03
6 units COMMERCE 2A03, 2A3, 2FA3
7 units ENGINEER 2C03, 2Q04
4 units MATH 3J04
3 units STATS 3Y03
3 units approved complementary studies electives (above Level II)

LEVEL IV: 35 UNITS
16 units CIV ENG 3A03, 3B03, 3C03, 3J04, 3K03
12 units COMMERCE 3BC3, 3FA3, 3MC3, 3OC3
3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2QB3
3 units ENGINEER 3P03
1 unit ENGN MGT 3AA1

LEVEL V: 37-38 UNITS
24-25 units from Level IV Civil Engineering technical electives or ENGINEER 4U03
3 units COMMERCE 4PA3
4 units ENGN MGT 4A01, 5B03
3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2QB3
3 units from ENGINEER 4A03, 4H03, ENG PHYS 4C03

Civil Engineering and Society (B.Eng.Soc.) {4120535}

ADMISSION
See Admission to Level II Engineering Programmes.

NOTES
1. 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 a Level V Registration Form.

LEVEL II: 36-39 UNITS
17 units CIV ENG 2A02, 2C04, 2I03, 2J04, 2Q04
4 units ENGINEER 2P04
6 units MATH 2M06
6 units ENGSOC 2X03, 2Y03
3-6 units Engineering and Society focus electives

LEVEL III: 33-36 UNITS
13 units CIV ENG 2B03, 3G03, 3M04, 3S03
7 units ENGINEER 2C03, 2Q04
4 units MATH 3J04
3 units ENGSOC 3Y03
6-9 units Engineering and Society focus electives

LEVEL IV: 31-34 UNITS
16 units CIV ENG 3A03, 3B03, 3C03, 3J04, 3K03
3 units ENGINEER 3P03
6 units ENGSOC 3X03, 3Z03
6-9 units Engineering and Society focus electives

LEVEL V: 36-37 UNITS
3 units ENGINEER 4B03
6 units ENGSOC 4X03, 4Z03
3 units Engineering and Society focus electives
24-25 units from Level IV Civil Engineering technical electives or ENGINEER 4U03

Computer Engineering (B.Eng.) {4144}

ADMISSION
See Admission to Level II Engineering Programmes.

LEVEL II: 37 UNITS
8 units COMP ENG 2D14, 2S14
12 units ELEC ENG 2C14, 2J14, 2E14
6 units ENGINEER 2B03, 2E03
8 units MATH 2P04, 2Q04
3 units approved complementary studies electives (above Level II)

LEVEL III: 38 UNITS
8 units COMP ENG 3D14, 3S14
20 units ELEC ENG 3E14, 3F14, 3TP4, 3TO4, 3TR4
3 units MATH 3K03
4 units SFWR ENG 3K04
3 units COMP SCI 3SH3

LEVEL IV: 35-37 UNITS (2002-2003 ONLY)
4 units ELEC ENG 4H13, 4HJ1
16 units COMP ENG 4DK4, 4DL4, 4DM4, 4014
3-4 units technical electives from Electrical Engineering or Computer Engineering Level III or IV
3-4 units approved Level III or IV technical electives
3 units ENGINEER 2H03
3 units from ENGINEER 4A03, 4H03, ENG PHYS 4C03
3 units COMP SCI 3SH3

LEVEL IV: 36-38 UNITS (EFFECTIVE 2003-2004)
4 units ELEC ENG 4H13, 4HJ1
20 units COMP ENG 4DK4, 4DL4, 4DM4, 4DN4, 4Q14
3-4 units technical electives from Electrical Engineering or Computer Engineering Level III or IV
3-4 units approved Level III or IV technical electives
3 units ENGINEER 2H03
3 units from ENGINEER 4A03, 4H03, ENG PHYS 4C03
Computer Engineering and Management (B.Eng.Mgt.)

ADMISSION
See Admission to Level II Engineering Programmes.

LEVEL II: 38 UNITS
3 units COMMERCE 2AA3
8 units ELEC ENG 2D14, 2S14
6 units ECON 1BB3, 2X03
8 units ELEC ENG 2C14, 2G4
2 units ENGN MGT 2AA2
8 units MATH 2P04, 2C04
3 units ENGINEER 2H03

LEVEL III: 38 UNITS
12 units COMMERCE 2AB3, 2BA3, 2FA3, 2MA3
12 units ELEC ENG 3F14, 3TP4
3 units ENGINEER 3E03
1 unit ENGN MGT 3AA1
3 units MATH 3K03
4 units SFWR ENG 3K04
3 units approved complementary studies electives (above Level I)

LEVEL IV: 38 UNITS
13 units ELEC ENG 3E14, 3TQ4, 3TR4, 4H1J
4 units COMP ENG 3D14
9 units COMMERCE 3BC3, 3FA3, 3MC3
3 units COMP SCI 3SH3
3 units STATS 3Y03
3 units Commerce electives selected from Level III and IV
3 units from ENGINEER 4A03, 4H03, ENG PHYS 4CS3

LEVEL V: 36 UNITS (2002-2003 ONLY)
6 units COMMERCE 3QQ3, 3PA3
20 units COMP ENG 3SK4, 4DK4, 4DL4, 4D14, 4D4, 4OI4
4 units ENGN MGT 4A01, 5B03
3 units COMP SCI 3SH3
3 units Commerce electives selected from Level III and IV
3 units from ENGINEER 4A03, 4H03, ENG PHYS 4CS3

LEVEL V: 37 UNITS (EFFECTIVE 2003-2004)
6 units COMMERCE 3QQ3, 3PA3
24 units COMP ENG 3SK4, 4DK4, 4DL4, 4D14, 4D4, 4D4, 4OI4
4 units ENGN MGT 4A01, 5B03
3 units Commerce electives selected from Level III and IV
3 units from ENGINEER 4A03, 4H03, ENG PHYS 4CS3

Computer Engineering and Society (B.Eng.Society)

ADMISSION
See Admission to Level II Engineering Programmes.

NOTE
A minimum of 18 units of focus elective courses is required for the programme.

LEVEL II: 36-39 UNITS
8 units COMP ENG 2D14, 2S14
8 units ELEC ENG 2C14, 2C14
3 units ENGINEER 2E03
6 units ENGSOCTY 2X03, 2Y03
8 units MATH 2P04, 2C04
3-6 units Engineering and Society focus electives

LEVEL III: 32-35 UNITS
3 units ENGINEER 2H03
12 units ELEC ENG 2E14, 3F14, 3TP4,
3 units ENGSOCTY 3Y03
4 units COMP ENG 3SK4
3 units MATH 3K03
4 units SFWR ENG 3K04
3-6 units Engineering and Society focus electives

LEVEL IV: 32-35 UNITS
13 units ELEC ENG 2E14, 3TQ4, 3TR4, 4H1J
4 units COMP ENG 3D14
6 units ENGSOCTY 3X03, 3Z03
3-6 units Engineering and Society focus electives
3 units ENGINEER 2H03
3 units COMP SCI 3SH3

LEVEL V: 31-35 UNITS (2002-2003 ONLY)
16 units COMP ENG 4DK4, 4DL4, 4D14, 4D4, 4OI4
6 units ENGSOCTY 4X03, 4Z03
3-6 units Engineering and Society focus electives
3-4 units technical electives from an approved list of Electrical Engineering or Computer Engineering Level III or IV
3 units COMP SCI 3SH3

20 units COMP ENG 4DK4, 4DL4, 4D14, 4D4, 4OI4
6 units ENGSOCTY 4X03, 4Z03
3-6 units Engineering and Society focus electives
3-4 units technical electives from an approved list of Electrical Engineering or Computer Engineering Level III or IV

Electrical Engineering (B.Eng.)

ADMISSION
See Admission to Level II Engineering Programmes.

LEVEL II: 37 UNITS
20 units ELEC ENG 2C14, 2C14, 2D14, 2E14, 2S14
6 units ENGINEER 2B03, 2E03
8 units MATH 2P04, 2C04
3 units approved complementary studies electives (above Level I)

LEVEL III: 39 UNITS
8 units COMP ENG 3D14, 3SK4
24 units ELEC ENG 3E14, 3P14, 3P14, 3TP4, 3TQ4, 3TR4
3 units MATH 3K03
4 units SFWR ENG 3M04

LEVEL IV: 36-38 UNITS
8 units ELEC ENG 4H1J, 4H1J, 4O14
16 units from COMP ENG 4DK4, 4DL4, 4D14, 4TL4, ELEC ENG 4CL4, 4F14, 4PK4, 4PL4, 4T1K4
3-4 units technical electives from an approved list of Electrical Engineering or Computer Engineering Level III or IV
3 units ENGINEER 2H03
3-4 units technical electives (from Level III and IV of the Faculty of Engineering)
3 units from ENGINEER 4A03, 4H03, ENG PHYS 4CS3

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

ADMISSION
See Admission to Level II Engineering Programmes.

LEVEL II: 38 UNITS
3 units COMMERCE 2AA3
6 units ECON 1BB3, 2X03
16 units ELEC ENG 2C14, 2C14, 2D14, 2S14
2 units ENGN MGT 2AA2
8 units MATH 2P04, 2C04
3 units ENGINEER 2H03

LEVEL III: 38 UNITS
12 units COMMERCE 2AB3, 2BA3, 2FA3, 2MA3
12 units ELEC ENG 2E14, 3F14, 3TP4
3 units ENGINEER 2E03
1 unit ENGN MGT 3AA1
3 units MATH 3K03
4 units SFWR ENG 3K04
3 units approved complementary studies electives (above Level I)

LEVEL IV: 39 UNITS
17 units ELEC ENG 3E14, 3P14, 3TQ4, 3TR4, 4H1J
4 units COMP ENG 3D14
9 units COMMERCE 3BC3, 3FA3, 3MC3
3 units STATS 3Y03
3 units Commerce electives selected from Level III and IV
3 units from ENGINEER 4A03, 4H03, ENG PHYS 4CS3
LEVEL V: 37 UNITS
6 units COMMERCE 3QC3, 4PA3
4 units ELEC ENG 4O14
4 units ENGN MGT 5B03, 4A01
4 units COMP ENG 3SK4
3 units Electrical Engineering and Society (B.Eng) Action
16 units from COMP ENG 4DK4, 4DL4, 4DM4, 4TL4, ELEC ENG 4CL4, 4FJ4, 4PK4, 4PL4, 4TK4

Engineering Physics and Society (B.Eng.Society) {4190352}
ADMISSION
See Admission to Level II Engineering Programmes.

NOTE
A minimum of 18 units of focus elective courses is required for the programme.

LEVEL VI: 36-39 UNITS
16 units ELEC ENG 2C14, 2CJ4, 2D14, 2SI4
3 units ENGINEER 2E03
6 units ENGSOCITY 2X03, 2Y03
8 units MATH 2P04, 2P04
3-6 units Engineering and Society focus electives

LEVEL VII: 32-35 UNITS
3 units ENGINEER 2B03
12 units ELEC ENG 2E14, 3F14, 3TP4
4 units ENGSOCITY 3Y03
4 units COMP ENG 3SK4
3 units MATH 3K03
4 units SFWR ENG 3M04
3-6 units Engineering and Society focus electives

LEVEL VIII: 36-39 UNITS
17 units ELEC ENG 3EJ4, 3PI4, 3TQ4, 3TR4, 4HJ1
4 units COMP ENG 3D4J
6 units ENGSOCITY 3X03, 3Z03
6-9 units Engineering and Society focus electives
3 units ENGINEER 2H03

LEVEL IX: 35-39 UNITS
4 units ELEC ENG 4O14
6 units ENGSOCITY 4X03, 4Z03
16 units from COMP ENG 4DK4, 4DL4, 4DM4, 4TL4, ELEC ENG 4CL4, 4FJ4, 4PK4, 4PL4, 4TK4
6-9 units Engineering and Society focus electives
3-4 units technical electives from an approved list of Electrical Engineering or Computer Engineering Level III or IV (not ELEC ENG 4H13)

Engineering Physics and Society (B.Eng.Society) {4190352}
ADMISSION
See Admission to Level II Engineering Programmes.

NOTE
The following areas and courses are suggested as technical electives for Level IV:
• Computer Systems PHYSICS 4D06
• Lasers and Optical Engineering PHYS 4G03, 4K03, 4S04
• Communications (Photonic) ENGSOCITY 3X03, 3Z03
• Nuclear Engineering ENGSOCITY 4X03, 4Z03
• Microelectronic Devices ENGSOCITY 4X03, 4Z03

LEVEL I: 39 UNITS
4 units COMP ENG 2D14
7 units ENGINEER 2003, 2P04
11 units ENGSOCITY 3X03, 3Z03, 2E04, 2H04
8 units MATH 2P04, 2Q04
3 units PHYSICS 2D03
6 units approved complementary studies electives (three units must be above Level I)

LEVEL II: 37 UNITS
19 units ENGSOCITY 3X03, 3Z03, 3E03, 3F03, 3G03, 3H03, 3W04
9 units ENGSOCITY 3X03, 3Z03, 4G03
8 units PHYSICS 3B06, 3M03

LEVEL III: 36-38 UNITS
3 units ENGINEER 4B03
11 units ENGSOCITY 4D03, 4F03, 4G03
22-24 units approved Level III or IV technical electives, of which
10 units must be selected from the following courses:
ENGSOCITY 4D03, 4E03, 4F03, 4G03, 4H03, 4S04, PHYSICS 4D06

Engineering Physics and Society (B.Eng.Society) {4190352}
ADMISSION
See Admission to Level II Engineering Programmes.

NOTE
A minimum of 18 units of focus elective courses is required for the programme.

LEVEL IV: 35-37 UNITS
3 units COMMERCE 2A03, 2MA3
4 units ENGSOCITY 2E04, 2F03, 2H04
11 units ENGSOCITY 2P04, 2Q04
6 units ENGSOCITY 2P04, 2Q04
3 units PHYSICS 2D03

LEVEL V: 38 UNITS
6 units ENGINEER 2B03
2 units ENGSOCITY 2P04, 2Q04
4 units ENGSOCITY 2P04
11 units ENGSOCITY 2P04, 2Q04
8 units MATH 2P04, 2Q04
3 units PHYSICS 2D03

LEVEL III: 40 UNITS
9 units ENGINEER 2A03, 2B03, 2C03
6 units ENGSOCITY 2D03, 2E04, 2F03
10 units ENGSOCITY 3G03, 3H03, 3I03
6 units MATH 3C03, 3D03
9 units PHYSICS 3B06, 3M03

12 units COMMERCE 3B03, 3F03, 3M03, 3Q03
1 unit ENGSOCITY 3A03
13 units ENGSOCITY 3A03, 3B03, 3C03, 3D03
3 units MATH 3G03
3 units PHYSICS 3M03
3 units approved complementary studies electives

12 units COMMERCE 3B03, 3F03, 3M03, 3Q03
1 unit ENGSOCITY 3A03
13 units ENGSOCITY 3A03, 3B03, 3C03, 3D03
3 units MATH 3G03
3 units PHYSICS 3M03
3 units approved complementary studies electives

LEVEL V: 35-37 UNITS
3 units ENGINEER 2A03, 2B03, 2C03
4 units ENGINEER 2D03, 2E03
4 units ENGINEER 2F03
18-20 units approved Level III or IV technical electives, of which
10 units must be selected from the following courses:
ENGSOCITY 4D03, 4E03, 4F03, 4G03, 4H03, 4S04, PHYSICS 4D06
6 units Commerce electives selected from Level III and IV

Engineering Physics and Society (B.Eng.Society) {4190352}
ADMISSION
See Admission to Level II Engineering Programmes.

NOTE
A minimum of 18 units of focus elective courses is required for the programme.

LEVEL IV: 35-38 UNITS
4 units ENGINEER 2B04
11 units ENGSOCITY 2A03, 2E04, 2F04
6 units ENGSOCITY 2P04, 2Q04
3 units PHYSICS 2D03
3-6 units Engineering and Society focus electives

LEVEL II: 35-38 UNITS
4 units ENGINEER 2B04
11 units ENGSOCITY 2A03, 2E04, 2F04
6 units ENGSOCITY 2P04, 2Q04
3 units PHYSICS 2D03
3-6 units Engineering and Society focus electives
Manufacturing Engineering (B.Eng.)  (4314)

NOTE
The Manufacturing Engineering Programmes are being phased out and will be replaced by a Manufacturing option in Level IV of the Mechanical Engineering programme (effective in the 2004-2005 academic year) and in Level V of the Mechanical Engineering and Materials Engineering and Society programmes (effective in the 2005-2006 academic year). Registration in Level III of the Manufacturing Engineering Programmes will be last available in September 2002. Students who intended to register in Level II of these programmes should refer to the requirements for the Mechanical Engineering programmes in this section of the Calendar.

LEVEL III: 35 UNITS
3 units ENGINEER 3N03
2 units MANUFACT 3M02
3 units MATL3 3M03
21 units MECH ENG 3A03, 3E04, 3F04, 3Q04, 3R03, 4D03
3 units STATS 3N03 or 3Y03
3 units approved complementary studies electives (above Level I)

LEVEL IV: 39 UNITS
3 units COMMERCE 3Q03
3 units stream of ENGINEER 4A03, 4H03, ENG PHYS 4C03
6 units ENGINEER 4B03, 4J03
6 units MANUFACT 4A03, 4M04, 4P02
15 units MECH ENG 4G03, 4K03, 4Q03, 4R03, 4Z03
3 units approved technical electives (See Level IV Mechanical Engineering)

Manufacturing Engineering and Management (B.Eng.Mgt.)  (4314325)

ADMISSION
See Admission to Level II Engineering Programmes.

LEVEL III: 38 UNITS
6 units COMMERCE 2A03, 2FA3
6 units ENGINEER 2M03 (Term 1), 3N03
2 units MANUFACT 3M02
3 units MATL3 3M03
18 units MECH ENG 2G04, 3C03, 3F04, 3Q04, 3R03
3 units STATS 3N03 or 3Y03

LEVEL IV: 35 UNITS
9 units COMMERCE 3B03, 3F03, 3MC3
2 units ENGN MGT 3A01, 4A01
5 units MANUFACT 4A03, 4P02
3 units MATL3 3M03
13 units MECH ENG 3A03, 3E04, 4D03, 4Z03
3 units approved complementary studies electives (above Level I)

LEVEL V: 37 UNITS
6 units COMMERCE 3Q03, 4P03
3 units from one of ENGINEER 4A03, 4H03, ENG PHYS 4C03
3 units ENGINEER 4J03
3 units ENGN MGT 5B03
4 units MANUFACT 4M04
12 units MECH ENG 4H03, 4K03, 4Q03, 4R03
6 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2B03.

Manufacturing Engineering and Society (B.Eng.Society)  (4314535)

LEVEL III: 34-37 UNITS
6 units ENGINEER 2M03 (Term 1), 3N03
3 units ENGN MGT 3Y03
2 units MANUFACT 3M02
17 units MECH ENG 2G04, 3A03, 3C03, 3E04, 3R03
3 units STATS 3N03 or 3Y03
3-6 units Engineering and Society focus electives

LEVEL IV: 34-37 UNITS
3 units ENGINEER 4J03
6 units ENGN MGT 3X03, 3Z03
2 units MANUFACT 4P02
3 units MATL3 3M03
17 units MECH ENG 4F04, 4G04, 4H03, 4R03
3-6 units Engineering and Society focus electives

LEVEL V: 34-37 UNITS
3 units ENGINEER 4J03
6 units ENGN MGT 3X03, 3Z03
2 units MANUFACT 4P02
3 units MATL3 3M03
17 units MECH ENG 4F04, 4G04, 4H03, 4R03
3-6 units Engineering and Society focus electives

Materials Engineering (B.Eng.)  (4315)

ADMISSION
See Admission to Level II Engineering Programmes.

NOTE
Students entering Level III can choose between the Materials Engineering stream and the Ceramic Engineering stream. In addition, the Materials Engineering stream is designed to permit choices of electives in Levels III and IV which will allow in-depth study of various types of modern engineering materials, i.e. electronic, metallurgical and polymeric materials. The following combinations of electives are suggested for specific areas of specialization.
- Metallurgical: MATL3 4C03, 4D03
- Polymer: CHEM ENG 3Q03, MATL3 4P03
- Electronic Materials: ENG PHYS 3F03, 4E03

LEVEL II: 38 UNITS
5 units CHEM 1A03, 2WW2
10 units ENGINEER 2M03, 2003, 2P04
11 units MATL3 2B03, 2D03, 2H03, 2X02
6 units MATH 2M06
6 units approved complementary studies electives

LEVEL III: (MATERIALS ENGINEERING STREAM)  (4315)
36-38 UNITS
4 units CHEM ENG 2A04
20 units MATL3 3B03, 3C03, 3D03, 3E04, 3M03, 3T04
3 units MATH 3I03
3 units STATS 3Y03
6-8 units from CHEM 2E03, CHEM ENG 3Q04, 3Q03, ENG PHYS 3F03, MATL3 3Q03, 4D03, 4P03, MECH ENG 3C04.
LEVEL IV: (MATERIALS ENGINEERING STREAM) 36-37 UNITS

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<th>Course/Subject</th>
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<tr>
<td>8</td>
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LEVEL III: (CERAMIC ENGINEERING STREAM) 36 UNITS

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LEVEL IV: (CERAMIC ENGINEERING STREAM) 34 UNITS

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

ADMISSION

See Admission to Level II Engineering Programmes.

LEVEL II: 36 UNITS

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LEVEL III: 37 UNITS

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LEVEL IV: (MATERIALS ENGINEERING STREAM) 36 UNITS

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LEVEL V: (CERAMIC ENGINEERING STREAM) 36 UNITS

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Advanced Materials and Processes (B.Eng. Mgt.)

ADMISSION

See Admission to Level II Engineering Programmes.

NOTES

A minimum of 12 units of focus elective courses is required for the programme.

LEVEL II: 34-37 UNITS

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LEVEL III: 33-36 UNITS

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LEVEL IV: (MATERIALS ENGINEERING STREAM) 32-35 UNITS

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LEVEL V: (MATERIALS ENGINEERING STREAM) 30-34 UNITS

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LEVEL IV: (CERAMIC ENGINEERING STREAM) 33-35 UNITS

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LEVEL V: (CERAMIC ENGINEERING STREAM) 30-33 UNITS

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Mechanical Engineering (B.Eng.) {4330}

ADMISSION
See Admission to Level II Engineering Programmes.

NOTE
Effective in the 2004-2005 academic year, Level IV Mechanical Engineering and Management students must choose one of the following option areas and complete sufficient units of the listed required courses and technical electives.

PROGRAMME OPTION COMPULSORY COURSES:
- GENERAL: Two of MECH ENG 3D03, 4Q03, 4S03, 4Z03
- MECHANICS AND DESIGN: MECH ENG 4Q03, 4Z03; two of MATLS 4T03, MECH ENG 4H03, 4I03, 4K03, 4L03, 4T03
- MANUFACTURING: MECH ENG 4Q03, 4Z03; two of CHEM ENG 4X03, ENGINEER 4J03, MATLS 4T03, MECH ENG 4A03, 4D03, 4H03, 4K03, 4T03
- THERMOFLUID SCIENCES: CHEM 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 3Q03, ELEC ENG 3P14

LEVEL II: 35 UNITS
4 units ENGINEER 2P04
3 units MATLS 2D03
6 units MATH 2M05
19 units MECH ENG 2B02, 2C03, 2Q04, 2W04, 3C03
3 units approved English literature (Term I)

LEVEL III: 35 UNITS (2002-2003 ONLY)
6 units ENGINEER 2M03 (Term I), 3N03
3 units MATH 3I03
23 units MECH ENG 3A03, 3D03, 3E04, 3F04, 3M02, 3O04, 3R03
3 units STATS 3Y03

LEVEL III: 35 UNITS (EFFECTIVE 2003-2004)
6 units ENGINEER 2M03, 3N03
3 units MATLS 3M03
3 units MATH 3I03
20 units MECH ENG 3E04, 3F04, 3M02, 3O04, 3R03, 4R03
3 units STATS 3Y03

LEVEL IV: 33 UNITS (2002-2004 ONLY)
3 units MATLS 3M03
15 units MECH ENG 4M04, 4P02, 4Q03, 4R03, 4S03
6 units ENGINEER 4B03 and one of ENGINEER 4A03, 4H03, or ENGG PHYS 4C03
3 units approved complementary studies electives (above Level I)
6 units from CHEM ENG 4T03, CIV ENG 3K03, COMMERCE 3Q03, ELEC ENG 3P14, ENGINEER 4J03, ENGG PHYS 3F03, 3X03, 4D03, 4L03, MANUFACT 4A03, MECH ENG 4D03, 4H03, 4I03, 4J03, 4K03, 4L03, 4T03, 4U03, 4V03
5 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 course list. (See Note above.)

Mechanical Engineering and Management (B.Eng.Mgt.) {4330325}

ADMISSION
See Admission to Level II Engineering Programmes.

NOTE
Effective in the 2004-2005 academic year, Level IV Mechanical Engineering and Management students must choose one of the following option areas and complete sufficient units of the listed required courses and technical electives.

PROGRAMME OPTION COMPULSORY COURSES:
- GENERAL: Two of MECH ENG 3D03, 4Q03, 4S03, 4Z03
- MECHANICS AND DESIGN: MECH ENG 4Q03, 4Z03; two of MATLS 4T03, MECH ENG 4H03, 4I03, 4K03, 4L03, 4T03
- MANUFACTURING: MECH ENG 4Q03, 4Z03; two of CHEM ENG 4X03, ENGINEER 4J03, MATLS 4T03, MECH ENG 4A03, 4D03, 4H03, 4K03, 4T03
- THERMOFLUID SCIENCES: CHEM 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 3Q03, ELEC ENG 3P14

LEVEL II: 37 UNITS
9 units COMMERCE 2AA3, 2B03, 2A03
6 units ECON 1BB3, 2X03
4 units ENGINEER 2P04
3 units MATLS 2D03
6 units MATH 2M06
7 units MECH ENG 2W04, 3C03
2 units ENGG MGT 2AA2

LEVEL III: 36 UNITS (2002-2003 ONLY)
3 units COMMERCE 2F03
1 unit ENGG MGT 3AA1
3 units MATLS 2M03
1 unit MATH 3I03
23 units MECH ENG 2C03, 2Q04, 3A03, 3C03, 3F04, 3M02, 3O04, 3R03
3 units STATS 3Y03

LEVEL III: 36 UNITS (EFFECTIVE 2003-2004)
3 units COMMERCE 2F03
1 unit ENGG MGT 3AA1
3 units ENGINEER 2M03
3 units MATH 3I03
23 units MECH ENG 2B02, 2C03, 2Q04, 3A03, 3F04, 3M02, 3O04, 3R03
3 units STATS 3Y03

LEVEL IV: 34 UNITS (2002-2003 ONLY)
12 units COMMERCE 2A03, 2B03, 3C03, 3F03, 4A01
18 units ENGG MGT 4A01
3 units ENGG MGT 4A01
3 units MATLS 3M03
12 units MECH ENG 3E04, 3M02, 3R03, 4V03
6 units from required option courses or approved technical electives

LEVEL IV: 34 UNITS (EFFECTIVE 2004-2005)
12 units COMMERCE 2A03, 2B03, 3C03, 3F03, 4A01
3 units MATLS 3M03
12 units MECH ENG 3E04, 3M02, 3R03, 4V03
6 units from required option courses or approved technical electives

LEVEL V: 34 UNITS (2002-2005 ONLY)
6 units COMMERCE 3C03, 4P03
7 units ENGG MGT 3AA3
6 units MECH ENG 4M04, 4Q03
3 units from ENGINEER 4A03 or 4H03 or ENGG PHYS 4C03
6 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2BB3
6 units from CHEM ENG 4T03, CIV ENG 3K03, ELEC ENG 3P14, ENGINEER 4A03, 4J03, ENGG PHYS 3F03, 3X03, 4D03, 4L03, MANUFACT 4A03, MATLS 3M03, MECH ENG 4D03, 4H03, 4I03, 4J03, 4K03, 4L03, 4T03, 4U03, 4V03, 4Z03
3 units approved complementary studies electives (above Level I)

LEVEL V: 34 UNITS (EFFECTIVE 2005-2006)
6 units COMMERCE 3C03, 4P03
6 units Commerce electives selected from Level III or IV Commerce or COMMERCE 2BB3
3 units ENGG MGT 5BB3
3 units from ENGINEER 4A03, 4H03 or ENGG PHYS 4C03
3 units approved complementary studies electives (above Level I)
8 units MECH ENG 4M06, 4P02
6 units from required option courses or approved technical electives. (See Note above.)
Mechanical Engineering and Society (B.Eng.Society)

ADMISSION
See Admission to Level II Engineering Programmes.

NOTES
1. Effective in the 2004-2005 academic year, Level IV 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.

PROGRAMME OPTION COMPULSORY COURSES:
- GENERAL: Two of MECH ENG 3D03, 4Q03, 4S03, 4Z03
- MECHANICS AND DESIGN: MECH ENG 4Q03, 4Z03; two of MATLS 4T03, MECH ENG 4H03, 4J03, 4K03, 4L03, 4T03
- MANUFACTURING: MECH ENG 4Q03, 4Z03; two of CHEM ENG 4X03, ENGINEER 4J03, MATLS 4T03, MECH ENG 4A03, 4D03, 4H03, 4K03, 4T03
- THERMOFLUID SCIENCES: MECH ENG 3D03, 4S03; two of CHEM ENG 4X03, MECH ENG 4I03, 4J03, 4Q03, 4T03

- APPROVED TECHNICAL ELECTIVES: Any of the required courses listed above, plus CHEM ENG 4T03, CIV ENG 3K03, COMMERCE 3C03, 3D03, 3E03, 3F03, 3G03, 3H03, 3I03, 3J03, 3K03.

2. A minimum of 18 units of focus elective courses is required for the programme.

LEVEL II: 33-36 UNITS

4 units ENGINEER 2P04
6 units ENGSOCTY 2X03, 2Y03
3 units MATLS 2D03
6 units MATH 2M06
11 units MECH ENG 2C03, 2Q04, 2W04
3-6 units Engineering and Society focus electives.

LEVEL III: 34-37 UNITS (2002-2003 ONLY)

3 units ENGSOCTY 3Y03
3 units MATH 3I03
22 units MECH ENG 2C03, 2Q04, 3A03, 3C03, 3M02, 3O04, 3R03
3 units STATS 3Y03
3-6 units Engineering and Society focus electives.

LEVEL IV: 31-34 UNITS (2002-2004 ONLY)

3 units ENGINEER 3N03
6 units ENGSOCTY 3X03, 3Z03
19 units MECH ENG 3D03, 3E04, 3F04, 4P02, 4R03, 4S03
3-6 units Engineering and Society focus electives.


3 units ENGINEER 4B03
3 units MATLS 3M03
3 units STATS 3Y03
6 units ENGSOCTY 3X03, 3Z03
12 units MECH ENG 5E04, 5M02, 4R03, 4V03
3 units from required option courses or approved technical electives.

3-6 units Engineering and Society focus electives.

LEVEL V: 31-34 UNITS (2002-2005 ONLY)

3 units ENGSOCTY 2X03, 2Y03
8 units PHYSICS 2G03
22 units SFWR ENG 2A04, 2B03, 2C04, 2D04, 2E03, 2F04
3 units approved complementary studies electives.

LEVEL III: 37 UNITS

6 units ENGINEER 3K03, 3L03
28 units SFWR ENG 3B04, 3C03, 3E03, 3F03, 3G03, 3H03, 3I03, 3J03, 3K03
3 units STATS 3Y03

LEVEL IV: 36 UNITS

3 units ENGINEER 4B03
27 units SFWR ENG 4A03, 4C03, 4D03, 4E03, 4F03, 4G03, 4H03, 4L03, 4P03
6 units approved technical electives.

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

ADMISSION
See Admission to Level II Engineering Programmes.

LEVEL II: 39 UNITS

6 units COMMERCE 2AA3, 2MA3
8 units ENGINEER 2B04, 2E04
22 units SFWR ENG 2A04, 2B03, 2C04, 2D04, 2E03, 2F04

LEVEL III: 37 UNITS

6 units COMMERCE 2B03, 2F03
8 units ENGSOCTY 3A03, 3B03, 3C03, 3D03, 3E03, 3F03, 3G03, 3H03, 3I03, 3J03, 3K03
3 units STATS 3Y03

LEVEL IV: 36 UNITS

15 units COMMERCE 2A03, 2C03, 3FA3, 3MC3, 3QC3
6 units ENGINEER 3K03, 3L03
2 units ENGSOCTY 3A01, 3A03
3 units PHYSICS 2B03
9 units SFWR ENG 3J03, 4E03, 4I03
3 units approved complementary studies electives (above Level I)

LEVEL V: 39 UNITS

3 units ENGINEER 4P03
3 units ENGSOCTY 3B03
21 units SFWR ENG 4A03, 4C03, 4D03, 4E03, 4F03, 4G03, 4H03, 4J03
6 units approved technical electives.

Software Engineering and Society (B.Eng.Society)

ADMISSION
See Admission to Level II Engineering Programmes.

NOTE
A minimum of 18 units of focus elective courses is required for the programme.

LEVEL II: 39 UNITS

6 units ENGSOCTY 2X03, 2Y03
8 units MATH 2P04, 2Q04
22 units SFWR ENG 2A04, 2B03, 2C04, 2D04, 2E03, 2F04
3 units approved complementary studies electives.

LEVEL III: 37 UNITS

6 units ENGINEER 3K03, 3L03
28 units SFWR ENG 3B04, 3C03, 3E03, 3F03, 3G03, 3H03, 3I03, 3J03, 3K03
3 units STATS 3Y03

LEVEL IV: 36 UNITS

3 units ENGINEER 4B03
27 units SFWR ENG 4A03, 4C03, 4D03, 4E03, 4F03, 4G03, 4H03, 4L03, 4P03
6 units approved technical electives.

Software Engineering and Society (B.Eng.Society)

ADMISSION
See Admission to Level II Engineering Programmes.

NOTE
A minimum of 18 units of focus elective courses is required for the programme.

LEVEL II: 39 UNITS

6 units ENGSOCTY 2X03, 2Y03
8 units MATH 2P04, 2Q04
22 units SFWR ENG 2A04, 2B03, 2C04, 2D04, 2E03, 2F04
3 units approved complementary studies electives.

LEVEL III: 37 UNITS

6 units ENGINEER 3K03, 3L03
28 units SFWR ENG 3B04, 3C03, 3E03, 3F03, 3G03, 3H03, 3I03, 3J03, 3K03
3 units STATS 3Y03

LEVEL IV: 36 UNITS

3 units ENGINEER 4B03
27 units SFWR ENG 4A03, 4C03, 4D03, 4E03, 4F03, 4G03, 4H03, 4L03, 4P03
6 units approved technical electives.
LEVEL IV: 33-36 UNITS
6 units ENGINEER 3K03, 4B03
6 units ENGSOCTY 3X03, 3203
3 units PHYSICS 2D03
15 units SFWR ENG 3J03, 4A03, 4E03, 4103, 4J03
3-6 units Engineering and Society focus electives

LEVEL V: 33-36 UNITS (2002-2003 ONLY)
6 units ENGSOCTY 4X03, 4203
18 units SFWR ENG 4A03, 4C03, 4D03, 4F03, 4G03, 4H03
6 units approved technical electives
3-6 units Engineering and Society focus electives

LEVEL V: 30-33 UNITS (EFFECTIVE 2003-2004)
6 units ENGSOCTY 4X03, 4203
15 units SFWR ENG 4C03, 4D03, 4F03, 4G03, 4H03
6 units approved technical electives
3-6 units Engineering and Society focus electives

PROGRAMME FOR THE B.TECH. DEGREE

The Bachelor of Technology Degree Programme in Manufacturing Engineering Technology is offered jointly by Mohawk College of Applied Arts and Technology and McMaster University. The objectives of the programme are to upgrade the knowledge and skills of existing technologists/technical specialists and to allow them to perform with a broad technical and academic background along with solid hands-on experience. The programme is designed to complement and enhance the student's background in basic engineering sciences, mathematics and advanced manufacturing technologies. An attempt has been made to structure the curriculum in concert with examinations typically assigned by Canadian professional engineering licensing bodies. Individuals seeking licensure in Mechanical Engineering may apply directly to the respective provincial (or territorial) professional engineering association. The number of examinations required for professional engineering licensing may be reduced.

ACADEMIC REGULATIONS

Students enrolled in a programme for the B.Tech. degree, in addition to meeting the General Academic Regulations of the University, shall be subject to the following regulations.

MINIMUM REQUIREMENTS TO CONTINUE IN THE PROGRAMME

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

REINSTATEMENT

A student who is ineligible to continue may apply for reinstatement to the programme. Application for reinstatement must be made in writing to the Committee of Instruction and should include a recommendation from the current employer. Reinstatement is not guaranteed.

A student who is reinstated after being ineligible to continue at a given level must repeat all the courses of that level, unless specific course exemptions are granted explicitly in the letter of reinstatement. Students who are reinstated will be placed on academic probation.

Manufacturing Engineering Technology (B.Tech.)

ADMISSION

Enrollment in this programme is limited. Admission requires satisfactory completion of a three-year Mechanical Engineering Technology Diploma (or equivalent). Applicants who meet the academic requirements may be interviewed, and some applicants may be required to write specific entrance examinations.

NOTE

Advance credit can be considered at the time of admission. However, a minimum of 33 units of work must be completed at McMaster in order to obtain the degree.

LEVEL 1: 18 UNITS
3 units ENG TECH 1MA3
3 units ENG TECH 1ML3
3 units ENG TECH 1PG3
3 units MAN TECH 1CD3
3 units MAN TECH 1D3
3 units MAN TECH 1TF3

LEVEL 2: 18 UNITS
3 units ENG TECH 2CT3
3 units ENG TECH 2FE3
3 units ENG TECH 2MN3
3 units MAN TECH 2MD3
3 units MAN TECH 2MT3
3 units MAN TECH 2TF3

LEVEL 3: 15 UNITS
3 units MAN TECH 3FB3
3 units MAN TECH 3FM3
3 units MAN TECH 3FT3
3 units MAN TECH 3MT3
3 units MAN TECH 3ST3
Each health professional has specific educational requirements, but...
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 programme 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 requested upon acceptance into the programme.

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 programmes, a faculty member is selected for each student in the September of entry to a degree programme and provides each student with advice on evaluations, electives and other educational needs throughout the programme. In the MD programme, the advisor is also responsible for the collation of all evaluations and completion of the final report. Changes in advisors may be entertained as each student becomes acquainted with Faculty well enough to choose his or her own advisor. The advisor, however, is responsible for S.C.S. students to the Coordinator of Studies (Nursing). Students are also encouraged to consult individual faculty members regarding career planning.

TRANSPORTATION

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

LICENSE TO PRACTISE

All graduates who wish to engage in clinical practice in any of medicine, midwifery, nursing, occupational therapy and physical therapy are subject to any qualifying examinations and other requirements by the licensing bodies for each of these professions. In addition students should be aware that a licence may be denied if they have been convicted of a criminal offence for which a pardon has not been granted. A student in such a position should consult the respective licensing body about such a situation.

POST-PROFESSIONAL HEALTH SCIENCES EDUCATION PROGRAMMES

CHILD LIFE STUDIES FULL-TIME DIPLOMA PROGRAMME

This is an eight-month applied professional programme in the Faculty of Health Sciences, aimed at developing the knowledge and skills for individuals working with infants, children, youth and families in a health care setting and community based programmes. The learning objectives are:

1. to examine and review the growth and development of infants, children and youth, incorporating communication, play, interactions, observation and mastery of the environment, behaviour and interactions, 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.

Coursework involves small group learning, case studies and self-directed learning. The eight-week introductory placements in children's hospitals and community settings are a requirement of this programme. A related university degree or diploma is required with an overall B average. Relevant experience is strongly recommended. Admission is based on the assessed strengths of each applicant as determined by the application package and interviews. Applications must be submitted by March 1 of each year for the study period beginning in September. Information outlining application requirements can be obtained by contacting the Child Life Studies programme office at (905) 525-9140, ext. 22795 or by email at childlife@mcmaster.ca or at http://www.fhs.mcmaster.ca/childlife.

Part-Time Multidisciplinary Distance Learning Courses

The Child Life Studies on-line educational programme offers a variety of research-based courses related to supporting the psychosocial needs of children, youth and families through health care experience and life changing events. For a current listing of courses, schedules and registration fees, visit the website at http://www.fhs.mcmaster.ca/childlife or call (905) 525-9140, ext. 22795.

DIPLOMA PROGRAMME IN CLINICAL BEHAVIOURAL SCIENCES

The Clinical Behavioural Sciences (CBS) Post-Baccalaureate Diploma and Selected Studies Programme is offered through Continuing Health Sciences Education. This part-time programme is designed to expand the knowledge and skills of allied health professionals by demonstrating a variety of approaches to understanding clinical problems. The aim is to enable health workers to more effectively carry out the mandate of their professional designation. The programme is designed to be completed within two years, and a diploma should be completed within five years. A small group learning format is used.

Applications must have basic professional qualifications (degree, certificate or mandate in current job); employment (possibly including volunteer positions), leave from employer to attend classes; and approval to use course-related material from the work setting (with signing of University confidentiality agreement). Courses must be submitted to the CBS Office (HSC 2E12) by April for September courses and by October for January courses. Personal interviews will be arranged. For additional information visit the CBS website at http://www.fhs.mcmaster.ca/cbs. Applications can be obtained by contacting the CBS Office at (905) 525-9140 ext. 22706.

DIPLOMA PROGRAMME IN ENVIRONMENTAL HEALTH

The diploma programme is a distance education programme offered through the Faculty of Health Sciences. Students are required to register on a full-time basis from September to April committing one day a week for self-directed learning, one hour per week for on-line tutorials and one day a week for completion of assigned work. The programme is designed to provide new and/or upgraded skills and knowledge in the environmental health area to individuals with a degree or certification in a recognized health discipline. It is suitable for health care professionals, community health nurses, environmental industrial professionals and those in labour and non-governmental organizations dealing with environmental health issues. Participants must be sufficiently motivated to undertake self-directed learning.

Students come from a variety of disciplinary backgrounds. A related university degree or diploma equivalent will normally be required. Admission is based on the number of places available and on the experience of applicants. Those without environmental health experience will also be considered.

Applications, a Transcript Assessment Fee, original transcripts and a letter of interest must be submitted by the beginning of April for the study period starting in September. Applications can be obtained by contacting the Environmental Health and Safety Programme in Occupational Health and Safety at (905) 525-9140, ext. 27559. Applicants will be notified of admissions decisions by the beginning of June.

DIPLOMA PROGRAMME IN OCCUPATIONAL HEALTH AND SAFETY

The Programme in Occupational Health and Environmental Medicine offers a diploma programme designed to provide basic instruction in the principles of occupational health and safety. Students can enrol in the programme on a full-time or a part-time basis. The full-time programme starts in September catering to those who wish to complete the course in three months. The part-time programme is designed for students within commuting distance from Hamilton wishing to continue their normal employment while enrolled in the programme. The part-time programme also begins in September and continues through to the end of April. The day per week includes two extended periods of full-time study each lasting two weeks.

While special consideration will be given to those already in the occupational health field, interested individuals without such experience may 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 1 of each year for the course beginning in September. Applications can be obtained by contacting the Programme in Occupational Health and Environmental Medicine at (905) 525-9140, ext. 22333 or emailing Jean Bodnar at bodnarj@mcmaster.ca. Further information can be obtained on our website (http://www.fhs.mcmaster.ca/ohem).
THE BACHELOR OF HEALTH SCIENCES (HONOURS) PROGRAMME

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

Health Sciences Centre, Room 1J11
Ext. 22815

Assistant Dean, Bachelor of Health Sciences (Honours)
D.G. Harnish/B.Sc., M.Sc. Ph.D., 3M Teaching Fellow
Programme Administrator
T. M. Basilio

Programme Overview

This programme, first offered in September 2000, is an innovative interdisciplinary programme 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 programme. In addition, this programme reflects the established tradition within the Faculty of understanding health from biological, behavioural and population-based perspectives. The programme 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 programme 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 programme is designed to emphasize flexibility, recognizing that studies may use this programme 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 programme of study through their senior years.

The programme begins in Level I and leads to the degree Bachelor of Health Sciences (Honours) upon successful completion of Level IV. The four-level programme offers opportunity for specialization through electives and through individual study or thesis courses.

Registration in Level I of the programme is limited to approximately 80 students, with expansion to 100 students at Level II.

PROGRAMME GOALS

The overall goal of the programme 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 provide 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.

> PERSONAL QUALITIES

Individuals who successfully complete this programme should be prepared to accept responsibility for a lifelong 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 2002-2003. Please note that the admission policy may be reviewed annually and the admission requirements may be changed in future years. As places in this programme are limited, the admission process is competitive. Possession of the minimum requirements does not guarantee admission to the programme.

Application to the B.H.Sc. (Honours) Programme 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 OACs (or Grade 12 U or U/C 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 14. 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) Programme Office by February 14. Supplementary Applications are to be submitted electronically via the web at: http://www.fhs.mcmaster.ca/bhsc (at the main page click on forms).

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) Programme Office by February 14. Supplementary Applications are to be submitted electronically via the web at: http://www.fhs.mcmaster.ca/bhsc (at the main page click on forms).

Applicants from other countries should contact the Office of International Affairs at http://www.mcmaster.ca/oa or (905) 525-9140, ext. 24211 for details.

Transfer Applicants

Transfer applicants from McMaster University are required to complete a McMaster University Application for Entry to Level II by April 15th and a mandatory Supplementary Application by April 30th. McMaster University Application for Entry to Level II forms are available from the applicant’s Faculty office.

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 30th. Supplementary Applications are to be submitted electronically via the web at: http://www.fhs.mcmaster.ca/bhsc (at the main page click on forms).
Second Bachelor Degree Applicants

McMaster University graduates are required to complete a McMaster University Returning Student Application and a mandatory Supplementary Application by April 30th. McMaster University Returning Student Application forms are available from the Office of the Registrar, Gilmour Hall, Room 108, 1280 Main St. W., Hamilton, Ontario. L8S 4L8. Graduates from other universities are required to apply through the Ontario Universities' Application Centre (OUAC) and complete a mandatory Supplementary Application by April 30th. Supplementary Applications are to be submitted electronically via the web at: http://www.fhs.mcmaster.ca/bhsc (at the main page click on forms).

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 first round of early conditional offers of admission is made in late March and will be based on the following: a) six final and/or mid-term OAC (or Grade 12 U or U/C course) grades (including required courses), or b) at least three final OAC (or Grade 12 U or U/C courses) grades and Grade 11/12 advanced Mathematics or Science grades plus enrolment in the appropriate three additional OAC (or Grade 12 U or U/C) courses. Offers based on interim 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 (at the main page click on forms). The Supplementary Application will be used primarily to select from among the pool of students with the highest grades in the courses outlined below.

Requirements

The following are the minimum OAC requirements under the OSIS curriculum:

1. One of OAC English I or OAC English II or OAC English III;
2. OAC Biology;
3. OAC Chemistry;
4. OAC Calculus;
5. One OAC from the Social Sciences (Geography, History, Law, Psychology, Sociology) or Humanities (Art, Drama, English, French, Music, other languages);
6. One additional OAC to total six credits.

The following are the minimum Grade 12 U and U/C requirements under the new Ontario Secondary School curriculum:

1. English U;
2. Biology U;
3. Chemistry U;
4. Advanced Functions and Introductory Calculus U;
5. One Grade 12 U or U/C course from Social Sciences (Geography, History, Law, Psychology, Sociology) or Humanities (Art, Drama, English, French, Music, other languages);
6. One additional Grade 12 U or U/C course to total six credits.

Applicants with Qualifications Equivalent to Ontario Secondary School

Applicants from other provinces and countries must achieve the equivalent to the qualifications listed in the OAC (or Grade 12 U or U/C 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 OAC Calculus (or Advanced Functions and Introductory Calculus U). If this course is unavailable, a course equivalent to OAC Finite Mathematics (or Mathematics of Data Management U) is acceptable.

Transfer Applicants

Transfer and second degree applicants will be admitted to the B.H.Sc. (Honours) Programme from other programmes 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) Programme must have completed the equivalent of six units of University Level I Biology and six units of University Level I Chemistry. Students who are accepted into Level II of the programme may be required to complete a university Level I Inquiry Course offered within the B.H.Sc. (Honours) Programme, after admission to the programme.

Second Bachelor's Degree Applicants

Transfer and second degree applicants will be admitted to the B.H.Sc. (Honours) Programme from other programmes at McMaster and from other post-secondary institutions. The process will be competitive and will be based on the student's academic qualifications and a Supplementary Application. Enrolment is limited. A Cumulative Average of at least 7.0 (minimum overall average of B-) will be required for admission. Previous university undergraduate studies must involve a significant component of work in subject areas unrelated to the B.H.Sc. (Honours) Programme. Certain subject combinations may not be permitted.

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

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 BIOLOGY 1A03, 1A3
6 units CHEM 1A03, 1A3
6 units HTH SCI 1E03, 1EE3
3 units HTH SCI 1F03
3 units HTH SCI 1G03
1 course SCIENCE 1A00
6 units Electives

LEVEL II: 30 UNITS

3 units HTH SCI 2E03
3 units HTH SCI 2F03
3 units HTH SCI 2F03
3 units HTH SCI 2G03
3 units HTH SCI 2G03
3 units HTH SCI 2K03
12 units Electives

LEVEL III: 30 UNITS

3 units HTH SCI 3E03
3 units HTH SCI 3G03
3 units HTH SCI 3G03
3 units HTH SCI 3H03
18 units Electives

LEVEL IV: 30 UNITS

6-9 units HTH SCI 4A09 or 4B06
3 units HTH SCI 4C03
3 units HTH SCI 4CC3
3 units HTH SCI 4X03 (See Note above)
12-15 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 in the Fall from our website at http://www.fhs.mcmaster.ca/bhsc/bursary.pdf. Bursaries are intended to offset provincial financial assistance. The following bursaries have been generously donated to assist Bachelor of Health Sciences (Honours) students in financial need:

• Ruth Murray Memorial B.H.Sc. Bursary
• Loucks Family and Friends B.H.Sc. Bursary

There are many other bursaries provided through the central campus bursary programme, which will be disbursed to students in the Fall each year. For further information about bursaries, please contact Teresa Basilio, (905) 525-9140 ext. 22786.

Academic Regulations

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

MINOR

A minor is an option available to a student enrolled in a four- or five-level programme. 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 a 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 PROGRAMME

Students must have a CA of 6.0 to continue in the programme. If a CA of 5.5 to 5.9 is obtained, a student may remain in the programme but will be placed on probation for one reviewing period. A student may be on probation only once.

If a CA of 5.5 to 5.4 is obtained, a student must transfer to another programme for which he/she qualifies, or register in the B.H.Sc. (Honours) Programme as an irregular student for one reviewing period. During that period a student cannot take B.H.Sc. (Honours) Programme courses. At the end of that period a student may apply for readmission to the B.H.Sc. (Honours) Programme. If a CA of 3.0 to 3.4 is obtained, a student may be placed on academic probation. A student may continue in the programme for one reviewing period as an irregular student but cannot take B.H.Sc. (Honours) Programme courses. The purpose of the period is to prepare a student for a programme outside the B.H.Sc. (Honours) Programme. 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 programme 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 programme 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) Programme may apply to the Office of the Assistant Dean to take courses at another university on a Letter of Permission. Students must achieve a grade of at least C- to receive 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 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 programme only with the permission of the B.H.Sc. (Honours) Programme Office.

REINSTATEMENT TO THE B.H.SC. (HONOURS) PROGRAMME

A student who may Not Continue at the University may apply for reinstatement. Students seeking reinstatement should complete the Returning Student Application form available at the Office of the Registrar (Gilmour Hall, Room 108) and the B.H.Sc. (Honours) Programme Office. The completed application and the $50.00 fee must be submitted to the Office of the Registrar by July 15 for September admission, January 30 for January entry. Applicants 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 students’ prior academic performance. Reinstatement cases will be carefully screened and the evidence considered will include the students’ 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 re-set to 0.0 on zero units, although students may, at the discretion of the Faculty, retain credit for prior work. Following reinstatement, students will be on academic probation and must complete a minimum of 60 units of work after reinstatement to be eligible for graduation with Distinction or other recognition based on the Cumulative Average.

REGISTRATION AND COURSE CHANGES

It is the responsibility of the student to ensure that the programme of work undertaken meets the requirements for the degree. When registering or making changes to course selection, students must seek approval from B.H.Sc. (Honours) Programme Office. Dates for final registration and course changes appear in the Sessional Dates section of the Calendar and are enforced.

SPRING COUNSELLING

Academic counselling is available throughout the year from the B.H.Sc. (Honours) Programme Office. It is recommended that the 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) Programme at that time.

GRADUATION

A CA of 5.0 is required for graduation. Students who successfully complete Level III of the programme may request permission from the B.H.Sc. (Honours) Programme Office to graduate with a three-level B.H.Sc. degree.

THE SCHOOL OF MEDICINE

WEB ADDRESS: http://www.hhs.mcmaster.ca/mdprog/

Health Sciences Centre, Room 2E18
Ext. 22141

Assistant Dean

Programme Administrator
D. Martin

The School of Medicine, established in 1965, offers major programmes in undergraduate, postgraduate and graduate medical education. The clinical programmes use not only the teaching hospital and ambulatory care and research facilities at the McMaster University Medical Centre division of the Hamilton Health Sciences Corporation, but also the clinical teaching units at several of the major Hamilton hospitals and community health-care centres. The Undergraduate Medical Programme for the MD degree was initiated in 1969, graduating its first students in May 1972. At present, 135-140 students are admitted to the programme each year through the Regular Admission Pool, and up to 10 additional students through the International Admission Pool.

The academic programme operates on an 11-months-a-year basis and students qualify for the MD degree at the end of the third academic year. The curriculum has been designed to involve medical students in a broad range of human health problems throughout their education and to prepare them for effective working relationships with patients, colleagues and society.

Postgraduate training programmes 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 programmes are available from the Postgraduate Medical Education Office.

The Northwestern Ontario Medical Programme (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 exposure in these settings is part of both the undergraduate and postgraduate medical programmes.

Graduate programmes leading to the M.Sc. and Ph.D. degrees are offered in Biochemistry and in Medical Sciences. An M.H.Sc. (Health Care Practice) programme is interprofessional in nature and is for experienced health professionals who wish advanced preparation as clinicians.
The Undergraduate Medical Programme (7880)

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

GENERAL OBJECTIVES

The goal of the Undergraduate Medical Programme is to provide students with a general professional education as physicians. The programme enables students to build on previous education and experience, using available learning resources and opportunities. The competencies achieved by graduates will qualify them to proceed to further postgraduate training. While most graduates will be involved directly with the care of individual patients, it is expected that some will choose careers concerned with the health of populations and the development of new knowledge.

The overriding objective to be achieved is the demonstrated ability to identify, analyze and manage clinical problems in order to provide effective, efficient and humane patient care.

The enabling objectives of knowledge, skills and professional behaviour comprise the following:

**KNOWLEDGE**

To acquire and put into practice concepts and information required to understand and manage health-care problems. The study of human structure, function and behaviour will be guided by an analysis of the determinants of health and illness. A spectrum of factors will be considered in both the external and internal environments of individuals when deciding on preventive, therapeutic, rehabilitative and supportive management.

**SKILLS**

To acquire and use the following skills:

1. Information Management Skills: The application of certain rules of evidence to clinical, investigational and published data in order to determine their validity and applicability.
2. Professional Skills: The ability to acquire, interpret, synthesize and record clinical information in managing the health problems of patients, considering their physical, social and emotional function. Included is the use of the clinical reasoning process.
3. Self-Directed Learning Skills: The ability to identify areas of deficiency in one's own performance, and appropriate educational resources, evaluate personal learning progress and use new knowledge and skills in the care of patients.

**PROFESSIONAL BEHAVIOUR**

To recognize, develop and maintain the professional behaviour required for a career as a health professional. Acquiring the authority to intervene in the lives of patients carries with it the obligation to act responsibly:

1. toward oneself: to recognize and acknowledge personal assets, emotional reactions and limitations in one's own knowledge, skills and attitudes, to build on one's assets and to overcome areas of limitation;
2. toward patients and their families: to be able, under appropriate supervision, to take responsibility for the assessment and care of patients and their families;
3. toward colleagues: to contribute to productive communication and cooperation among colleagues engaged in learning, research or health care;
4. toward the community: to contribute to the maintenance and improvement of the health of the general population.

**LEARNING METHODS**

To achieve the objectives of the Undergraduate Medical Programme, students are introduced to patients within the first unit 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 health-care 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. In each problem area, the student may select the most appropriate issues to ensure the understanding and application of fundamental concepts. This flexibility is an opportunity for the development of individual interests and goals. The faculty function as learning resources or guides. Learning by a process of inquiry is stressed.

The central focus of the programme is the tutorial. The class is divided into small groups, each with a tutor. In the tutorial session students develop a series of learning objectives from each health-care problem and negotiate how they will approach their learning tasks. They then acquire the knowledge and skills to meet the objectives of the unit 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 provides a basis for life-long working and learning habits. Attendance is mandatory.

Students admitted to the Undergraduate Medical Programme have the responsibility and privilege of taking an active role in the planning and evaluation of the education programme. 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 programme. Such participation is a hallmark of the Programme.

**STUDENT EVALUATION METHODS**

The evaluation format has been designed to complement learning in the Undergraduate Medical Programme. Evaluation methods have been developed to measure how well the student achieves the stated educational objectives in the various units of the programme. Continuous 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 unit. At the completion of the unit, the tutor is responsible for the final evaluation 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 unit. 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 Programme 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 unit, including the clerkship, and additionally by Objective Structured Clinical Evaluations (OSCE's) which are run on an annual basis.

The Evaluation Committee, a subcommittee of the Medical Education Committee, has the responsibility of working with the Medical Programme 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.

**Curriculum Plan**

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The curriculum of the Undergraduate Medical Programme comprises six units and an elective programme.

There is less of a division between the pre-clinical components and the clinical components of the MD Programme than in more traditional schools. Patient contact and clinical skills development start in Unit 1 and increase throughout the programme. The scientific background for understanding patients' problems, while more intensively studied in earlier units, continues to be applied as it is relevant to the care of patients in clinical situations.

**PROGRAMME OUTLINE FOR UNIT 1**

The programme Unit 1 provides an opportunity for students to become familiar working and learning in a small-group tutorial, problem-based learning environment. The Unit is organized into three subunits. The first addresses initial reproductive events and the fundamental mechanisms of early development. The second subunit will examine the processes by which we become biologically, socially and emotionally independent. Students will examine these concepts from at least three perspectives: population, behavioral and biological. The third subunit examines the behavioral perspective in detail. Basic issues of critical thinking, information management skills, clinical skills and communication skills are introduced and further developed in the subsequent units.

**PROGRAMME OUTLINE FOR UNITS 2-4**

These units are concerned with the systematic study of human function, form and behaviour throughout the Life Cycle, and are organized around systems of the body, as follows:

- Unit 2 Cardiovascular, Respiratory and Renal Systems
- Unit 3 Gastrointestinal, Endocrine and Reproductive Systems
- Unit 4 Neurologic, Locomotor and Behavioural Systems

Throughout these body-systems oriented units, students are expected to become self-directed learners capable of critically evaluating newly acquired information.

**PROGRAMME OUTLINE FOR UNIT 5 - THE CLERKSHIP**

In this component of the programme students participate in the direct care of patients as they learn about the management of health and illness. All prior objectives apply, but the health-care problems are now real patients or populations. Students become self-sufficient in contemporary medicine, but are able to sense and examine the processes by which we become biologically, socially and emotionally independent. Students will examine these concepts from at least three perspectives: population, behavioral and biological. The third subunit examines the behavior perspective in detail. Students will focus on fundamental issues of critical thinking, information management skills, clinical skills and communication skills are introduced and further developed in the subsequent units.

**PROGRAMME OUTLINE FOR UNIT 6**

This unit will offer opportunities for students to integrate, consolidate and reflect on their learning to date and to prepare for their future roles as resident and practicing physician. The unit will focus on professionalism; stressing autonomy with accountability, critical thinking and self direction. Content will include complex issues such as population health, ethics and technological assessment of standard and novel diagnostic, therapeutic and evaluative procedures. Learning opportunities will be provided through case and problem-based seminars, access to multidisciplinary resources and personal learning plans developed with mentors. Evaluation will include formative and summative measures such as learning contracts, reflective papers and observation. Students will be given the opportunity to focus on a portion of their learning objectives according to individual career objectives.

**ELECTIVES**

Elective studies form an integral part of the Curriculum Plan. They may be considered the epitome of self-directed learning, since students must define goals for electives which are appropriate for their own learning objectives. These objectives represent specific areas of educational need or interest. The responsibility for planning electives rests with each student in collaboration with the student advisor.

The three types of electives in the Undergraduate Medical Programme are:

1. **Block Electives**: These are blocks of curriculum time dedicated to full-time elective activities. Their satisfactory completion is a mandatory component of the Undergraduate Medical Programme. Block Electives occur after Unit 3 (eight weeks), after Unit 4 (four weeks), during the Clerkship (eight weeks) and immediately following the Clerkship (seven weeks).

2. **Horizontal Electives**: These are undertaken concurrently with other parts of the curriculum. Horizontal electives are entirely voluntary, not being required for completion of the programme, but are used to explore or review a specific area of knowledge or practice in more detail. It is particularly important that the student's advisor be involved in all decisions concerning the selection and carrying out of horizontal electives.

3. **Enrichment Electives**: There are arrangements in place for a small number of students from each class to devote longer periods of time (from six to 12 months) to the pursuit of special academic experiences. The intent is to encourage students to explore special frontier areas of medicine and health care. Examples include: research training and experience; community health projects; international health opportunities. These experiences are often undertaken following Unit 4 or during the first half of Unit 5. Some experiences may potentially be part of the programme, and to help programme directors obtain the students of their choice. It provides an orderly method for students to decide where to train and for programme directors to decide which applicants they wish to enrol. For both students and directors, it removes the factors that generate unfair pressures and premature decisions.

**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. Students in Ontario medical schools are not required to register as students with the College of Physicians and Surgeons of Ontario. 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.

**CANADIAN RESIDENT MATCHING SERVICE (CaRMS)**

The Matching Service is a clearing-house designed to help final year Canadian medical students obtain the post-MD programme of their choice, and to help programme directors to decide which applicants they wish to enrol. It provides an orderly method for students to decide where to train and for programme directors to decide which applicants they wish to enrol. For both students and directors, it removes the factors that generate unfair pressures and premature decisions.

Further information is available from Deborah Martin, MD Programme Administrator, (905) 525-9140, ext. 22141.

**BASIC CARDIAC LIFE SUPPORT TRAINING**

All students are required to have obtained a current certificate in Basic Cardiarc Life Support (Adult and Child CPR) prior to registration in the medical programme. Courses are readily available in most communities. Information will be sent to successful applicants prior to registration.

Specific questions can be directed to Deborah Martin, MD Programme Administrator, (905) 525-9140, ext. 22141.

**IMMUNIZATION**

The Ontario Public Hospitals Act requires that all persons working in a hospital setting meet certain criteria regarding surveillance for communicable diseases. In order for the registration of the legislation to be met, once students have been enrolled in the MD Programme, they must 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 Deborah Martin, MD Programme Administrator, (905) 525-9140, ext. 22141.
Admission Policy for the Medical Programme

The official admission policy and deadlines for the Undergraduate Medical Programme for late August 2003 shall be as published in the 2002 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
Email: omsas@netserv.ouac.on.ca

Please note that the admission policy is reviewed annually, and the admission requirements from year to year may not apply. Because of the nature of the selection procedures, deadlines are enforced strictly. All relevant documentation must be provided by the specified deadlines. Applicants must follow the instructions precisely.

SELECTION PROCEDURE

The intention of the McMaster Undergraduate Medical Programme is to prepare students to become physicians who have the capacity and flexibility to select any area in the broad field of medicine. The applicant is selected with this goal in mind. Faculty, medical students and members of the community are normally involved in the admissions process.

Application to the medical programme implies acceptance by the applicant of the admission policies and procedures, and the applicant must be registered. Failure to report courses, programmes or grades on the Academic Record Form to the admissions programme is a reason for the disqualification of the application. All applications must be submitted by the date of possible entry into the programme.

Applications deadlines are for the fall of 2002 are for the academic year commencing in the fall of 2003. Applicants who will not be ready or able to begin studies in the fall may withdraw their application without prejudice. Application fees cannot be refunded.

Applications must be submitted by October 15, 2002, 4:30 p.m. EDT. Approximately 400 applicants will be invited for interviews in Hamilton in March or April. Invitations for interviews are determined on the basis of applicants' academic performance, and an assessment of their preparedness for a career in medicine and suitability for the McMaster Undergraduate Medical Programme. From this group a class of 135-140 is selected.

ACADEMIC ELIGIBILITY

Applicants must report on the Academic Record Form all grades received in the degree credit courses in which they have ever registered. Failure to report courses, programmes or grades on the Academic Record Form will result in the disqualification of the application. All grades are converted to a 4.0 scale according to the OMSAS Undergraduate Grading System Conversion Table. (The Conversion Table is provided with the OMSAS Application.)

TRANSCRIPT REQUIREMENTS AND TRANSCRIPT REQUEST FORMS (TRF)

All transcripts from Ontario universities will be ordered by OMSAS by the TRF for both compass and paper applications if the TRF is received at OMSAS by the October 15, 2002 deadline. It is expected that applicants will request all other transcript materials 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 transcripts, the applicant must arrange to have the Registrar of the institution send a Statement of Registration to OMSAS by October 15, 2002. Applicants should retain a paper copy of their transcripts and correspondence related to their transcript request. Evidence to show that applicants requested transcripts and Registrar statements in a timely manner may be requested by McMaster University.

It is entirely the applicant's responsibility to ensure that all of the above are received at OMSAS by October 15, 2002. 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 and programmes attended at an accredited post-secondary institution. This includes community colleges, CEGEPs, senior colleges, pre-university programmes, etc.

Failure by the applicant to comply with the instructions or to meet the deadlines will result in disqualification of the application.

AUTOBIOGRAPHICAL SUBMISSION

Applicants must provide an Autobiographical Submission which is a description about their preparedness for medicine and suitability for the McMaster Undergraduate Medical Programme. The Autobiographical Submission Booklet is included in the application package provided by OMSAS.

The Autobiographical Submission Booklet includes detailed instructions with regard to the length and format of responses. Those instructions are considered to be part of the Admission Policy and Procedures for the McMaster Undergraduate Medical Programme.

Failure to comply with the instructions for the Autobiographical Submission Package will result in disqualification of the application.

GEOGRAPHICAL CONSIDERATION

The geographical status of the applicant is determined from the Autobiographical Sketch. Applicants may be asked to provide evidence of geographical status. In selecting applicants for interview, the nearest place of residence will be used in the following order of priority:

1. the province of Ontario;
2. the rest of Canada; and
3. other countries.

To qualify for 1 above, an applicant must:

a) be a Canadian citizen or permanent resident by October 15, 2002, and
b) 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 programme.

Any other applicant who is a Canadian citizen or permanent resident qualifies for 2.

All other applicants qualify for 3.

INTERVIEWS

Approximately 400 applicants will be invited to Hamilton for an interview. The selection of these applicants is based on the composite score which weights equally the grade point average from the Academic Assessment and the scores from the Autobiographical Submission. Geographical consideration is applied to determine the composition of the pool of applicants that are selected for 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.

Each applicant is assessed in two activities: the Simulated Tutorial (Part 1 and Part 2) and the Personal Interview. In the Simulated Tutorial, the applicant participates in two parts: a written exercise, after viewing a short video, to assess the recognition and understanding of human emotions; and a small group exercise exploring a health-related problem. Participation in the above does not assume any previous health care knowledge.
In the Personal Interview, the applicant is interviewed by a team which is not involved in the assessment of the Simulated Tutorial. Before an applicant meets the interview team, the Interviewers are provided with the candidate's Autobiographic Sketch. This Autobiographic Sketch is not assessed but serves as background for the interviewers. It supplements the overall assessment of the applicant, the Personal Interview team considers the following areas: depth and breadth of experience, personal characteristics and preparation for medical school and ability to accommodate McMaster's learning methods.

**SELECTION**

All the information resulting from the process described above, as well as the Confidential Assessments from referees, is reviewed and used in the final selection. Applicants will be notified the last working day in May 2003.

**APPLICATION FOR DEFERRED REGISTRATION**

Deferred registration may be granted only under exceptional circumstances. Deferred registration applications may be requested only by those candidates offered a place in the class on the last working day in May and who have accepted that offer. The request for deferral must be submitted within two weeks of the offer of admission.

**SPECIAL APPLICANTS**

Candidates who wish to determine if they qualify as Special Applicants must contact, in writing, the Chair of the MD Admissions Committee, McMaster Undergraduate Medical Programme, HSC Room 187, before making a formal application. All relevant information and documentation, including transcripts, must be provided by September 13 to be considered for eligibility for that year's selection and admission cycle.

This category is designed to provide opportunities only to those who meet all of the following:

1. have not attended any post-secondary institution, including those offering diploma or certificate programmes, as a full-time student;
2. have completed, at the time of application, the equivalent of at least four but not more than ten full degree credit courses as a part-time student, obtaining an overall OMSAS converted average of at least 3.0. A current university transcript must accompany the request for consideration;
3. have been employed or active in the community for at least seven years since leaving high school;
4. must be a resident of Ontario at the time of application, and
5. must be assessed as having made an exceptional contribution to society. In this, candidates must have shown creativity, initiative and leadership. A letter from the candidate, outlining activities and contributions must accompany the request for assessment. Only those who meet the above criteria will be eligible to apply to the programme. First Nation applicants who do not meet the criteria for application through the regular stream must meet all of the above requirements except 1.

**INTERNATIONAL APPLICANT POOL**

The Undergraduate Medical Programme will be offering up to 10 positions in the MD Programme each year to applicants with international status (those who are neither Canadian citizens, landed immigrants of Canada, nor dual citizens with Canada and any other country). These positions will be in addition to the current class of 135-140 admitted each year. Graduates from the International Admission Pool will not be considered eligible for postgraduate training in Canada.

International applicants may apply to either the Regular Applicant Pool or to the International Applicant Pool, but not both. As McMaster University gives preference in the Regular Applicant Pool according to geographic status, international applicants should note that non-Canadian citizens have very infrequently been offered a position in the regular stream. The deadline for applications is October 15 each year, and information packages can be obtained through email at admint@mcmaster.ca or by calling (905) 525-9140, ext. 22712.

**ADVANCED STANDING/TRANSFER**

The structure of the McMaster Programme requires that all students begin in Unit 1. There is no provision for advanced standing or transfer into the programme.

**UNSUCCESSFUL APPLICANTS**

Applications 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.

Unsuccessful applicants may enquire about their application for the current year. Their percentile ranking on the application instruments is the only feedback that is available.

**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 Programme 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 Programme cannot assume this responsibility.

In 2001-2002, the act to provide funding (including student supplementary fees) for a student in the McMaster Undergraduate Medical Programme were:

**CANADIAN CITIZENS AND LANDED IMMIGRANTS**

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year I</td>
<td>$14,036.99</td>
</tr>
<tr>
<td>Year II</td>
<td>$14,016.99</td>
</tr>
<tr>
<td>Year III</td>
<td>$14,016.99</td>
</tr>
</tbody>
</table>

In addition, the cost of books and diagnostic equipment for a Year 1 student was approximately $1,900. 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 programmes 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 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.

- Adrachis (Archie) Yian Moughan Memorial Bursary
- Burlington Medical Society Bursary
- Daniel Giannini Bursary
- Dr. Gail Henning Memorial Bursary
- J.W. Harry Butler Estate Bursaries
- Daniel and Natalie Strub Bursary
- Medical Student Opportunity Trust Bursary
- Ontario Medical Student Bursary Fund
- Ragonetti Family Bursary
- Ripley Estate Bursaries
- Ronald Pye Bursary
- Ruth Tomlinson Memorial Bursaries
- Scotiabank McMaster Medical Scholarship
- Scotiabank Breast Cancer Bursary
- UCO Ferwerda Humanitarian Bursary
- William A. Vanderburgh Estate Bursaries
There are many other bursaries provided through the central campus bursary programme, 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 Deborah Martin, (905) 525-9140, ext. 22141.

ACADEMIC AWARDS
The Undergraduate Medical Programme has in the past indicated its preparedness to recognize students who distinguish themselves and the University by virtue of their scholarship and their contribution to the university community. At the same time, the School has indicated that the terms of reference for such awards should neither compromise the spirit of cooperative scholarship which characterizes its MD Programme 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 Programme 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 Electives Office, outlining the nature of their work and the need for funds. For further information, contact Deborah Martin, (905) 525-9140, ext. 22141.

ABBOTT MEMORIAL SCHOLARSHIP LOAN FUND
This fund was established by the Federation of Medical Women of Canada. Small loans are available to any female medical student or first-year resident. In special cases, a loan up to $1,000 may be made to a student for recognized postgraduate training. Loans are payable within five years of date of issue, after which time interest will be charged at a rate of 5% compounded annually.

Information regarding these loans may be obtained from Kay Moffat, Executive Coordinator, Federation of Medical Women of Canada, Box 6244, Ottawa, Ontario, K1G 5H7.

MEDICAL OFFICER TRAINING PLAN
The Department of National Defence administers a programme 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 programme in medicine in a Canadian university or in an accredited Residency Programme.

Further information on this programme and on the career opportunities in medicine in the Canadian Armed Forces may be obtained from local Canadian Forces Recruiting Centres. In Hamilton, the Recruiting Centre is at 100 Main Street East. Telephone (905) 572-4000.

LOAN FUNDS
The Undergraduate Medical Programme administers a small loans programme to assist medical students with demonstrable need. Unfortunately, these funds are limited and cannot be relied on to meet a major portion of any student's financial obligations. The sources of these funds include: The Ontario Medical Association Loan Fund, the William Andrew Vanderburgh Sr. Memorial Fund, the Ripley Estate Loan Fund, the Dr. Elizabeth Bagshaw Fund and the Dr. A. Boit Memorial Fund.

For further information about loans contact Deborah Martin, (905) 525-9140, ext. 22141.

B.H.SC. MIDWIFERY PROGRAMME {6501}
Admission Requirements and Procedures

Admission into the Midwifery Education Programme is reserved for candidates who satisfy the academic requirements of the programme. It is recommended that applicants complete at least one year of university studies prior to application. All certified transcripts from secondary and post-secondary institutions previously attended must accompany the application. Applicants submitting international documents must submit their original documents as well as certified translations of the documents (if they are in a language other than English). The application deadline is January 1, 2002. Applications received after January 1, 2002, will not be considered. For those applicants currently registered in required subjects, interim grades must be submitted and courses completed by June 30, 2002. Final grades must be made available immediately thereafter.

All documents submitted with the application become the property of the University. Successful applications remain on file.

Applicants Directly from Ontario Secondary Schools

The following are the minimum OAC requirements under the OSIS curriculum:

1. One of OAC English I; OAC anglais I or OAC anglais II;
2. One of Biology or OAC Chemistry (both are recommended);
3. An OAC in Social Sciences (history, sociology, psychology, geography, or law);
4. Completion of additional OACs 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 final average of 70% in six OAC courses, including the required courses.

The following are the minimum Grade 12 U and U/C requirements under the new Ontario Secondary School curriculum:

1. English U;
2. One of Biology U or Chemistry U (both are recommended);
3. One Grade 12 U or U/C course in Social Science (History, Sociology, Psychology, Geography, Law);
4. Completion of additional Grade 12 U or U/C 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 U/C courses including the required courses.

Prior/Current College Diploma Studies

Applicants with prior or current university studies, at the time of application must have high school OACs (or Grade 12 U or U/C courses) or equivalent university courses in three of the required subject areas as stated above. In addition, a minimum of 70% must be obtained in each of the three required subject areas. A minimum of 70% average from at least two years of college work must be obtained. Applicants with CEGEP background should consult the Ontario Secondary School Equivalence Chart. 

Prior/Current University Students

Applicants with prior or current university studies, at the time of application must have high school OACs (or Grade 12 U or U/C courses) 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 best ten full courses or equivalent two years of university 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 OACs (or Grade 12 U or U/C courses) or introductory university level courses. The two years absence from formal studies clause may be waived for those who take OAC (or Grade 12 U or U/C course) upgrading. The following University requirements for Mature Students also apply. A student must:

1. be at 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 programme within the last five years or have completed less than one year of college work.

Prior Midwifery Education or Experience

Applicants should note that the College of Midwives of Ontario offers a Prior Learning Experience and Assessment process to determine equivalency to Ontario requirements for registration. Please contact the College of Midwives of Ontario, 2155 Yonge Street, 4th Floor, Toronto, Ontario, M4S 2B2.

Transfer or Challenge 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. Challenge Credites are only available for HTH SCI 1C06 (Social and Cultural Dimensions of Health Care), HTH SCI 1D06 (Topics in Biological Sciences), HTH SCI 3M03 (Critical Appraisal for Midwifery) and MIDWIF 1C03 (Life Science for Midwifery). Transfer or Challenge Credits will not reduce the time required to complete the programme.

Selection Procedure

Midwives should have the ability to give supervision, care and advice to women during pregnancy, labour and the postpartum period. They must be able to conduct deliveries and provide care for a newborn. In order to fulfill this criterion, midwives must have thorough critical and rigorous training.

Midwifery, as primary health care providers, should have well-developed interpersonal skills. They must be competent in areas of health education, counselling and interprofessional collaboration. Applicants to the programme will be assessed for their ability to exhibit and further develop these important personal/professional qualities.

The Midwifery Education Programme has limited placements and the admission process is very competitive. Therefore, the possession of the minimum requirements does not guarantee admission. To ensure suitable candidates are admitted, the programme has a selection procedure which allows candidates to be assessed on a more extensive basis.

The admission process is comprised of three stages. Applicants must be successful at stages one and two to be considered for stage three.

1. Assessment of Academic Eligibility: Review of applications for completeness and evidence of academic eligibility.
2. Review of Personal Letter: Each applicant must answer four questions in a typed submission not exceeding five double-spaced pages.
3. Personal Interviews: Offers of Admission will be made following the interview process.

UNSUCCESSFUL APPLICANTS

Applications are not held over from one year to another. If an unsuccessful applicant wishes to reapply to the Midwifery Education Programme, a new application, including transcripts and supplementary materials must be submitted. Unsuccessful applicants may request feedback about their application for the current year. Applicants must make their requests in writing to the programme no later than June 30th of the year of application. Depending on the volume of requests it may take several months for the programme to reply.

APPLICATION FOR DEFERRED REGISTRATION

Deferred registrations are not normally granted in the Midwifery Education Programme. Under exceptional circumstances, applications for deferral will be reviewed by the Admissions Committee for those candidates offered a place in the programme. The application of deferral must be submitted in writing no later than August 1 of the year for which deferral 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 all supporting documents/transcripts must be received by the University no later than February 1 of the year in which registration is expected.

Financial Information

In 2001-2002 the tuition fees for a student in the Midwifery Education Programme were $4,135.10 for Level I and $4,115.10 for upper levels. Supplementary fees are estimated at $200.00 per year.

Financial assistance is available from the federal and provincial governments through the Ontario Student Assistance Programme (OSAP). Students intending to apply for OSAP may begin their
DEAN'S HONOUR LIST

Students will be evaluated for standing on the Dean's Honour List only upon completion of the programme. Students will be named to the Dean's Honour List if they receive no failing, provisional or unsatisfactory grades in any courses throughout the programme and achieve a CA of 9.5, on graded courses taken throughout the programme.

GRADUATION REQUIREMENTS

A student is eligible for graduation when the following criteria are met. The student must:
1. complete all required courses, including electives, with a CA of at least 6.0 on including a minimum grade of C in HTH SCI 1D06 and a minimum grade of B- in MIDWIF 1A06.
2. complete all clinical courses with a Pass/Satisfactory grade.
3. complete all courses for the degree within five years.

Professional Membership

The practice of midwifery is regulated by the College of Midwives under the Midwifery Act, 1991 and the Regulated Health Professions Act, 1991. The College of Midwives has approved a set of core competencies for entry to practice which guides the Midwifery Programme's curriculum. Regulations under the Ministry Act set out the following for registration: attendance at a minimum of 60 births, of which the student must be involved as a primary caregiver for 40; 30 must include care throughout pregnancy, labour and the puerperium.

The Association of Ontario Midwives is the professional body representing midwives and the practice of midwifery in the province of Ontario. The Association of Ontario Midwives advocates for the professional interests of midwives in the area of professional liability insurance and funding for midwifery services. They provide public education and promote midwifery as an integral part of the Ontario health care system.

The programme strongly suggests that students join both the College of Midwives Subscriber Status and the Association of Ontario Midwives as a student member.

Graduation from the Midwifery Education Programme does not guarantee registration with the College of Midwives. All applicants to the College must meet additional registration requirements. New graduates are required to work in an established practice for their first year of registration.

Regulatory requirements are subject to change from time to time. The programme will maintain a close working relationship with the regulatory body so that students obtain the required clinical experiences to be eligible for registration.

THE SCHOOL OF NURSING

WEB ADDRESS: http://www.fns.mcmaster.ca/nursing
Health Sciences Centre, Room 2E20
Ext. 22401

Assistant Dean, Undergraduate Nursing Education
C. Tompkins /B.Sc.N., M.Ed., Ph.D., R.N.
Programme Administrator
A. Cholewka

In 1942, McMaster University began its first programme in Nursing, a cooperative effort between the University and the Hamilton General Hospital. Since the establishment of McMaster University's School of Nursing in 1948, students have received a Bachelor of Science in Nursing degree upon graduation. The programme has functioned completely under the supervision of the University, while enjoying the full cooperation of community hospitals and agencies in the operation of its clinical courses. In July 1974, the Schools of Nursing and Medicine became the Faculty of Health Sciences. In 1982, the Post Diploma Stream of the B.Sc.N. Programme was introduced. This second category of admission was created to provide Diploma Registered Nurses with the opportunity to work towards a B.Sc.N. degree.

McMaster University is one of ten Ontario universities collaborating with the Council of Ontario University Programs in Nursing to offer a Primary Health Care Nurse Practitioner Programme.
The programme commenced in September 1995 and enables Nursing diploma prepared students to obtain a B.Sc.N. degree and a Nurse Practitioner Certificate. Those students who hold a Nursing Baccalaureate receive the Nurse Practitioner certificate upon completion of the programme.

In 1994, the first Ph.D. candidates entered the Clinical Health Sciences (Nursing) graduate programme 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 Clinical Health Sciences (Nursing) graduate programme should be directed to the Graduate Programmes Office, HSC-3N10, (905) 525-9140, ext. 22982.

Information Sessions for high school students are hosted by the Student Liaison 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 most recent educational initiative that is affecting Nursing education is the provincial legislation on entry to practice. This legislation requires all new graduating nurses to have a baccalaureate degree in Nursing. In response, McMaster University, Mohawk College and Conestoga College have formed an educational consortium to offer the B.Sc.N. programme. The McMaster nursing degree is now available in conjunction with Mohawk College and Conestoga College. Students wishing to register in the B.Sc.N. programme 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. programme at either Mohawk or Conestoga College should refer to the Collaborative B.Sc.N. (D) Stream references throughout the School of Nursing section of the Calendar. Students are also advised to contact the Chair of the Collaborative programme at either Mohawk or Conestoga College for additional information.

The B.Sc.N. Programme

The B.Sc.N. Programme promotes the development of nursing as a caring, client-centred, scientific and humanitarian profession. With an emphasis on problem-based, small group, self-directed learning, the programme 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. Programme 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. Programme, they will find an increasing emphasis on interpersonal and communication skills, independent learning, and leadership qualities. Applicants should evaluate their own potential for developing abilities to interact with others and to assume leadership roles. Learning is a process of inquiry, a skill to develop as a life-long activity in an environment conducive to openness and sharing among faculty and students. Emphasis on small group tutorials and self-directed learning promotes the application of unique combinations of principles and concepts. 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 classrooms and clinical settings. (Opportunities exist for international and outreach clinical practice experiences.) Evaluation by self, peers and faculty is part of an ongoing assessment process of the achievement of clinical, course, and programme objectives.

GOALS

Graduates of the McMaster University B.Sc.N. Programme will be prepared to provide competent professional practice in a variety of health care contexts and with diverse clients (individual, family, group, communities, populations) who have predictable and unpredictable outcomes and multifactorial influences (internal and external) on their health status. Graduates will:

1. Practice nursing within a primary health care perspective and an ethic of professional caring.
2. Demonstrate sensitivity to client diversity and recognize the influence this has on professional and personal meaning, clients' health and healing practices and access to health care.
3. Demonstrate ability to establish, maintain and terminate therapeutic relationships with clients.
4. Demonstrate critical thinking in the assessment, planning and evaluation of client care through the synthesis and application of:
   - Validated knowledge and theories from nursing, the humanities, biological, psychological, social and public health sciences
   - Knowledge of the health care system
   - Knowledge of the client context
   - Knowledge of self.
5. Engage in effective decision-making to set goals and establish priorities, going beyond the application of general rules to the application of unique combinations of principles and concepts.
6. Provide safe, ethical, competent care within established professional standards and guidelines.
7. Assess, plan and evaluate programmes of care with clients and an interprofessional team of care providers and partners from multiple sectors (i.e. education, social services, politics, etc.)
8. Demonstrate leadership and beginning competencies in managing a health care team, managing resources and coordinating health care.
9. Access and manage relevant information, required for professional nursing, through the effective use of information technology.
10. Contribute to the body of nursing knowledge through demonstrating the ability to identify, test and evaluate research questions, applying research findings, participating in research activities, and sharing research results with others.
11. Identify the need for appropriate change, create a climate for adapting to change in self and others, and contribute to effecting and evaluating change.
12. Participate in developing and implementing strategies for advancing 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:
   - awareness of competencies and limitations
   - accountability for own actions
   - commitment to the search for new knowledge
   - receptivity for the application of new knowledge
   - commitment to self-directed, life-long learning
   - critical self-reflection and reflective practice.

Admission Policy and Procedure

ADMISSION POLICY

Application to the B.Sc.N. Programme in the Faculty of Health Sciences implies acceptance of admission policies, procedures and the terms and conditions by which they are administered. As places in the B.Sc.N. Programme are limited, admission is by selection. Possession of the published minimum requirements does not guarantee admission.

There are four streams of study leading to the completion of the B.Sc.N. degree. The Basic (A) Stream and Collaborative B.Sc.N. (D) Stream require four years of study, and are available to those applying directly from an Ontario secondary school with OACs (or Grade 12 U or U/C courses); to those who have qualifications equivalent to OACs (or Grade 12 U or U/C courses); to university students; 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 programme who are admitted to the B.Sc.N. Programme are granted advanced credit and may complete the programme in five academic terms if taken on a full-time basis.

The Ontario Primary Health Care Nurse Practitioner Programme (C) Stream is a post diploma/post degree programme. Diploma-prepared nurses require 24 months of full-time study to complete their B.Sc.N./N.P. degree, while 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.

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 programme having submitted false documentation will be withdrawn.
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

Requirements

The following are the minimum OAC requirements under the OSIS curriculum:
1. One of OAC English I, OAC English II, or OAC English III;
2. Either one of OAC Algebra and Geometry or OAC Calculus, or OAC Finite Mathematics;
3. Two of OAC Biology, OAC Chemistry or OAC Physics;
4. Four additional OACs from A to C.

The following are the minimum Grade 12 U and O/C requirements under the OSS curriculum:
1. English;
2. One of Geometry and Discrete Mathematics, Advanced Functions and Introductory Calculus, or Mathematics of Data Management;
3. Two of Biology, Chemistry or Physics;
4. Two additional Grade 12 U or O/C courses to total six.

Note: Application to the programme must be made within two years of completion of the OAC or Grade 12 U or O/C course requirements.

Applicants with Qualifications Equivalent to Ontario Secondary School

Applicants from other provinces and countries must achieve the equivalent to the qualifications listed above in their secondary school graduation year.

Applicants with Other Qualifications

Applicants normally should:

1. be currently enrolled in first year of a university programme and have achieved a university admission average of at least 75%; or
b) achieve a Cumulative Average of at least B- in all university degree credit courses taken. A minimum of 12 units or equivalent are required. (These courses may be taken as a full-time or part-time student. University correspondence degree courses are acceptable.)

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 programme.

2. submit Form 105D to OUAACL along with the required fees by February 15;
3. submit a completed original and three copies of the response to the questionnaire provided in the application package to McMaster by February 15.

Applicants From Other Degree Nursing Programmes

Applicants who are currently enrolled in a Nursing degree programme at another university may apply to transfer into the B.Sc.N. Programme at McMaster. Availability of space and placement in the programme will be determined by the Level Chair.

Even if space is not available, the applicant may choose to complete the admission process and be placed on a waiting list. The applicant 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. Applications for transfer into the B.Sc.N. Programme to commence studies in September must be received by the Admissions Coordinator (Nursing) no later than June 30.

Applicants must:
1. contact the Admissions Coordinator (Nursing) to discuss placement in the programme;
2. submit Form 105D to OUAACL along with the required fees by June 30;
3. submit a completed original and three copies of their response to the questionnaire provided in the transfer application package; an official letter from the Dean/Director of the programme in which the applicant is currently enrolled stating that the applicant has good standing in that programme (good standing is interpreted as at least a B- average in nursing courses); course descriptions/Outlines for assessment of advanced credit; and a current transcript.

II. POST DIPLOMA (B) STREAM

Applicants normally must:
1. possess a current College of Nurses of Ontario annual registration payment card or be eligible for reciprocity, or be eligible to write and subsequently pass the Registration examinations.
2. have an Ontario Diploma in nursing or the equivalent with a minimum overall average of 2.7 (B+).
3. submit Form 105D to OUAACL along with the required fees no later than February 15;
4. submit a completed original and three copies of the response to the questionnaire provided in the application package, a photocopy of the current College of Nurses of Ontario annual registration payment card and transcripts to McMaster by February 15.

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

III. ONTARIO PRIMARY HEALTH CARE NURSE PRACTITIONER PROGRAMME (C) STREAM

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 will be informed of the admission decision by May.

Applicants with a Diploma in Nursing must:
1. have an Ontario Diploma in nursing or the equivalent with a minimum overall average of 70%;
2. hold a current College of Nurses of Ontario annual registration payment card;
3. have the equivalent of a minimum of two years full-time nursing practice within the past five years as evidenced by the employer-completed Verification of Employment form(s);
4. submit Form 105D to OUAACL along with the required fees by February 15;
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 diploma nursing programme, copies of any additional professional registration, memberships or certificates listed on the relevant professional experience form (i.e., RNAO, CPR), and an official transcript showing a minimum of B- in at least one full-year university degree credit course or a Cumulative Average of at least B- to McMaster by March 1.

Applicants with a Baccalaureate in Nursing must:
1. possess an Ontario baccalaureate 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 OUAACL along with the required fees by February 15;
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 programme, copies of any additional professional registrations, memberships or certificates listed on the relevant professional experience form (i.e., RNAO, CPR) to McMaster by March 1.

Preference will be given 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

IV. MOHAWK AND CONESTOGA SITES (D) STREAM

Admission requirements for students applying to the Mohawk and Conestoga sites of the McMaster B.Sc.N. Programme are equivalent to those for students applying to the B.Sc.N. Basic (A) Stream.

Applicants Directly from Ontario Secondary Schools Requirements

The following are the minimum OAC requirements under the OSS curriculum:
1. One of OAC English I, OAC anglais I or OAC anglais II;
2. One of OAC Algebra and Geometry, OAC Calculus, OAC Finite Mathematics;
3. Two of OAC Biology, OAC Chemistry or OAC Physics;
4. Two additional OACs to total six.

The following are the minimum Grade 12 U and U/C requirements under the OSIS curriculum:
1. English U;
2. One of Geometry and Discrete Mathematics U, Advanced Functions and Introductory Calculus U or Mathematics of Data Management U;
3. Two of Biology U, Chemistry U or Physics U;
4. Two additional Grade 12 U or U/C courses to total six.

Note: Application to the programme must be made within two years of completion of the OAC or Grade 12 U or U/C course requirements.

Applicants with Qualifications Equivalent to Ontario Secondary School

Applicants from other provinces and countries must achieve the equivalent to the qualifications listed above in their secondary school graduation year.

Applicants with Other Qualifications

Applicants normally should:
1. a) be currently enrolled in first year of a university programme and have achieved a university admission average of at least 75%; or
PART-TIME STUDENTS
It is possible to complete the B.Sc.N. Programme on a part-time basis. University and programme 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, C STREAMS)
Unsuccessful applicants may inquire about their application for the current year by writing to the Chair of the Undergraduate Nursing Admissions Committee. No inquiries will be considered after August 31 of the year of application. Applications are not held over from one year to another. An unsuccessful applicant may reapply to the B.Sc.N. Programme by submitting a new application, including supporting documentation.

APPLICATION FOR DEFERRED REGISTRATION
Deferred registration is granted only under exceptional circumstances to those candidates who have been admitted and have accepted the offer. Registration may be deferred for one year only. The request for deferral, outlining the reasons for the request, must be postmarked no later than July 31 of the year for which deferral is requested.

Curriculum for the B.Sc.N. Programme

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 programme. 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. For some courses, the amount of duplication of required content will preclude their being used for elective credit in the B.Sc.N. Programme.

REQUIREMENTS
LEVEL I: 32 UNITS
(Units graded: 32)
- 12 units HTH SCI 1A03, 1B03, 1H03, 1H03
- 8 units NURSING 1F04, 1G04
- 6 units PSYCH 1A03 and 1A03
- 8 units Electives

LEVEL II: 29 UNITS
(Units graded: 23; Units pass/fail: 6)
- 12 units HTH SCI 2H03, 2H03
- 14 units NURSING 2L03, 2M03, 2N03, 2P03, 2P03
- 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 4A02, 4E03, 4F03, 4J07, 4K07
- 6 units Electives

TOTAL UNITS: 123
REGISTRATION TO PRACTISE NURSING
On receiving the B.Sc.N. degree after successful completion of the (A) Stream of the B.Sc.N. Programme, graduates are eligible to write the RN Licensing Examinations which are administered by the College of Nurses of Ontario. Application to write the RN Licensing Examinations is made through the Faculty of Health Sciences.

DIPLOMA RN (B) STREAM
(6391)
The programme 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 programme 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. Programme.

b) achieve a Cumulative Average of at least B- in all university degree credit courses taken. A minimum of 12 units or equivalent are required. (These courses may be taken as a full-time or part-time student. University correspondence degree courses are acceptable.)

Note: University degree credit courses completed prior to admission will be assessed for advanced credit by the Chair, Nursing Programme, at the site where application was made, following admission to the programme.

2. Apply to 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 the 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 programmes where there are often enough qualified applications received by the equal consideration date (February 1) to fill the programme.

Applicants From Other Degree Nursing Programmes
Applicants who are currently enrolled in a Nursing degree programme at another university or in another college/university consortium may apply to transfer to the Mohawk and Conestoga sites to earn a McMaster B.Sc.N. degree. Availability of space and placement in the programme will be determined by the Level Coordinator in consultation with course planners. Even if space is not available, the applicant may choose to complete the admission process and be placed on a waiting list.

Applications for transfer into the Collaborative B.Sc.N. programme to commence studies in September must be received by the Ontario Colleges Application Services (OCAS) in Guelph no later than May 15.

Applicants must:
1. submit an application to OCAS with the fee by May 15;
2. submit to the Registrar's office at the College by May 15 an official letter from the Dean/Director of the programme in which the applicant is currently enrolled stating that the applicant is in good standing in that programme (in good standing is interpreted as at least B- average in nursing courses); course descriptions and outlines for assessment of advanced credit; and current transcripts of all university work taken;
3. The Registrar's office will forward the transcripts to the Chair, Nursing Programmes for consideration and an admission decision. The Registrar's Office will inform the applicant of the admissions decision. Applicants may be invited to a personal interview. Applicants are responsible for their travel expenses. Failure to attend the interview will result in cancellation of the application.

V. ALL OTHER APPLICANTS
Certain provisions are available for applicants who wish to pursue a Nursing degree at McMaster but do not qualify under any of the above categories. For information on how to qualify, applicants should contact the Office of the Registrar (Admissions), Gilmour Hall, Room 108, McMaster University, Hamilton, ON L8S 4L8.
Computer skills and Internet access are mandatory. 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.

Full-time B.Sc.N./N.P. students attend classes for 24 consecutive months. Full-time certification N.P. students attend classes for 12 consecutive months. Once N.P. core courses are started, the five courses must be completed within three calendar years.

NURSE PRACTITIONER (C) STREAM (5997)

REQUIREMENTS
ADVANCED CREDIT: 42 UNITS
Required elective completed before admission: 6 units

LEVEL III: 42 UNITS
(Units graded: 42)

TERMS 1 AND 2: 33 UNITS
21 units HTH SCI 1CC7, 2C07, 3B03, 3C04
12 units NURSPRAC 4A10, 4P03, 4R03, 4T10
6 units Electives

TERMS 1 AND 2: 33 UNITS
21 units HTH SCI 1CC7, 2C07, 3B03, 3C04
6 units NURSPRAC 3S03, 3T03
6 units Electives

SUMMER TERM: 9 UNITS
9 units Electives

LEVEL IV: 44 UNITS
(Units graded: 34, Units pass/fail: 10)

TERMS 1 AND 2: 31 UNITS
2 units HTH SCI 4L02
25 units NURSPRAC 4A10, 4P03, 4R03, 4T10
3 units Electives

SUMMER TERM: 13 UNITS
(Units graded: 3; Units pass/fail: 10)
13 units NURSPRAC 4C13

TOTAL UNITS: 134

REQUIREMENTS FOR STUDENTS WHO ENTERED PRIOR TO SEPTEMBER 2001

All B.Sc.N. (B) Stream students who entered the programme prior to September 2001 have the option of continuing under the curriculum in effect when they entered. Alternatively, students may take advantage of the programme requirements which took effect in September 2001. All students are strongly encouraged to contact the Coordinator of Studies for individual counselling to decide upon their programme of study. Students require a minimum of 121 units to graduate.

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. For some courses, the amount of duplication of required content will preclude their being used for elective credit in the B.Sc.N. Programme.

REQUIREMENTS
ADVANCED CREDIT: 33 UNITS
LEVEL III: 45 UNITS
(Units graded: 40; Units pass/fail: 5)

TERMS 1 AND 2: 33 UNITS
17 units HTH SCI 1A06, 1ZZ4, 3B03, 3C04
16 units NURSING 3LL2, 3MM3, 3S03, 3T03, 3VV2, 3W03

SPRING TERM: 6 UNITS
6 units Electives

SUMMER TERM: 6 UNITS
6 units Electives

LEVEL IV: 47 UNITS
(Units graded: 35; Units pass/fail: 12)

TERMS 1 AND 2: 29 UNITS
9 units HTH SCI 2C07, 4L02
20 units NURSING 4A02, 4E03, 4F03, 4S06, 4T06

SPRING TERM: 6 UNITS
6 units Electives

SUMMER TERM: 6 UNITS
6 units Electives

ADDITIONAL ELECTIVES (ANY TERM): 6 UNITS
6 units Electives

TOTAL UNITS: 125

ONTARIO PRIMARY HEALTH CARE NURSE PRACTITIONER PROGRAMME (C) STREAM

This programme has been developed by a provincial consortium of ten Ontario universities offering one standardized curriculum since 1995.

The programme prepares students with a nursing diploma or a nursing baccalaureate with relevant experience to provide individuals, families and communities with the five basic components of comprehensive primary health care services (promotion, prevention, cure, rehabilitation and support) within an extended scope of nursing.

REQUIREMENTS
ADVANCED CREDIT: 33 UNITS
LEVEL III: 45 UNITS
(Units graded: 45)

TERMS 1 AND 2: 33 UNITS
21 units HTH SCI 1CC7, 2C07, 3B03, 3C04
12 units NURSPRAC 3MM3, 3S03, 3T03, 3VV3

SPRING TERM: 6 UNITS
6 units Electives

SUMMER TERM: 6 UNITS
6 units Electives

TOTAL UNITS: 121

REQUIREMENTS FOR STUDENTS WHO ENTERED PRIOR TO SEPTEMBER 2001

All B.Sc.N (B) Stream students who entered the programme prior to September 2001 have the option of continuing under the curriculum in effect when they entered. Alternatively, students may take advantage of the programme requirements which took effect in September 2001. All students are strongly encouraged to contact the Coordinator of Studies for individual counselling to decide upon their programme of study. Students require a minimum of 121 units to graduate.

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. For some courses, the amount of duplication of required content will preclude their being used for elective credit in the B.Sc.N. Programme.

REQUIREMENTS
ADVANCED CREDIT: 33 UNITS
LEVEL III: 45 UNITS
(Units graded: 40; Units pass/fail: 5)

TERMS 1 AND 2: 33 UNITS
17 units HTH SCI 1A06, 1ZZ4, 3B03, 3C04
16 units NURSING 3LL2, 3MM3, 3S03, 3T03, 3VV2, 3W03

SPRING TERM: 6 UNITS
6 units Electives

SUMMER TERM: 6 UNITS
6 units Electives

LEVEL IV: 47 UNITS
(Units graded: 35; Units pass/fail: 12)

TERMS 1 AND 2: 29 UNITS
9 units HTH SCI 2C07, 4L02
20 units NURSING 4A02, 4E03, 4F03, 4S06, 4T06

SPRING TERM: 6 UNITS
6 units Electives

SUMMER TERM: 6 UNITS
6 units Electives

ADDITIONAL ELECTIVES (ANY TERM): 6 UNITS
6 units Electives

TOTAL UNITS: 125

ONTARIO PRIMARY HEALTH CARE NURSE PRACTITIONER PROGRAMME (C) STREAM

This programme has been developed by a provincial consortium of ten Ontario universities offering one standardized curriculum since 1995.

The programme prepares students with a nursing diploma or a nursing baccalaureate with relevant experience to provide individuals, families and communities with the five basic components of comprehensive primary health care services (promotion, prevention, cure, rehabilitation and support) within an extended scope of nursing.

REQUIREMENTS
ADVANCED CREDIT: 33 UNITS
LEVEL III: 45 UNITS
(Units graded: 45)

TERMS 1 AND 2: 33 UNITS
21 units HTH SCI 1CC7, 2C07, 3B03, 3C04
12 units NURSPRAC 3MM3, 3S03, 3T03, 3VV3

SPRING TERM: 6 UNITS
6 units Electives

SUMMER TERM: 6 UNITS
6 units Electives

TOTAL UNITS: 121

REQUIREMENTS FOR STUDENTS WHO ENTERED PRIOR TO SEPTEMBER 2001

All B.Sc.N (B) Stream students who entered the programme prior to September 2001 have the option of continuing under the curriculum in effect when they entered. Alternatively, students may take advantage of the programme requirements which took effect in September 2001. All students are strongly encouraged to contact the Coordinator of Studies for individual counselling to decide upon their programme of study. Students require a minimum of 121 units to graduate.

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. For some courses, the amount of duplication of required content will preclude their being used for elective credit in the B.Sc.N. Programme.

REQUIREMENTS
ADVANCED CREDIT: 33 UNITS
LEVEL III: 45 UNITS
(Units graded: 40; Units pass/fail: 5)

TERMS 1 AND 2: 33 UNITS
17 units HTH SCI 1A06, 1ZZ4, 3B03, 3C04
16 units NURSING 3LL2, 3MM3, 3S03, 3T03, 3VV2, 3W03

SPRING TERM: 6 UNITS
6 units Electives

SUMMER TERM: 6 UNITS
6 units Electives

LEVEL IV: 47 UNITS
(Units graded: 35; Units pass/fail: 12)

TERMS 1 AND 2: 29 UNITS
9 units HTH SCI 2C07, 4L02
20 units NURSING 4A02, 4E03, 4F03, 4S06, 4T06

SPRING TERM: 6 UNITS
6 units Electives

SUMMER TERM: 6 UNITS
6 units Electives

ADDITIONAL ELECTIVES (ANY TERM): 6 UNITS
6 units Electives

TOTAL UNITS: 125

ONTARIO PRIMARY HEALTH CARE NURSE PRACTITIONER PROGRAMME (C) STREAM

This programme has been developed by a provincial consortium of ten Ontario universities offering one standardized curriculum since 1995.

The programme prepares students with a nursing diploma or a nursing baccalaureate with relevant experience to provide individuals, families and communities with the five basic components of comprehensive primary health care services (promotion, prevention, cure, rehabilitation and support) within an extended scope of nursing.

REQUIREMENTS
ADVANCED CREDIT: 33 UNITS
LEVEL III: 45 UNITS
(Units graded: 45)

TERMS 1 AND 2: 33 UNITS
21 units HTH SCI 1CC7, 2C07, 3B03, 3C04
12 units NURSPRAC 3MM3, 3S03, 3T03, 3VV3

SPRING TERM: 6 UNITS
6 units Electives

SUMMER TERM: 6 UNITS
6 units Electives

TOTAL UNITS: 121

REQUIREMENTS FOR STUDENTS WHO ENTERED PRIOR TO SEPTEMBER 2001

All B.Sc.N (B) Stream students who entered the programme prior to September 2001 have the option of continuing under the curriculum in effect when they entered. Alternatively, students may take advantage of the programme requirements which took effect in September 2001. All students are strongly encouraged to contact the Coordinator of Studies for individual counselling to decide upon their programme of study. Students require a minimum of 121 units to graduate.

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. For some courses, the amount of duplication of required content will preclude their being used for elective credit in the B.Sc.N. Programme.
NURSE PRACTITIONER CERTIFICATE STREAM

REQUIREMENTS

39 UNITS

(Units graded: 29; Units pass/fail: 10)

TERMS 1 AND 2: 26 UNITS

(Units graded: 26)

26 units NURSPRAC 4A10, 4P03, 4F03, 4T10

SUMMER TERM 13 UNITS

(Units graded: 3; Units pass/fail: 10)

13 units NURSPRAC 4C13

TOTAL UNITS: 39

EXTENDED CLASS OF REGISTRATION (RN/EC)

On successful completion of the Ontario Primary Health Care Nurse Practitioner Programme, nurses registered with the College of Nurses of Ontario are eligible to write the Extended Class Licensing examination through the College of Nurses of Ontario (CNO). Updates regarding this process are available to registered students on the N.P. Network.

COLLABORATIVE B.SC.N. (D) STREAM

CONESTOGA SITE

MOHAWK SITE

The Faculty has planned the curriculum so that the study of nursing, the physiological, psychological and social sciences, and the humanities are interrelated and span the entire programme.

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 the amount of 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 NURSECON and are open only to Nursing students at the Mohawk and Conestoga sites as specified in prerequisite statements. For descriptions of these courses, please see NURSECON under the heading NURSING in the Course Listings section of the Calendar. Remaining elective courses will be offered by McMaster and delivered at these sites.

REQUIREMENTS

LEVEL I: 32 UNITS

(Units graded: 32)

12 units HTH SCI 1AA3, 1BB3, 1H03, 1HH3
8 units NURSING 1F04, 1G04
6 units NURSECON 1A03 and 1B03 (Mohawk Site) or NURSECON 1C03 and 1D03 (Conestoga Site)
6 units Electives.

LEVEL II: 29 UNITS

(Units graded: 23; Units pass/fail: 6)

6 units HTH SCI 2K03, 2H03
14 units NURSING 2L03, 2M03, 2N03, 2P03, 2Q02
9 units Electives. (Students studying at the Mohawk College site must include NURSECON 2A03 and 2D03.)

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: 20; Units pass/fail: 14)

2 units HTH SCI 4L02
22 units NURSING 4A02, 4E03, 4F03, 4J07, 4K07
6 units Electives

TOTAL UNITS: 123

REGISTRATION TO PRACTISE NURSING

On receiving the B.Sc.N. degree after successful completion of the (D) Stream of the B.Sc.N. Programme, graduates are eligible to write the RN Licensing Examinations which are administered by the College of Nurses of Ontario. Application to write the RN Licensing Examinations is made through the college attended.

Nursing Leadership/Management Programme

The Nursing Leadership/Management Programme, which was previously administered and is currently endorsed by the Canadian Nurses Association, was transferred to McMaster in 1993. The Programme is offered to Registered Nurses located throughout Canada and internationally by means of distance education. It is also offered locally through individual self-directed study and tutorial.

The course work is designed to familiarize Registered Nurses with the theory and clinical application necessary to function effectively in a formal or informal leadership position. Content includes theory and techniques of management, leadership, organizational development and change, 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 Programme Office.

ACADEMIC REGULATIONS

Students in the Nursing Leadership/Management Programme are subject to the General Academic Regulations of the University and the regulations of the B.Sc.N. Programme.

CURRICULUM

6 units NURSING 4B06
1 unit NURSING 4F01
1 unit NURSING 4D01
3 units NURSING 4I03

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

Oncology Programmes

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 programme is based on recent, relevant oncology nursing experience and demonstrated commitment to oncology nursing practice. Selection criteria for admission to the Paediatric Oncology programme 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 Programme Office in Health Sciences Centre, Room 2J32.

ACADEMIC REGULATIONS

Students in the Oncology programmes are subject to the General Academic Regulations of the University and the regulations of the B.Sc.N. Programme.

Adult Oncology Programme

This programme has been established to provide registered nurses working with adult cancer patients the opportunity to develop enhanced knowledge and skills required for the evolving challenges of their roles across the cancer consortium.

The programme 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 programme include professional role development, evidence based practice, and development of assessment, communication, supportive care and collaborative practice skills.

The Adult Oncology programme is offered to nurses within the province of Ontario and will be made accessible through a distance education format.

REQUIREMENTS

(Units graded: 13; Units pass/fail: 9)

3 units NURSING 3A4A3
3 units NURSING 3CC3
3 units NURSING 3DD3
3 units NURSING 3MM3
4 units HTH SCI 3C04
6 units NURSING 4I06

TOTAL UNITS: 22

Students who are subsequently admitted to the Post Diploma (B) Stream of the B.Sc.N. Programme will be granted credit for these courses (or their equivalent) in the B.Sc.N. Programme.
Paediatric Oncology Programme  {6394}

In order to accommodate the educational needs of registered nurses working in paediatric oncology, a programme has been developed within the context of the existing post-diploma stream. This programme 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 programme 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. Some courses are available using a distance education modality.

REQUIREMENTS

(Units graded: 13; Units pass/fail: 9)

- 3 units NURSING 3AA3
- 3 units NURSING 3P03
- 3 units NURSING 3Q03
- 3 units NURSING 3MM3
- 4 units HTH SCI 3C04
- 6 units NURSING 4T06

TOTAL UNITS: 22

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

Academic Regulations

In addition to meeting the General Academic Regulations of the University, students enrolled in the B.Sc.N. Programme shall be subject to the following programme regulations.

Registration in the B.Sc.N. Programme implies acceptance on the part of the student of the objectives of that programme 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. Programme reserves the right to remove a student from a clinical placement or laboratory setting at any point during the term if the student exhibits unsafe clinical practice or behaviour that places the patient or others at risk. Such removal will result in the student receiving a grade of F in the course and may result in dismissal from the programme. The clinical activities associated with any clinical course must be successfully achieved for attainment of a passing grade in the course.

B.Sc.N. Programme Academic Regulations

Basic (A) and Post Diploma (B) Stream

A student must:
1. achieve a Cumulative Average (CA) of at least 3.5;
2. achieve a grade of at least C- in the graded Nursing and required Health Sciences courses. A grade of D-, D or D+ is permissible in one Level I Health Sciences course and only once in required Health Sciences courses beyond Level I.
3. achieve a Pass designation in all clinical courses and the clinical component of NURSING 1F04 and 1G04.

The following courses are designated clinical courses:
- Basic (A) Stream: NURSING 2L03, 2P03, 3X04, 3Y04, 4J07, 4K07
- Diploma Registered Nurses (B) Stream: NURSING 4S06, 4T06

All clinical courses above Level I are evaluated on a Pass/Fail basis. The grade 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. Programme Chair in consultation with the programme Reviewing Committee.)

Nurse Practitioner (C) Stream and Nurse Practitioner Certificate Stream

A post-diploma student must:
1. achieve a Cumulative Average (CA) of at least 3.5;
2. achieve a grade of at least C- in the graded Nursing and required Health Sciences courses with the exception that a grade of D-, D or D+ is permissible in one Level I Health Sciences course and only once in required Health Sciences courses beyond Level I.

Both post-diploma and post-degree students must:
1. achieve a Pass designation in the clinical component as well as a grade of B- in the theoretical component in each of NURSPRAC 4A10, 4C13, 4T10 and NURSPRAC 4P03, 4R03.
2. achieve a grade of B- in NURSPRAC 4P03, 4R03.

The following courses are designated clinical courses:
- NURSPRAC 4A10, 4C13, 4T10

CONTINUATION IN THE PROGRAMME

Students are reviewed at the end of each term. To continue in the B.Sc.N. Programme a student must obtain a CA of at least 3.5. A student whose CA is at least 3.0 may, at the discretion of the B.Sc.N. Programme Chair in consultation with the programme Reviewing Committee, proceed in the programme and will be placed on programme probation. A student may be placed on programme probation only once during the programme.

Failure:
A student whose CA is less than 3.5, and who has not been granted programme probation, may not continue in the programme.

A student who fails to obtain a CA of 3.5 at the completion of the programme probation may not continue in the programme. 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 Programme Chair in consultation with the programme Reviewing Committee, be allowed to repeat the course in which the minimum grade or Pass requirement has not been met. If a student fails to meet the minimum grade or Pass requirements after repeating the course, he or she may not continue in the programme. A student may normally be allowed to repeat only one clinical and one non-clinical Nursing or Health Sciences course during the programme.

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 programme.

COURSES WITH A PRACTICUM COMPONENT

Students are responsible for arranging their own travel to and from learning settings external to the University and for covering any costs incurred. All students who enrol in the B.Sc.N. Programme are expected to be able to travel to any learning setting in Hamilton and the surrounding area that is accessible by public transportation. Normally, students will only be assigned to settings to which they can travel by public transit. If a setting is not accessible by public transit, or if the travel demands of the setting exceed what can be provided by the public transit system (e.g., Public Health, VON), only those students who indicate an interest in the setting and who have other means of transportation will be given that assignment. 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.

Collaborative B.Sc.N. Programme (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.
Programme Approval: Selection of courses must be approved by the Chair of the Programme 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 Chair of the Programme at the appropriate site (Conestoga or Mohawk College). Before courses are selected, students are requested to determine the requirements for the programme as outlined in the appropriate Faculty sections of the Mohawk or Conestoga Calendars 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 Chair of the Programme 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. Programme are expected to be able to travel to any learning setting in Hamilton and surrounding area (Mohawk) and Kitchener-Waterloo and surrounding area (Conestoga) that is accessible by public transportation.

Honours Biology and Pharmacology Programme (Co-op)

This is a joint programme between the Faculty of Health Sciences and the Faculty of Science (Department of Biology). The Pharmacology courses, which are run in a small group, problem-based format, are the responsibility of the Faculty of Health Sciences, drawn from the following departments: Biomedical Sciences, Medicine, Obstetrics and Gynecology, and Pathology. Please see the Faculty of Science, Department of Biology section for admission requirements.
FACULTY OF HUMANITIES

WEB ADDRESS: http://www.humanities.mcmaster.ca
E-MAIL ADDRESS: humconf@mcmaster.ca
Chester New Hall, Room 112 Ex. 27423

Dean of Humanities
D.R. Woolf/B.A., D.Phil., F.R.H.S.

Acting Associate Dean of Humanities
S. Crosta/B.A., M.A., Ph.D.

Assistant Dean (Studies)
P.A. Kalnins/B.A.

Academic Advisors
S.A. Richard/B.A.
C. Schlechta/B.A.
K. Singer

Business Manager
S. Mercer

Faculty Advancement Officer
N. Alexianian/B.A.

Assistant to the Faculty Advancement Officer
Kendyll Woodman/B.Ed.

Faculty Liaison Officer
R. Muhic-Day/B.A., M.A.

The Humanities at McMaster partake in a distinguished tradition. Our subjects-humanities, history and philosophy, art, dance, music and classics-are crucial to the self-knowledge that social scientists. They also develop the intellectual skills critical and creative thinking, oral and written communication, understanding other people that are vital in a knowledge society. Our many interdisciplinary programmes, Communication Studies, Comparative Literature, Peace Studies and Women's Studies, allow students to draw on several departmentally-based subjects within a single programme of study.

Our faculty members are dedicated scholars who are eager to share their knowledge. We welcome students and scholars who are interested in the application of computers to their disciplines, who aspire to excellence in the fine and performing arts, who want deeper understanding of other cultures and mastery of their languages, or who desire to pursue classical, historical or philosophical studies.

The attainment of precise knowledge and fresh insights through lectures, class discussions, reflection, analysis and writing is the essence of study in the Faculty of Humanities' seven academic units. These are:

- School of the Arts
- Department of Classics (Ancient History and Archaeology, Classical Languages and Literature)
- Department of English
- Department of French
- Department of History
- Department of Modern Languages and Linguistics (Chinese, Catalan, German, Spanish Studies, Italian, Japanese, Polish, Russian)
- Department of Philosophy

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

- Honours Communication Studies
- Combined Honours in Comparative Literature
- Combined Honours in German
- Combined Honours in Hispanic Studies
- Combined Honours in Italian
- Honours Linguistics
- Honours Modern Languages and Linguistics
- Combined Honours in Multimedia
- Combined Honours in Peace Studies
- Combined Honours in Women's Studies
- Combined B.A. in Indigenous Studies
- Interdisciplinary Minor in Archaeology

PROGRAMMES AND DEGREES

A. Level I Programmes

HUMANITIES I

PROGRAMME 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 programme normally requires completion of six units of the relevant subject. In order to be considered for admission to a Level II programme, students should consult the admission statements for the Level II programmes 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 Inqui or Humanities in the Course Listings section of this Calendar.

3. Humanities I students are permitted to take up to 12 units of work in any single subject.

4. Students with an OAC or Grade 12 U course in Greek or Latin will register for six units of Level II Greek or Latin in lieu of the corresponding 1Z03 and 1ZZ3 courses.

5. Humanities I students are restricted to taking no more than 12 units of introductory language courses.

6. Portfolio Required: ART 1F06: The prerequisite for ART 1F06 requires permission of the School of the Arts based on a required portfolio interview. If you intend to take ART 1F06 which is required for entrance into any Honours Art programme, you must make an appointment with the School for a portfolio interview in February/March of the calendar year in which you wish to register for the programme. The portfolio should contain a variety of original work in different media, including work derived from both firsthand observation and the imagination. Aptitude in art and academic ability are both 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. Late applications will be considered subject to space availability and merit after the first allocations have been confirmed in June. Acceptance into ART 1F06 is contingent upon receiving a written confirmation from the School of the Arts.

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>1F06</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART HIST</td>
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<td>HISPANIC</td>
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<td>LINGUIST</td>
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<td>MMEDIA</td>
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<td>MUSIC</td>
<td>1A03, 1AA3, 1CC3, 1D03, 1Y03, 1YY3</td>
</tr>
</tbody>
</table>

(See Note 7 above.)

PEACE ST  | 1A03, 1B03 |
PHILOS    | 1A03, 1B03, 1C03, 1D03, 1E03 |
THTR&FLM  | 1A03, 1B03 |
WOMEN ST  | 1A06 |
COMBINED HONOURS PROGRAMME

This involves three years of study, beyond Level I, concentrated in the work of two disciplines (e.g. English and Communication Studies). 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) or one Humanities discipline (e.g. Multimedia) with Japanese Studies.

MINOR

A minor is an option available to a student enrolled in a four-level programme. 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 programme 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. 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.

B.A. PROGRAMME

This involves two years of study, beyond Level I, concentrated in the work of a single discipline.

The content and the requirements of single Honours, Combined Honours and other B.A. programmes are found after the Academic Regulations below.

There are a number of Humanities courses which may be taken as electives without prerequisites. Individual course descriptions, by Department, are given under the section entitled Courses Listings.

Not only are students from other Faculties able to take individual courses which have no prerequisites, but they are also able to transfer into any of the degree programmes offered by the Faculty of Humanities. For the majority of programmes in the Faculty, admission may be gained after the successful completion of any Level I programme at the university, providing this includes the necessary programme requisites as outlined in the admission statement for each Humanities programme as described under Programmes for the B.A., B.A. (Honours) and B.Mus. Degrees.

SECOND LANGUAGE PROFICIENCY

Students embarking on Humanities programmes 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 most highly-qualified Humanities' graduates seeking the widest range of post-graduation academic and employment opportunities.

PART-TIME STUDY

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

ACADEMIC REGULATIONS

Students enrolled in Humanities programmes, in addition to meeting the general Academic Regulations of the University, shall be subject to the following Faculty Regulations and Policies.

TRANSFER TO THE FACULTY OF HUMANITIES

Students from other Faculties are able to transfer to degree programmes 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 programme.

REINSTATEMENT TO THE FACULTY OF HUMANITIES

Students seeking reinstatement must complete the Returning Student Application form available at the Office of the Registrar (Gilmour Hall, Room 109) and the Faculty of Humanities (Chester Newby Building, Room 120). The completed application and the $50.00 fee must be submitted to the Office of the Registrar by June 30 for September entry and by November 30 for January entry.

Applications should explain the reasons for the student’s inadequate performance, corroborated 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 might have affected the student's academic performance or final grades. Reinstatement cases will be carefully screened and the evidence considered will include the student’s academic performance before and after admission to McMaster, as well as the nature of the reasons cited in the application letter, the Letters of Reference, and the accompanying documentation. Reinstatement is not guaranteed. Students who 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.

REGISTRATION AND COURSE CHANGES

It is the responsibility of the student to ensure that the programme of work undertaken meets the requirements for the degree. When registering or making changes to course selection, students must seek the written approval of the Office of the Dean of the Faculty of Humanities. Dates for final registration and course changes appear in the Sessional Dates section of this Calendar and are rigidly adhered to.

OVERLOAD

Students who wish to take more courses than recommended for a single Level of their programme may do so only if their Cumulative Average on completion of the previous Fall/Winter session is at least 7.0. A student with outstanding deferred examination or termwork will not be permitted to overload in the following Term. Students registered in the final Level of their programme 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 termwork 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 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 automatic if a student is placed on academic probation, programme probation, or required to withdraw from the University. Students should take note of any conditions on the Letter of Permission that might apply, including the requirement of a grade of at least C- for transfer credit. Courses taken at another university cannot be used to satisfy the University's minimum residence requirement, will not be included in the calculation of the averages at McMaster, and therefore cannot be used to raise standing. The transcript designation will read COM, indicating Complete, when a C- or better is attained.

SUMMER IMMERSION PROGRAMMES IN FRENCH

Students must obtain approval from the Office of the Dean of the Faculty of Humanities prior to participating in any language immersion programme.

The government-sponsored summer language bursary programme offers university students the opportunity to take French courses at a large number of accredited institutions. Students wishing to attend another university in order to participate in a language immersion programme must: (a) petition the Office of the Dean of the Faculty of Humanities, (b) submit detailed course descriptions for assessment, and (c) obtain a Letter of Permission.

Students registered in a programme in French may take a maximum of six units of credit in this manner as elective work only. Students not registered in a programme in French may take up to 12 units of credit.

EXCHANGE PROGRAMMES WITHIN CANADA

For information on the Canadian Scholars Exchange Programme (CANEX), please refer to the Academic Facilities, Student Services and Organizations section of this Calendar under the heading Student Exchanges.

THIRD YEAR STUDY ELSEWHERE/HUMANITIES STUDY ABROAD

Humanities Study Abroad During Level III of Honours Programmes

There are two ways to undertake international studies during Level III of an Honours programme: (i) a Formal Exchange Programme or (ii) a Third Year Study Elsewhere Programme.

(i) Formal Exchange Programme

During Level III of Honours Programmes

Formal Exchange Programmes are those in which McMaster University has an agreement with another institution involving a temporary exchange of students. Exchange students register and pay tuition fees and supplementary fees at McMaster. No tuition is paid at the other institution. See the General Academic Regulations section in this Calendar and the sections on Eligibility and Application below.

(ii) Third Year Study Elsewhere Honours Programme

Qualified Level III students may undertake studies at a university abroad for one or two terms in the Third Year Study Elsewhere Programme. This programme 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 all associated travel, study and living expenses. See the General Academic Regulations section in this Calendar and the sections on Eligibility and Application below.

Eligibility

Students registered in any Honours or Combined Honours programme in the Faculty of Humanities may apply to replace all or part of the work of their third year with an acceptable programme of study taken at a university or equivalent institution approved by the Faculty of Humanities.

To be eligible to take part in this programme, students must have completed at least 60 units of work with a Cumulative Average of at least 7.0. Individual programmes 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 programme do not have the option of graduating with a three-year B.A. degree on the basis of work completed in this programme, 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

Students interested in applying for this programme should consult the Coordinator, Humanities Study Abroad, Togo Salmon Hall, Room 607, 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 programme, approved by the programme counsellor(s), must be submitted together with the application to the Coordinator no later than the end of January. However, application for some exchanges may be due as early as December.

SPRING COUNSELLING

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

During the Spring Counselling period:

1. A Majors Fair is held by departments in the Faculty of Humanities to discuss undergraduate programmes, course offerings, for the next academic session, etc.;
2. Students seeking admission to a Level II programme for the following Fall/Winter session must complete an application for admission to Level II available in the Humanities Faculty Office in Chester New Hall, Room 112;
3. Copies of the Undergraduate Calendar for the next year are distributed by the Office of the Registrar to students in March. Individual degree audits are available to students through MUGSI.

SCHOOL OF THE ARTS

WEBADDRESS: http://www.sota.humanities.mcmaster.ca

The School of the Arts offers programmes in:

- Art
- Art History
- Multimedia
- Music
- Theatre & Film Studies

In addition, Minors are available in: Art History, Music and Theatre & Film Studies.

PROGRAMMES 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 programmes 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 programme.
Honours Art  \(2028\)

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order 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 programme and: (a) a Cumulative Average of at least 6.0, (b) a grade of at least B- in ART 1F06; and (c) the successful completion of ART HIST 1A03 and 1A06.

**NOTES**

1. Students in Honours Art must complete ART 2A06, 2B06, 2C06, and 2F06 before registering in Level III or IV Art courses.
2. Students must achieve a minimum grade of B- in ART 3E06 or 3G06 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 programme may be counted toward the Minor of 24 units.

**REQUIREMENTS**

<table>
<thead>
<tr>
<th>Units</th>
<th>Requirement</th>
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<tbody>
<tr>
<td>120</td>
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<tr>
<td>51</td>
<td>ART 2A06, 2B06, 2C06, 2F06, 3C03, 3D03, 3D3, 3E06, 4E12</td>
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<td>ART HIST 2D03, 3A03</td>
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<td>Levels III and IV Art History</td>
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</tr>
<tr>
<td>18</td>
<td>Electives</td>
</tr>
</tbody>
</table>

**Combined Honours in Art and Another Subject**

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

**ADMISSION**

Enrolment in this programme is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I programme and: (a) a Cumulative Average of at least 6.0, (b) a grade of at least B- in ART 1F06; and (c) the successful completion of ART HIST 1A03 and 1A06.

**NOTES**

1. Students in Combined Honours Art must complete ART 2A06, 2B06, 2C06 and 2F06 before registering in Level III or IV Art courses.
2. Students wishing to substitute ART 4E12 for ART 3E06 should become familiar with the prerequisites for Level III Art History and seek permission of the Studio Committee of Instruction.
3. Because ART HIST 2D03 is required in all Art History programmes, students registered in the Combined Honours Art and Art History programme will substitute three units elective for ART HIST 2D03.

**REQUIREMENTS**

<table>
<thead>
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<th>Units</th>
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<td>Levels II, III or IV Art History</td>
</tr>
<tr>
<td>18</td>
<td>Electives</td>
</tr>
</tbody>
</table>

**B.A. in Art History  \(1029\)**

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

**ADMISSION**

Completion of any Level I programme and a Cumulative Average of at least 6.0 including an average of at least 7.0 in ART HIST 1A03 and 1A06 or a grade of at least B- in ART HIST 1A06.

**REQUIREMENTS**

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<th>Units</th>
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<td>120</td>
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<tr>
<td>18</td>
<td>Electives to total 120 units</td>
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</tbody>
</table>

**Honours Art History  \(2029\)**

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

**ADMISSION**

Completion of any Level I programme and a Cumulative Average of at least 6.0 including an average of at least 7.0 in ART HIST 1A03 and 1A06 or a grade of at least B- in ART HIST 1A06.

**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**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>30</td>
<td>from the Level I programme completed prior to admission into the programme</td>
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<tr>
<td>18</td>
<td>ART HIST 2A03, 2B03, 2C03, 2D03, 2I03, 3P03</td>
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<td>Levels III and IV Art History</td>
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</tr>
<tr>
<td>45</td>
<td>Electives</td>
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</tbody>
</table>

**Minor in Art History**

24 units of Art History, of which no more than six units may be from Level I.

**PROGRAMMES IN DRAMA**

(SEE PROGRAMMES IN THEATRE & FILM STUDIES)
MULTI MEDIA

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

Honours Arts & Science and Multimedia
(B.Arts.Sc.; See Arts & Science programme)

Combined Honours B.A. in Multimedia and Another Subject

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION

Enrolment in this programme is limited. Selection is based on academic achievement in Level I Multimedia courses but requires, as a minimum, completion of any Level I programme and a Cumulative Average of at least 6.0 including a grade of at least B- in each of two courses from MMEDIA 1A03, 1B03 and 1C03.

NOTE

Students must complete MMEDIA 4A03 and 4B03 in the same academic year.

COURSE LIST 1

ART HIST 3M03; CMST 2T03, COMP SCI 1MC3, 1MD3, 2SC3, 3SE3; LINGUIST 4D06; MMEDIA 2C03, 2D03, 2E03, 2F03, 2G03, 2H03, 2I03, 2J03, 3D03, 3E03, 3F03, 3G03, 3H03, 3I03, 3J03, 4C03, 4D03; MUSIC 2F03; THTR&FLM 2E03; WOMEN ST 2D03

REQUIREMENTS

120 units total (Levels I to IV)

30 units from the Level I programme completed prior to admission into the programme (including two of MMEDIA 1A03, 1B03, or 1C03)

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

PROGRAMMES IN MUSIC

NOTES

1. Completion of a Music degree requires considerable daytime attendance.

2. Normally, students with an undergraduate degree in Music will not be admitted to a B.Mus. degree programme 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 who entered the programme prior to September 2002 should consult the 2001-2002 Calendar (http://registrar.mcmaster.ca) or consult the Departmental Counselor for programme requirements.

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order 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, 3P03, 3Q03, 3R03, 4L03, 4M03, 4N03, 4O03, 4P03, 4Q03, 4V03

COURSE LIST 2

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

COURSE LIST 3

MUSIC 2A03, 2AA3, 2F03, 2Z03, 3G03, 3T03, 3U03, 3Z03, 4AA3, 4G03, 4S03, 4U03, 4X03, 4Z03, 4ZZ3; SOTA 2A03

COURSE LIST 4

MUSIC 3E03, 3E06, 3S03, 4E03, 4E06

(Extra 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, 2AA3, 2F03, 3T03, 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 who entered the programme prior to September 2002 should consult the 2001-2002 Calendar (http://registrar.mcmaster.ca) or consult the Departmental Counselor for programme requirements.

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order 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, 4AA3, 4X03

COURSE LIST 2

MUSIC 2A03, 2AA3, 2F03, 2G03, 2Z03, 3T03, 3U03, 3Z03, 4AA3, 4X03, SOTA 2A03

REQUIREMENTS

120 units total (Levels I to IV)

33 units Music I programme

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

B.A. in Music (1378)

Students who entered the programme prior to September 2002 should consult the 2001-2002 Calendar (http://registrar.mcmaster.ca) or consult the Departmental Counselor for programme requirements.

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order 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 programme may be admitted with a Cumulative Average of at least 3.5, a grade of at least C+ in MUSIC 1A06, or a weighted average of 4.0 in MUSIC 1A03 and 1AA3, and a successful audition.
2. Students registered in the B.A. Music programme who wish to transfer into the Honours B.Mus. programme must apply through the Dean's Office before the end of classes in their final year of study.

COURSE LIST 1
All Level II, III and IV Music courses, except MUSIC 2G03, 3G03, 4G03.

REQUIREMENTS
90 units total (Levels I to III)
33 units MUSIC i programme
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 programme at McMaster; and
2. Students enrolled in, or graduates of, other McMaster degree programmes, 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 programme in Music. Students should meet with the Academic Counsellor for Music in the School of the Arts as early as possible in their degree programme.

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 examination of rudiments of theory (Grade 2 level);
5.5. Aural; and
6. MUSIC 1E06 or equivalent, e.g., A.R.C.T. (Associate of the Royal Conservatory of Music).

In lieu of the above, students concentrating in jazz must complete an audition demonstrating equivalent experience in jazz performance.

Auditions take place between January and March. Applicants must contact the School of the Arts to arrange for an audition. Advanced credit, up to a maximum of 15 units, may be determined on an individual basis.

REQUIREMENTS
The Diploma will require completion of 24 units as follows:
15 units MUSIC 2E06, 3E06, and one of MUSIC 3S03, 4G03, 4U03
9 units MUSIC 4E09
Lesson fees: Lesson fees are charged over and above tuition for MUSIC 2E06, 3E06, 3S03 and 4E09. Students registered in Honours Music will not be charged extra fees for MUSIC 2E06.

For those registered in a degree programme at McMaster University, MUSIC 4E09 must be taken over and above the total number of units required for a McMaster degree. Because this course may not be used for credit towards any McMaster degree, students pursuing the Diploma must plan their work to accommodate nine extra units.

PROGRAMMES IN THEATRE & FILM STUDIES
(Formerly Programmes in Drama)
Honours Arts & Science and Theatre & Film Studies
(B.Arts.Sc.; See Arts & Science programme)

NOTES
1. All Drama courses have been renamed Theatre & Film and renumbered. To determine the former Drama designations of the new Theatre & Film courses, please see Theatre & Film in the Course Listings section of this Calendar. To determine the Theatre & Film designation of a former Drama course, please see the listings for Drama in the Course Listings section of this Calendar.
2. The School of the Arts offers a broadly based programme of study in the history, theory, and critical understanding of dramatic performance in both live and recorded media. Programme requirements at Level II are designed to expose students to the breadth of the study. Level III courses offer more specific approaches to the study of theatre and film. A limited amount of student specialization within the programme is possible at this level. The Honours Seminars at Level IV focus on independent research. Students are advised to note carefully the prerequisites for all courses. Students are also advised to take note which courses are offered in alternate years.
3. Students registered in Honours Theatre & Film Studies are encouraged to complete courses in related art forms.

Honours Theatre & Film Studies

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme and a Cumulative Average of at least 6.0 including an average of at least 7.0 in THTTR&FLM 1A03 and 1B03, or DRAMA 1A03 and 1AA3; or a grade of at least B- in DRAMA 1A06.

NOTE
A number of courses that directly pertain to Theatre & Film Studies are offered by other departments: Classics, Comparative Literature, English, French, Kinesiology and Women's Studies. These are recommended as electives listed at the end of the Theatre & Film designation of a former Drama course, please see the listings for Drama in the Course Listings section of this Calendar.

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme and a Cumulative Average of at least 6.0 including an average of at least 7.0 in THTTR&FLM 1A03 and 1B03, or DRAMA 1A03 and 1AA3; or a grade of at least B- in DRAMA 1A06.

NOTE
A number of courses that directly pertain to Theatre & Film Studies are offered by other departments: Classics, Comparative Literature, English, French, Kinesiology and Women's Studies. These are recommended as electives listed at the end of the Theatre & Film designation of a former Drama course, please see the listings for Drama in the Course Listings section of this Calendar.

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme and a Cumulative Average of at least 6.0 including an average of at least 7.0 in THTTR&FLM 1A03 and 1B03, or DRAMA 1A03 and 1AA3; or a grade of at least B- in DRAMA 1A06.

NOTE
A number of courses that directly pertain to Theatre & Film Studies are offered by other departments: Classics, Comparative Literature, English, French, Kinesiology and Women's Studies. These are recommended as electives listed at the end of the Theatre & Film designation of a former Drama course, please see the listings for Drama in the Course Listings section of this Calendar.

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme and a Cumulative Average of at least 6.0 including an average of at least 7.0 in THTTR&FLM 1A03 and 1B03, or DRAMA 1A03 and 1AA3; or a grade of at least B- in DRAMA 1A06.

NOTE
A number of courses that directly pertain to Theatre & Film Studies are offered by other departments: Classics, Comparative Literature, English, French, Kinesiology and Women's Studies. These are recommended as electives listed at the end of the Theatre & Film designation of a former Drama course, please see the listings for Drama in the Course Listings section of this Calendar.

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme and a Cumulative Average of at least 6.0 including an average of at least 7.0 in THTTR&FLM 1A03 and 1B03, or DRAMA 1A03 and 1AA3; or a grade of at least B- in DRAMA 1A06.

NOTE
A number of courses that directly pertain to Theatre & Film Studies are offered by other departments: Classics, Comparative Literature, English, French, Kinesiology and Women's Studies. These are recommended as electives listed at the end of the Theatre & Film designation of a former Drama course, please see the listings for Drama in the Course Listings section of this Calendar.

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme and a Cumulative Average of at least 6.0 including an average of at least 7.0 in THTTR&FLM 1A03 and 1B03, or DRAMA 1A03 and 1AA3; or a grade of at least B- in DRAMA 1A06.

NOTE
A number of courses that directly pertain to Theatre & Film Studies are offered by other departments: Classics, Comparative Literature, English, French, Kinesiology and Women's Studies. These are recommended as electives listed at the end of the Theatre & Film designation of a former Drama course, please see the listings for Drama in the Course Listings section of this Calendar.

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme and a Cumulative Average of at least 6.0 including an average of at least 7.0 in THTTR&FLM 1A03 and 1B03, or DRAMA 1A03 and 1AA3; or a grade of at least B- in DRAMA 1A06.

NOTE
A number of courses that directly pertain to Theatre & Film Studies are offered by other departments: Classics, Comparative Literature, English, French, Kinesiology and Women's Studies. These are recommended as electives listed at the end of the Theatre & Film designation of a former Drama course, please see the listings for Drama in the Course Listings section of this Calendar.

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme and a Cumulative Average of at least 6.0 including an average of at least 7.0 in THTTR&FLM 1A03 and 1B03, or DRAMA 1A03 and 1AA3; or a grade of at least B- in DRAMA 1A06.

NOTE
A number of courses that directly pertain to Theatre & Film Studies are offered by other departments: Classics, Comparative Literature, English, French, Kinesiology and Women's Studies. These are recommended as electives listed at the end of the Theatre & Film designation of a former Drama course, please see the listings for Drama in the Course Listings section of this Calendar.

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme and a Cumulative Average of at least 6.0 including an average of at least 7.0 in THTTR&FLM 1A03 and 1B03, or DRAMA 1A03 and 1AA3; or a grade of at least B- in DRAMA 1A06.

NOTE
A number of courses that directly pertain to Theatre & Film Studies are offered by other departments: Classics, Comparative Literature, English, French, Kinesiology and Women's Studies. These are recommended as electives listed at the end of the Theatre & Film designation of a former Drama course, please see the listings for Drama in the Course Listings section of this Calendar.
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 programme in Theatre & Film Studies. Students are advised that there may be restrictions on enrolment in these courses.

REQUIRED COURSE 36 units Courses specified for the other subject: enrolment in these courses.

36 units Electives counted toward the final level of their programme.

B.A. in Theatre & Film Studies

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION

Completion of any Level I programme and a Cumulative Average of at least 3.5 including an average of at least 4.0 in THTR&FLM 1A03 and 1B03, or DRAMA 1A03 and 1AA3; or a grade of at least C- in DRAMA 1A06.

REQUIREMENTS

90 units total (Levels I to III)

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

12 units Level II Theatre & Film courses with at least six units from THTR&FLM 2C03, 2D03, 2E03, 2F03

12 units Level III or IV Theatre & Film

36 units Electives

Minor in Theatre & Film Studies

NOTE

Students currently working toward a Minor in Drama or a Minor in Film may apply any courses completed to the Minor in Theatre & Film Studies.

24 units of Theatre & Film

INTERDISCIPLINARY PROGRAMMES

IN THE HUMANITIES

The Office of Interdisciplinary Studies located in Togo Salmon Hall, Room 726, is the administrative home for the Comparative Literature, Peace Studies and Women's Studies programmes. These programmes are listed alphabetically within the Faculty of Humanities section of this Calendar. The Comparative Literature, Peace Studies and Women's Studies courses are listed alphabetically in the Course Listings section.

DEPARTMENT OF CLASSICS

WEB ADDRESS: http://www.humanities.mcmaster.ca/classics

NOTES

1. Students in a Classics programme may choose courses from the following subfields: Ancient History and Society, Ancient Philosophy, Classical Archaeology and Art History, Classical Literature in Translation, Greek Language and Literature, Latin Language and Literature.

2. With the approval of the Department of Classics and the Office of the Dean of the Faculty of Humanities, students who have completed 60 units of work in any Honours programme in Classics may replace all or part of their Level III work by courses of study at a university or equivalent institution abroad. Consult the Department for further details.

3. Students may receive up to six units of credit for archaeological field work at an approved Classical site. Consult the Department for further details.

4. Students intending to do graduate work in the field of Classics should note that most universities offering such programmes require undergraduate work in Greek and Latin for admission. These students are strongly encouraged to include Greek and Latin courses as early as possible in their programme.

5. Students intending to do graduate work in the field of Classics may wish to include an independent study course (CLASSICS 4T03) in the final level of their programme.

Honours Classics

(PROGRAMME A: ANCIENT HISTORY AND ARCHAEOLOGY)

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION

Completion of any Level I programme 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 OAC Ancient Greek (or Greek U) may substitute six units of Level II Greek; students with OAC Latin (or Latin U) may substitute six units of Level II Latin.)

REQUIREMENTS

120 units total (Levels I to IV)

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

24 units from CLASSICS 2B03, 2C03, 2D03, 2L03, 2LL3, 2Z03, 3C03, 3CC3, 3E03, 3EE3, 3G03, 3H03, 3LL3, 3MM3, 3Q03, 3S03, 3T03

6 units from CLASSICS 4B03, 4BB3, 4E03, 4T03

24 units Levels II, III and IV Classics, Greek, Latin

36 units Electives

Honours Classics

(PROGRAMME B: CLASSICAL LANGUAGES AND LITERATURE)

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION

Completion of any Level I programme and a Cumulative Average of at least 6.0 and an average of at least 7.0 in GREEK 1Z03 and 1ZZ3 or in LATIN 1Z03 and 1ZZ3 (Students with OAC Ancient Greek (or Greek U) may substitute six units of Level II Greek; students with OAC Latin (or Latin U) may substitute six units of Level II Latin.) Students are encouraged to include a Level I Classics course in their Level I programme.

REQUIREMENTS

120 units total (Levels I to IV)

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

6 units from CLASSICS 2B03, 2E03, 2H03, 3E03, 3L03, 3T03

24 units Greek (including GREEK 1Z03 and 1ZZ3 (or 1Z06), if not completed in Level I)

24 units Latin (including LATIN 1Z03 and 1ZZ3 (or 1Z06), 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

(PROGRAMME A: ANCIENT HISTORY AND ARCHAEOLOGY)

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION

Completion of any Level I programme 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 OAC Ancient Greek (or Greek U) may substitute six units of Level II Greek; students with OAC Latin (or Latin U) may substitute six units of Level II Latin.)
FACULTY OF HUMANITIES

REQUIREMENTS

120 units total (Levels I to IV)

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

21 units from CLASSICS 2B03, 2C03, 2K03, 2L03, 2LL3, 2R03, 2R13, 3C03, 3E03, 3E03, 3G03, 3H03, 3LL3, 3MM3, 3Q03, 3S03, 3T03

6 units from CLASSICS 4B03, 4B33, 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

ADMISSION

Completion of any Level I programme and a Cumulative Average of at least 6.3 and an average of at least 7.0 in GREEK 1Z03 and 1ZZ3 or in LATIN 1Z03 and 1ZZ3. (Students with OAC Ancient Greek (or Greek U) may substitute six units of Level II Greek; students with OAC Latin (or Latin U) may substitute six units of Level II Latin.)

REQUIREMENTS

120 units total (Levels I to IV)

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

5 units from CLASSICS 2D03, 2E03, 2H03, 3E03, 3O03, 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

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION

Completion of any Level I programme 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 OAC Ancient Greek (or Greek U) may substitute six units of Level II Greek; students with OAC Latin (or Latin U) may substitute six units of Level II Latin.)

NOTES

1. Students entering the programme with GREEK 1Z23 or LATIN 1ZZ3 who have not also completed a Level I Classics course are strongly encouraged to include CLASSICS 2L03, 2LL3 in their Level II programme.

2. Students are encouraged to include at least six units of Greek or Latin in their programme. GREEK 1Z03, 1ZZ3 and LATIN 1Z03, 1ZZ3, if not completed in the Level I programme, may be taken as elective courses.

REQUIREMENTS

90 units total (Levels I to III)

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

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, of which no more than six units may be from Level I.

INTERDISCIPLINARY MINOR IN ARCHAEOLOGY

For details see Interdisciplinary Minors and Thematic Areas section of this Calendar.

COMMUNICATION STUDIES

WEB ADDRESS: http://www.humanities.mcmaster.ca/cmst

Honours Communication Studies

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION

Completion of any Level I programme 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 programme, students should select courses carefully in order to meet the prerequisites for courses listed in specific Streams.

NOTES

1. Students in this programme must complete two of the following Streams:

The Language and Discourse Stream involves the study and discovery of patterns in human language and society. Focus is placed on the art and science of persuasion, rhetoric and the importance of language in political and social life.

The Cultural Studies Stream analyses cultural texts (e.g., television shows or magazine advertisements) and cultural practices (e.g. shopping, eating or drinking) with the aim of understanding their significance as forms of communication in a broader social, economic and political context.

The Performance Studies Stream examines artistic and everyday performances (from theatre, concerts and performance art to storytelling, ceremonies and public protests) and the relationships between them, with a particular emphasis on the role of the body in social communication.

The Mass Communication Stream focuses on the organization and functioning of information media such as television, radio and the press as major institutions and sources of knowledge and understanding about society.

2. Some courses are listed in more than one Stream. Students can receive credit in only one stream for such courses.

3. Students must take at least three units of Level IV courses in each of the two streams they are completing.

4. It is recommended that students, especially those in the Language and Discourse Stream, take six units of a language other than English.

COURSE LIST 1 - LANGUAGE AND DISCISSION STREAM

6 units CMST 2E03, 3G03

12 units from CMST 2F03, 2U03, 2V03, 2W03, 3C03, 3D03, 3E03, 3V03, 3W03, 3Y03, 4G03, 4H03, 4I03, 4J03, 4K03, 2C03, 2H03, 3U03

COURSE LIST 2 - CULTURAL STUDIES STREAM

6 units CMST 2J03, 2K03

12 units from CMST 2L03, 2M03, 2N03, 2O03, 2P03, 2T03, 2W03, 3B03, 3C03, 3E03, 3F03, 3S03, 3T03, 3U03, 3W03, 3WW3, 3XX3, 4F03, 4FF3

COURSE LIST 3 - PERFORMANCE STUDIES STREAM

6 units CMST 2G03, 4C03

6 units from CMST 2H03, 2P03, 2R03, 2S03, 3U03

6 units from CMST 2Q03, 3H03, 3M03, 3N03, 3O03, 3P03, 3Q03, 3R03, 3S03, 3T03, 3U03, 3W03, 3WW3, 3XX3, 4F03, 4FF3

KINESIOL 4JJ3
Course List 1 - Language and Discourse Stream

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Course List 2 - Cultural Studies Stream

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</tr>
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<td>from CMST 2I03, 2M03, 2N03, 2O03, 2T03, 2Y03, 3B03, 3C03, 3F03, 3P03, 3S03, 3T03, 3U03, 3W03, 3X03, 4F03, 4F03</td>
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Course List 3 - Performance Studies Stream

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</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>CMST 2G03, 4C03</td>
</tr>
<tr>
<td>6</td>
<td>from CMST 2H03, 2P03, 2R03, 2S03, 3U03</td>
</tr>
<tr>
<td>6</td>
<td>from CMST 2Q03, 3H03, 3M03, INDIG ST 3G03, KINESIO 4J03</td>
</tr>
</tbody>
</table>

Course List 4 - Mass Communication Stream

<table>
<thead>
<tr>
<th>Units</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>CMST 2K03, 2L03, 2Z03</td>
</tr>
<tr>
<td>12</td>
<td>from CMST 2K03, 2L03, 2Z03, 3C03, 3D03 (if not completed to satisfy above requirements), 3I03, 3K03, 4D03, 4E03</td>
</tr>
</tbody>
</table>

Requirements

120 units total (Level I to IV)

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

12 units CMST 2A03, 2B03, 2C03, 2G03, 2D03
3 units from CMST 3A03, 3B03
3 units from CMST 4A03, 4B03
36 units from Course Lists (See Note 1 above.)
36 units Electives

Combined Honours in Communication Studies and Another Subject

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

Admission

Completion of any Level I programme and a Cumulative Average of at least 6.0 including an average of at least 7.5 in CMST 1A03 and 1G03. In their Level I programme, 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. Students in this programme must complete one of the following Streams:

   a. The Language and Discourse Stream involves the study and discovery of patterns in human language and society. Focus is placed on the art and science of persuasion, rhetoric and the importance of language in political and social life.

   b. The Cultural Studies Stream analyses cultural texts (e.g. television shows or magazine advertisements) and cultural practices (e.g. shopping, eating or drinking) with the aim of understanding their significance as forms of communication in a broader social, economic and political context.

   c. The Performance Studies Stream examines artistic and everyday performances (from theatre, concerts and performance art to storytelling, ceremonies and public protests) and the relationships between them, with a particular emphasis on the role of the body in social communication.

   d. The Mass Communication Stream focuses on the organization and functioning of information media such as television, radio and the press as major institutions and sources of knowledge and understanding about society.

3. Students must take at least three units of Level IV courses in their stream.

4. It is recommended that students, especially those in the Language and Discourse Stream, take six units of a language other than English.

COMPARATIVE LITERATURE

Web Address: http://www.humanities.mcmaster.ca/~complit

Honours Arts & Science and Comparative Literature

(B.Arts.Sc.; See Arts & Science programme)

Combined Honours in Comparative Literature and Another Subject

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

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

Admission

Completion of any Level I programme and a Cumulative Average of at least 6.0 including a grade of at least B- in COMP LIT 1A03 or 1AA3; whichever of these two courses was not completed in Level I must be taken in Level II.

Notes

1. Graduate programmes 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 programme.

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 programme may be replaced by courses of study at a university or universities under the Humanities Study Elsewhere Programme.

Requirements

120 units total (Level I to IV)

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

12 units from COMP LIT 2A03, 2AA3, 3D03, 3DD3, 3QQ3
6 units from COMP LIT 4AA3, 4803, 4C03, 4E03, 4T03
18 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.
Honours Arts & Science and English
(B.Arts.Sc.; See Arts & Science programme)

AREAS OF STUDY
The Department has defined four areas of study. Students should consult the Programme Notes for their specific programme to determine their requirements regarding these areas. Level II and III courses are allocated to the areas as follows:

<table>
<thead>
<tr>
<th>AREA</th>
<th>COURSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>AREA 1</td>
<td>Early British Literature</td>
</tr>
<tr>
<td>AREA 2</td>
<td>Later British Literature</td>
</tr>
<tr>
<td>AREA 3</td>
<td>Canadian, American and Post-Colonial</td>
</tr>
<tr>
<td>AREA 4</td>
<td>Theory and Cultural Studies</td>
</tr>
</tbody>
</table>

**Honours English** {2200}

Students who entered the programme prior to September 2001 should consult the 2000-2001 Calendar or the Departmental Counsellor for programme requirements.

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

**ADMISSION**
Completion of any Level I programme 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; six units of Level IV English seminars (No student may take more than six units of Level IV seminars.)
2. With permission of the Department, students may substitute ENGLISH 4X03 for three units of Level IV seminar work in second term. Students who are interested in taking 4X03 should contact the faculty member chairing the 4X03 committee early in the first term.
3. Most graduate programmes in English require proficiency in a second language. Students who plan to pursue graduate studies in English are strongly encouraged to include in their programme a second language beyond the introductory level.

**REQUIREMENTS**

<table>
<thead>
<tr>
<th>120 units total (Levels I to IV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 units from the Level I programme completed prior to admission into the programme</td>
</tr>
<tr>
<td>12 units from Area 1 English courses</td>
</tr>
<tr>
<td>6 units from Area 2 English courses</td>
</tr>
<tr>
<td>6 units from Area 3 English courses</td>
</tr>
<tr>
<td>12 units from Area 4 English courses</td>
</tr>
<tr>
<td>6 units from Areas 1-4 and ENGLISH 2D03, 3CC3, 3HH3, 3II3, 3S03, 3W03, 3X03, 3XX3</td>
</tr>
<tr>
<td>12 units Level IV English seminars</td>
</tr>
<tr>
<td>36 units Electives</td>
</tr>
</tbody>
</table>

**Combined Honours in English and Another Subject**

Students who entered the programme prior to September 2001 should consult the 2000-2001 Calendar or the Departmental Counsellor for programme requirements.

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

**ADMISSION**
Completion of any Level I programme 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: 12 units of Levels II and/or III English
   - Level III: 12 units of Levels II and/or III English
   - Level IV: six units of Levels II and/or III English; six units of Level IV English seminars (No student may take more than six units of Level IV seminars.)
2. With permission of the Department, students may substitute ENGLISH 4X03 for three units of Level IV seminar work in second term. Students who are interested in taking 4X03 should contact the faculty member chairing the 4X03 committee early in the first term.
3. Most graduate programmes in English require proficiency in a second language. Students who plan to pursue graduate studies in English are strongly encouraged to include in their programme a second language beyond the introductory level.

**REQUIREMENTS**

<table>
<thead>
<tr>
<th>120 units total (Levels I to IV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 units from the Level I programme completed prior to admission into the programme</td>
</tr>
<tr>
<td>6 units from Area 1 English courses</td>
</tr>
<tr>
<td>6 units from Area 2 English courses</td>
</tr>
<tr>
<td>6 units from Area 3 English courses</td>
</tr>
<tr>
<td>6 units from Area 4 English courses</td>
</tr>
<tr>
<td>6 units from Areas 1-4 and ENGLISH 2D03, 3CC3, 3HH3, 3II3, 3S03, 3W03, 3X03, 3XX3</td>
</tr>
<tr>
<td>30 units Electives</td>
</tr>
</tbody>
</table>

**B.A. in English** {1200}

Students who entered the programme prior to September 2001 should consult the 2000-2001 Calendar or the Departmental Counsellor for programme requirements.

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

**ADMISSION**
Completion of any Level I programme and a Cumulative Average of at least 6.0 including an average of at least 7.0 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**

<table>
<thead>
<tr>
<th>90 units total (Levels I to III)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 units from the Level I programme completed prior to admission into the programme</td>
</tr>
<tr>
<td>6 units from Area 1 English courses</td>
</tr>
<tr>
<td>6 units from Area 2 English courses</td>
</tr>
<tr>
<td>6 units from Area 3 English courses</td>
</tr>
<tr>
<td>6 units from Area 4 English courses</td>
</tr>
<tr>
<td>6 units from Areas 1-4 and ENGLISH 2D03, 3CC3, 3HH3, 3II3, 3S03, 3W03, 3X03, 3XX3</td>
</tr>
<tr>
<td>30 units Electives</td>
</tr>
</tbody>
</table>
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 programme)

Honours French

PROGRAMME A: LANGUAGE AND LITERATURE (2231)

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme 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.

COURSE LIST 1

FRENCH 4F03, 4I03, 4LL3, 4MM3, 4N03, 4S03, 4U03, 4X03, 4Y03

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I programme completed prior to admission into the programme
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
3 units from FRENCH 3B03, 3BB3, 3Z03, 4J03
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

PROGRAMME B: LANGUAGE, LINGUISTICS AND TRANSLATION (2232)

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme and a Cumulative Average of at least 6.0 including a grade of at least B- in FRENCH 1A06 or 2M06 or a grade of at least B+ in FRENCH 1N06. Students who are interested in entering this programme are advised to take LINGUIST 1A03 and 1AA3.

NOTE
Upon completion of 60 units of work (including 18 units of required Level II French courses), and with the approval of the Department of French and the Office of the Dean of the Faculty of Humanities, Level III of Honours French may be replaced by courses of study at a French-language university.

COURSE LIST 1

FRENCH 3A03, 3AA3, 3BB3, 3K03, 3KK3, 3Q03, 3QQ3, 3SS3, 3Z03, 4F03, 4I03, 4J03, 4L33, 4MM3, 4N03, 4U03, 4Y03

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I programme completed prior to admission into the programme
12 units FRENCH 2B03, 2BB3, 2G03, 2H03
12 units FRENCH 3C03, 3C33, 3G03, 3H03
6 units FRENCH 4A03, 4BB3
3 units from FRENCH 2J03, 2JJ3
3 units from FRENCH 2W03, 2WW3
9 units from Course List 1
9 units from FRENCH 4E03, 4H03, 4I33, 4S03, 4X03
12 units Linguistics courses beyond Level I
24 units Electives

Combined Honours in French and Another Subject

PROGRAMME A: LANGUAGE AND LITERATURE

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme and a Cumulative Average of at least 6.0 including a grade of at least B- in FRENCH 1A06 or 2M06 or a grade of at least B+ in FRENCH 1N06.

NOTES
1. Students are not permitted to combine this programme with Combined Honours French Programme 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, 4I03, 4LL3, 4MM3, 4N03, 4S03, 4U03, 4X03, 4Y03

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I programme completed prior to admission into the programme
12 units FRENCH 2B03, 2BB3, 3C03, 4A03
3 units from FRENCH 2J03, 2JJ3
3 units from FRENCH 2W03, 2WW3
3 units from FRENCH 3K03, 3KK3
3 units from FRENCH 3Q03, 3QQ3
3 units from FRENCH 3A03, 3SS3, 4J03
9 units from Course List 1
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

PROGRAMME B: LANGUAGE AND LINGUISTICS

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme and a Cumulative Average of at least 6.0 including a grade of at least B- in FRENCH 1A06 or 2M06 or a grade of at least B+ in FRENCH 1N06.

NOTES
1. Students are not permitted to combine this programme with Combined Honours French Programme 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, 2N03, 2W03, 2WW3, 3AA3, 3BB3, 3K03, 3KK3, 3Q03, 3QQ3, 3SS3, 3Z03, 4F03, 4I03, 4J03, 4L03, 4M03, 4N03, 4S03, 4U03, 4Y03

REQUIREMENTS
120 units total (Levels I to IV)

- 30 units from the Level I programme completed prior to admission into the programme
- 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 2H03, 3H03
- 9 units from Course List 2
- 36 units Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
- 18 units Electives to total 120 units

B.A. in French {1230}

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme 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 programme completed prior to admission into the programme
- 12 units FRENCH 2B03, 2BB3, 3C03, 3F03
- 3 units from FRENCH 2J03, 2JJ3
- 3 units from FRENCH 2W03, 2WW3
- 6 units from FRENCH 3A03, 3K03, 3Q03, 3QQ3, 3SS3
- 12 units Levels II, III or IV French
- 24 units Electives

Minor in French

REQUIREMENTS
24 units total

- 6 units from FRENCH 1A06/2M06, 1N06
- 9 units FRENCH 2B03, 2BB3, 3C03
- 3 units from FRENCH 2E03, 2JJ3, 2W03, 2WW3, 3AA3, 3BB3, 3K03, 3KK3, 3Q03, 3QQ3
- 6 units Level II or III French, excluding FRENCH 2M06 and 2Z06

DEPARTMENT OF HISTORY

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

Honours Arts & Science and History
(B.Arts.Sc.; See Arts & Science programme)

SUBFIELDS
The Department has defined three fields of study. Students should consult the Programme Notes for their specific programme to determine the requirements regarding these fields. Level II and III courses are allocated to the fields as follows:

- Europe (including Britain)
  - HISTORY 2A06, 2BB6, 2C06, 2I06, 2N06,206, 2P03, 2S03, 2U03, 2UU3, 3D03, 3F03, 3H03, 3I06, 3J03, 3JL3, 3L03, 3PP3, 3QQ3, 3R03, 3RR3, 3S03, 3SS3, 3TT3, 3V03, 3Y03, 3Z03, 3Z23

- Ancient and Non-Western World
  - HISTORY 2E03, 2EB3, 2GG3, 2K03, 2L03, 2L3, 2N06, 2P03, 2U03, 2UU3, 3A03, 3AA3, 3BB3, 3C03, 3CC3, 3D03, 3E03, 3EE3, 3GG3, 3H03, 3M3, 3NU3, 3V03

- The Americas
  - HISTORY 2H06, 2J06, 2Q06, 2P03, 2R03, 2RR3, 2T03, 3B03, 3FF3, 3G03, 3J03, 3K03, 3Q03, 3L03, 3N03, 3NN3, 3P03, 3U03, 3V03, 3WW3, 3X03, 3XX3, 3Y03

Honours History {2290}

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme and a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units of Level I History or a grade of at least B- in HISTORY 1L06.

NOTES
1. In selecting courses, students must ensure that they take a minimum of six units in each of three fields of History. This requirement must be satisfied by the end of Level III. All Level II and III History courses from the above list may be used towards this requirement.
2. The department recommends that students take one Level IV seminar in Level III and one Level IV seminar in Level IV.
3. HUMAN 2F03 (Selected Interdisciplinary Topics in Medieval Life and Culture) may be taken as a substitute for three units of Level II History.
4. KINESIOL 3A03 (History of Physical Culture and Sports Medicine) or KINESIOL 3H03 (History of Sport in the Western World) may be taken as a substitute for three units of Level III History.
5. With permission of the Department of History and the instructor, KINESIOL 4L06 (Advanced Topics in Canadian Sport History) may be taken as a substitute for one Level IV History seminar.

REQUIREMENTS
120 units total (Levels I to IV)

- 30 units from the Level I programme completed prior to admission into the programme
- 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 programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme and a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units of Level I History or a grade of at least B- in HISTORY 1L06.

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 towards this requirement.
2. No Level IV seminar may be taken before completion of 12 units of History beyond Level I.
3. HUMAN 2F03 (Selected Interdisciplinary Topics in Medieval Life and Culture) may be taken as a substitute for three units of Level II History.
4. KINESIOL 3A03 (History of Physical Culture and Sports Medicine) or KINESIOL 3H03 (History of Sport in the Western World) may be taken as a substitute for three units of Level III History.
5. With permission of the Department of History and the instructor, KINESIOL 4L06 (Advanced Topics in Canadian Sport History) may be taken as a substitute for one Level IV History seminar.

REQUIREMENTS
120 units total (Levels I to IV)

- 30 units from the Level I programme completed prior to admission into the programme
- 12 units Level II History
- 6 units Level III History
- 12 units Level IV History
- 36 units Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
- 24 units Electives to total 120 units
B.A. in History {1290}

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme and a Cumulative Average of at least 3.5 including an average of at least 4.0 in any six units of Level I History.

NOTES
1. In selecting courses, students must ensure that they take a minimum of three units in each of three fields of History. All Level II and III History courses from the above list may be used towards this requirement.
2. HUMAN 2F03 (Selected Interdisciplinary Topics in Medieval Life and Culture) may be taken as a substitute for three units of Level II History.
3. KINESIOL 3A03 (History of Physical Culture and Sports Medicine) or KINESIOL 3H03 (History of Sport in the Western World) may be taken as a substitute for three units of Level III History.

REQUIREMENTS
30 units total (Levels I to III)
30 units from the level I programme completed prior to admission into the programme
12 units Level II History
12 units Level III History
36 units Electives

Minor in History
24 units of History of which no more than six units may be from Level I. Consult the Course Listings section for course prerequisites and limited enrolment courses.

COMBINED B.A. IN INDIGENOUS STUDIES AND ANOTHER SUBJECT

For details see Combined B.A. in Indigenous Studies and Another Subject section of this Calendar.

JAPANESE STUDIES

Combined Honours in Japanese Studies and Another Subject

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme including JAPANESE 1Z03 and 1ZZ3 and a Cumulative Average of at least 6.0. A minimum grade of at least B- is required in JAPANESE 1ZZ3.

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I Programme completed prior to admission into the programme
18 units JAPANESE 2Z03, 2ZZ3, 3A03, 3AA3, 4L03, 4Z03
8 units JAPAN ST 2P06
12 units from JAPANESE 3B03, 3CC3, JAPAN ST 2A03, 2C03, 2F03, 3B03, 3E03, 3H03, 3S03, 3T03, 3U03, 4A06, 4B03, 4S03, GEO 3HJ3, HISTORY 4BB6, PCL SCI 4MM6
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 Japanese Studies
24 units from JAPANESE 1Z03, 1ZZ3 and JAPAN ST 2P06 and 12 additional units of Japanese or Japanese Studies courses.

DEPARTMENT OF MODERN LANGUAGES AND LINGUISTICS

Web Address:
http://www.humanities.mcmaster.ca/~modlang/mlhome.htm

The Department of Modern Languages and Linguistics offers B.A. Honours programmes in:
- German
- Hispanic Studies
- Italian
- Linguistics
- Modern Languages and Linguistics

In addition, minors are available, using electives only, in: German, Hispanic Studies, Italian, Japanese and Linguistics.

Language courses in Catalan, Chinese, Polish and Russian are also offered by the Department.

Combined Honours in German and Another Subject

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme including GERMAN 1B03 and 1BB3, or 1Z03 and 1Z23 and a Cumulative Average of at least 6.0. A minimum grade of B- is required in GERMAN 1BB3 or 1Z23.

NOTES
1. It is highly recommended that students include HISTORY 3Q03 as an elective in this programme.
2. Upon completion of 60 units and with the approval of the Department of Modern Languages and Linguistics and the Office of the Dean of the Faculty of Humanities, one or both terms of Level III of this programme may be replaced by courses of study at a university or universities under the Humanities Study Elsewhere Programme.

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I Programme completed prior to admission into the programme
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

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme including HISPANIC 1A03 and 1AA3, or 1Z03 and 1Z23 and a Cumulative Average of at least 6.0. A minimum grade of B- is required in HISPANIC 1AA3 or 1Z23.

NOTES
1. It is highly recommended that students include at least three units from either HISTORY 3XX3 or 3YY3 as an elective in this programme.
2. Upon completion of 60 units and with the approval of the Department of Modern Languages and Linguistics and the Office of the Dean of the Faculty of Humanities, one or both terms of Level III of this programme may be replaced by courses of study at a university or universities under the Humanities Study Elsewhere Programme.
3. With permission of the Department, a student may substitute up to six units from CATALAN 2A03, 2AA3, 3A03, 3AA3 for six units of Levels II, III or IV Hispanic courses.
REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I Programme completed prior to admission into the programme
36 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

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme including ITALIAN 1A03 and 1AA3, or 1C03 and 1CC3, or 1D03 and 1DD3, and a Cumulative Average of at least 6.0. A minimum grade of B- is required in ITALIAN 1AA3, 1CC3, or 1DD3.

NOTE
Upon completion of 60 units and with the approval of the Department of Modern Languages and Linguistics and the Office of the Dean of the Faculty of Humanities, one or both terms of Level II of this programme may be replaced by courses of study at a university or universities under the Humanities Study Elsewhere Programme.

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I Programme completed prior to admission into the programme
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

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

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme 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 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.
2. Upon completion of 60 units of work and with the approval of the Department of Modern 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 Programme.

COURSE LIST 1

All Linguistics courses beyond Level I; and all courses taught in a language other than English; MMEDIA 1A03, 2A03, 2103, 3D03, 3E03, 4C03; PHILOS 2B03, 3F03, 4D03; PSYCH 2E03, 2H03, 3A03, 3U03

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I programme completed prior to admission into the programme
15 units from LINGUIST 2L03, 2LL3, 2M03, 3J03, 3L13, 3M03
6 units from LINGUIST 2A03, 2AA3, 2E03, 3X03
6 units from LINGUIST 3B03, 3P03, 4B03, 4Z03
3 units from LINGUIST 4A03, 4B3, 4L03, 4XX3
6 units from LINGUIST 4BB3, 4D03, 4XX3
12 units from one of the languages (beyond Level I) as specified in Note 1 above, except Russian
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 programme is designed for students who want to combine the scientific study of language with another subject of their choice.

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme 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 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.
2. Upon completion of 60 units of work and with the approval of the Department of Modern 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 Programme.

Honours Modern Languages

This programme 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 programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme 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 1A06, 1N06 or 1Z06 (see Note 2 below); GERMAN 1BB3 or 1ZZ3; HISPANIC 1AA3 or 1ZZ3; ITALIAN 1AA3, 1CC3 or 1DD3; JAPANESE 1ZZ3.

NOTES
1. Students are strongly urged to complete LINGUIST 1A03 and 1AA3 in their Level I programme. If not, LINGUIST 1A03 and 1AA3 must be included in Level II of their programme.
2. Students entering the programme with FRENCH 1Z06 must complete FRENCH 1N06 or 2Z06, in addition to the 16 units of French, beyond Level I.

3. Upon completion of 60 units and with the approval of the Department of Modern Languages and Linguistics and of the Office of the Dean of the Faculty of Humanities, one or both terms of Level III of this programme may be replaced by courses of study at a university or universities under the Humanities Studies Elsewhere Programme.

COURSE LIST 1
All Linguistics courses beyond Level I; and all courses taught in a language other than English; M/MEDIA 1A03, 2D03, 2I03, 3B03, 3D03, 3E03, 4C03; PHILOS 2B03, 3F03, 4D03; PSYCH 2E03, 2I03, 3A03, 3U03

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I programme completed prior to admission into the programme
18 units from LINGUIST 2A03, 2AA3, 2E03, 3X03, 4B03, 4BB3, 4D03, 4X03
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.

PROGRAMMES FOR STUDENTS WHO ENTERED PRIOR TO SEPTEMBER 2000
Honours Modern Languages
Combined Honours in Modern Languages and Another Subject

Students who entered these programmes prior to September 2000 must consult the Departmental Counsellor for Modern Languages and Linguistics to discuss ways of fulfilling their programme requirements.

PEACE STUDIES
WEB ADDRESS: http://www.humanities.mcmaster.ca/~peace

Honours Arts & Science and Peace Studies
(B.Arts.Sc.; See Arts & Science Programme)

Combined Honours in Peace Studies and Another Subject

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.
REQUIREMENTS

120 units total (Levels I to IV)
30 units from the Level I programme completed prior to admission to the programme
3 units PEACE ST 2A03
3 units from ANTHRO 3T03, PEACE ST 3M03, RELIG ST 2H03, SOCIO1 3K3
3 units PEACE ST 4A03 or 4B03
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 the Department 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 PEACE ST 2A03, 4A03, 4B03 and Course Lists 1 and 2 above

DEPARTMENT OF PHILOSOPHY

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

Honours Arts & Science and Philosophy

(B.Arts.Sc.; See Arts & Science programme)

Honours Philosophy [2420]

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION

Completion of any Level I programme 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 1A13 with a grade of at least B- and six units of Level I Mathematics. Students are cautioned to observe that CHEM 1A03 is the normal prerequisite for BIOLOGY 2B03 and BIOLOGY 2C03, which are required courses in the programme. Enrolment in this programme 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 programme completed prior to admission into the programme
12 units PHILOS 2A06, 2C06
3 units from HUMAN 2C03, PHILOS 2B03
15 units Levels III and IV Philosophy
6 units Level IV Philosophy
36 units Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
18 units Electives to total 120 units

Honours Philosophy (B.A.)

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION

Completion of any Level I programme and a Cumulative Average of at least 6.0 including a grade of at least B- in each of MATH 1A03 or 1A13 and 1B03 and an average of at least 7.0 in six units of Level I Philosophy or, if no such course was taken, in six units of work acceptable to the Department of Philosophy.

REQUIREMENTS

120 units total (Levels I to IV)
30 units from the Level I programme completed prior to admission into the programme
12 units PHILOS 2A06, 2C06
3 units from HUMAN 2C03, PHILOS 2B03
15 units Levels III and IV Philosophy
6 units Level IV Philosophy
36 units Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
18 units Electives to total 120 units

Honours Philosophy (B.Ed.)

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION

Completion of any Level I programme and a Cumulative Average of at least 6.0 including a grade of at least B- in each of MATH 1A03 or 1A13 and 1B03 and an average of at least 7.0 in six units of Level I Philosophy or, if no such course was taken, in six units of work acceptable to the Department of Philosophy.
NOTES
1. Students are advised to note carefully the prerequisites for all courses. Students are also advised to take note which courses are offered in alternate years.
2. Upon completion of 60 units of work and with the approval of the Department of Philosophy and the Office of the Dean of the Faculty of Humanities, one or both terms of Level III may be replaced by courses of study at a designated university abroad.

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I programme completed prior to admission into the programme
24 units MATH 2A03, 2AB3, 2C03, 2R03, 2S03, 3A03, 3E03, 3X03
3 units from MATH 3AA3, 3EE3
3 units from MATH 4C03, 4E03, 4X03
12 units from Level III and IV Mathematics, Statistics
12 units PHILOS 2A06, 2C06
3 units PHILOS 2B03
21 units Level III or Level IV Philosophy
3 units Level IV Philosophy
9 units Electives

B.A. in Philosophy  

Students wishing to enter this programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme 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 programme completed prior to admission into the programme
12 units PHILOS 2A06, 2C06
3 units from PHILOS 2B03, HUMAN 2C03
3 units Levels II, III or IV Philosophy
6 units Levels III or IV Philosophy
36 units Electives

Minor in Philosophy
24 units from PHILOS 2A06 and 2C06; and 12 additional units of Philosophy, of which no more than six units may be from Level I.

WOMEN’S STUDIES

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

Honours Arts & Science and Women’s Studies
(B.Arts.Sc.; See Arts & Science Programme)

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 Programme 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 Programme’s focus on research prepares students for graduate school.

Students wishing to enter this Programme must complete an application for admission to Level II in mid-March in order to be considered for admission.

ADMISSION
Completion of any Level I programme and a Cumulative Average of at least 3.0 including a grade of at least B- in WOMEN ST 1A06.

NOTE
1. Students who have not taken WOMEN ST 1A06 because they have transferred from another university may be considered for admission to the programme if they are deemed by the Admissions Committee to have fulfilled requirements equivalent to WOMEN ST 1A06.
2. In Levels II, III and IV, students must take six units of Women’s Studies courses appropriate to their level and six additional units of approved discipline-related courses at each level.
3. The courses required for the Women’s Studies portion of the Combined Honours programme 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 programme completed prior to admission to the programme
6 units WOMEN ST 2A03, 2A3
6 units from ANTHROP 2R03, HUMAN 2F03, LABR ST 2D03, RELIG ST 2B03, 2B3, 2S53, SOCIO 2G06, 2U06, WOMEN ST 2B06, 2C03, 2D03, 2H03, 2K06, 2L03
6 units WOMEN ST 3A03, 3A3
6 units from ANTHROP 3RR3, LABR ST 3E03, POL SCI 3V03, SOCIO 3D03, 3E03, 3X03, WOMEN ST 3B03, 3BB3, 3C03, 3CC3, 3D03, 3E03, 3F06, 3G03, 3GG3, 3H03, 3HH3, 3I03, 3JW03, 3K03
6 units WOMEN ST 4A06
6 units from HISTORY 4H06, KINESIOL 4T03, SOCIO 4U03, SOC WORK 4R03, WOMEN ST 4B03, 4BB3, 4BJ3, 4C03, 4CC3
36 units Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
18 units Elective course work beyond Level I.

With the permission of the Director of Women’s Studies, some courses not listed above may be substituted, at the appropriate level, from: Anthropology, Classics, Comparative Literature, English, French, Geo, History, Kinesiology, Labour Studies, Philosophy, Religious Studies and Sociology.

Minor in Women’s Studies

NOTE
The courses required for the Minor may not include courses offered in the student’s other subject area.

REQUIREMENTS
24 units total
6 units WOMEN ST 1A06
18 units Level II and III Women’s Studies courses as listed under Women’s Studies in the Course Listings section of this Calendar.
The Faculty of Science provides studies through the following departments:

- Biochemistry
- Biology
- Chemistry
- Computing and Software
- Geography and Geology
- Kinesiology
- Mathematics and Statistics
- Materials Science and Engineering
- Physics and Astronomy
- Psychology

PROGRAMMES AND DEGREES

A. Level I Programmes

The Faculty of Science offers two Level I programmes:

**SCIENCE I**

**MATHEMATICS AND STATISTICS I**

The Faculty of Science also offers an Honours B.Sc. Kinesiology Degree. Please refer to the Faculty of Social Sciences, Programmes and Degrees, Level I Programmes section of this Calendar, for Kinesiology Level I requirements for admission to Honours Kinesiology (B.Sc.).

**SCIENCE I PROGRAMME NOTES**

1. Level I students must select courses carefully to meet the Level II admission requirements of a specific programme (see Faculty of Science Programme Listings in this section of the Calendar for Level II programme admission requirements).
2. A suitable choice of Level I options will allow successful students to enter Level II of any one of several programmes.
3. Up to six units of electives may be taken from any Level I courses offered by any faculty provided the prerequisites have been met and provided the course is open to students in the Faculty of Science.
4. INQUIRY 1SC3 may be taken as an elective. The Faculty of Science places great emphasis on inquiry in upper year courses. Inquiry 1SC3 offers a Level I preparation for these courses.
5. SCIENCE 1A00 is a one-hour mandatory Health and Safety course which must be completed by all Science students.
6. Students registered in Science I or Mathematics and Statistics I are not allowed to take upper level electives.

**REQUIREMENTS: 30 UNITS**

- 3 units MATH 1A03
- 3 units from MATH 1A03, STATS 1CC3
- 6 units from BIOLOGY 1A03 (or 1AA3), CHEM 1A03, PHYSICS 1B03
- 12 units from the Science I Course List (of which no more than six units may be taken from any one discipline) (see below)
- 6 units Level I electives
- 1 course SCIENCE 1A00

**SCIENCE I COURSE LIST:**

Each course consists of three units and is completed in one term, i.e. from September to December (Term 1) or from January to April (Term 2). Some courses are offered again in the Spring/Summer Session (May to August).

- **ASTRON 1F03** Introduction to Astronomy and Astrophysics
- **BIOLOGY 1A03** Cellular and Molecular Biology
- **BIOLOGY 1AA3** Biodiversity, Evolution and Ecology
- **CHEM 1A03** Introduction to Chemistry I
- **CHEM 1A3A** Introductory Chemistry II
- **COMP SCI 1S3A** Computing Fundamentals
- **COMP SCI 1MC3** Computer Science I
- **COMP SCI 1MD3** Computer Science II
- **ENVIR SC 1A03** Atmosphere and Hydrosphere
- **ENVIR SC 1B03** The Living Environment
- **ENVIR SC 1G03** Earth and the Environment
- **MATHS 1A03** Introduction to Materials
- **MATH 1AA3** Calculus II
- **MATH 1B03** Linear Algebra I
- **PHYSICS 1B03** Mechanics and Waves
- **PHYSICS 1B3A** Introduction to Modern Physics A
- **PHYSICS 1B3B** Introduction to Modern Physics B
- **PSYCH 1A03** Introduction to Experimental Psychology
- **PSYCH 1A3A** The Psychology of Interpersonal Behaviour
- **STATS 1CC3** Introductory Computer-Aided Statistics

**B. Level II Programmes**

- **CHEM 1R03** is offered for those students who did not complete OAC Chemistry and wish to proceed to CHEM 1A03.
- Students with little or no previous computer experience may substitute COMP SCI 1S3A for COMP SCI 1MC3; however, students must achieve a grade of at least B+ in COMP SCI 1S3A to satisfy the prerequisite for COMP SCI 1MD3.
- ENVIR SC 1G03 provides more Level II course and programme choices.
- No more than six units from Computer Science or Environmental Science may be completed in Level I.
- PHYSICS 1P03 provides the background necessary to proceed to PHYSICS 1B03 for those students who did not complete OAC Physics (or Physics U) or who completed it with a grade of less than 60%.

**MATHEMATICS AND STATISTICS I PROGRAMME NOTES**

1. Students may also be admitted to the Honours B.Sc. Computer Science programmes upon successful completion of Mathematics and Statistics I, with the inclusion of COMP SCI 1MC3, 1MD3. Six additional units from Science I Course List (CHEM 1A03 and PHYSICS 1B03 are recommended) must be completed before entry to Level IV (before entry to Level II is strongly recommended).
2. Up to 18 units of electives may be taken from any Level I courses offered by any faculty provided the prerequisites have been met and provided the course is open to students in the Faculty of Science.
3. INQUIRY 1SC3 may be taken as an elective. The Faculty of Science places great emphasis on inquiry in upper year courses. Inquiry 1SC3 offers a Level I preparation for these courses.
4. It is possible to complete Mathematics and Statistics I through evening/summer studies. Students wishing this option should consult the Office of the Registrar for timetable information.
5. SCIENCE 1A00 is a one-hour mandatory Health and Safety course which must be completed by all Science students.
6. Students registered in Science I or Mathematics and Statistics I are not allowed to take upper level electives.
B. Degree Programmes

McMaster University General Student Information, MUGSI, is an on-line system that, among other options, enables students to track their academic progress. The Degree Audit, available on MUGSI, gives a listing of courses outstanding for the programme and is continually updated as courses are added and successfully completed.

HONOURS B.SC. PROGRAMMES

The Faculty of Science has restructured its four year honours programmes. Each Department or School now offers an Honours B.Sc. Programme and one or more Honours B.Sc. Programmes 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. 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 programme descriptions for details.

Students currently enrolled in either the Specialist Option or the Complementary Option of the Honours B.Sc. programmes may choose to transfer to the new Honours B.Sc. programmes. Please contact the appropriate departmental undergraduate advisor for details.

There are also four Honours Science Programmes that provide a breadth of study in science. Each programme requires a concentration of studies from one of the four areas of science: geo science, life science, mathematical science or physical science. They also require the completion of at least 21 units from the remaining three areas of science, completion of 15 units from faculties other than the Faculty of Science and completion of 6 units of inquiry course work in the final year.

The Faculty of Science offers Level IV Inquiry courses in different disciplines. Level IV Honours Science students may take these to satisfy their inquiry requirement. See Inquiry in the Course Listings section of this Calendar.

HONOURS CO-OP PROGRAMMES

The Faculty of Science has instituted Cooperative Education programmes, beginning in Level III, in Honours Biochemistry, 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 programmes have limited enrolment and admission is by selective placement procedure. Please see the admission statement for each programme. In this section of the Calendar. Employment must be full-time during the work term. Students enrolled in Co-op programmes must register in full-time studies during the academic terms of their programme. With written permission from the work term supervisor, one three unit course may be taken during each four-month period of a work term. A Science Co-op Fee will be charged for each academic term of a Co-op programme.

For further information, please consult the Associate Dean of Science (Studies) or Science Cooperative Education in the Faculty of Science.

COOPERATIVE INTERNSHIPS

The Faculty of Science offers students the opportunity to participate in 12-16 month full-time paid work placements in industry that provide students with technical work experience related to their academic curriculum. Internship placements are available to students registered as Full Time students in Level II or III of an Honours B.Sc. programme, who will have at least 24 units left to complete upon their return and are eligible to return to complete their undergraduate degree. 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 (Studies), Science Cooperative Education in the Faculty of Science or Engineering Career Services in the Faculty of Engineering.

INTERNATIONAL STUDY DURING LEVEL III OF HONOURS PROGRAMMES

There are two ways to undertake international studies during Level III of an Honours Programme: via a Formal Exchange Programme or a Third Year Study Elsewhere programme.

FORMAL EXCHANGE PROGRAMME

DURING LEVEL III OF HONOURS PROGRAMMES

See the heading International Study in the General Academic Regulations section in this Calendar.

THIRD YEAR STUDY ELSEWHERE HONOURS PROGRAMME

Third Year Study Elsewhere is not available at universities with which McMaster University has a Formal Exchange Agreement. Students registered in single or Combined Honours programmes in the Faculty of Science are encouraged to apply to study the whole of a third year at an appropriate university* (see below).

To be eligible to take part in this programme, students are expected to complete Level II with a Cumulative Average of at least 6.0. Students must pay all associated travel, study and living expenses. For students in need of financial assistance, OSAP (Ontario Student Aid Programme) grants and loans may be available for this programme. Furthermore, McMaster University offers some bursaries to those in need of help.

Students interested in this programme should begin discussions with the Associate Dean of Science (Studies) about one year before they plan to enrol elsewhere.

Students must propose an academic programme that must be submitted to their Department for approval. Academic approval must be completed by the end of February for registration in the following Fall.

Students must maintain links through correspondence with their departments at McMaster University while they are engaged in study elsewhere. All credit for work completed may only be confirmed 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 normally 30 units for the full year of study, equivalent to Level III. In certain cases, students may be recommended for the Deans' Honour List on the basis of work undertaken in the programme.

There are approved universities in the following areas: Rhone-Alpes (France), Baden-Wurttemberg (Germany), Lombardy (Italy) and Catalonia (Spain).

EXCHANGE PROGRAMMES WITHIN CANADA

For information on the Canadian Scholars Exchange Programme (CANEX), please refer to the Academic Facilities, Student Services and Organizations section of this Calendar under the heading Student Exchanges Officer.

MINORS

Minors are available to students registered in four- or five-level programmes. 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 programme, there may be certain minors which are included. Please see the Programme Notes for individual programmes 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:

- Astronomy
- Biochemistry
- Biology
- Chemistry
- Computer Science
- Earth Science
- Environmental Science
- Geographical Information Systems (GIS)
- Materials Properties
- Materials Processing
- Mathematics and Statistics
- Physics
- Psychology

† The minors in Geography and Geology are no longer offered. However, students who are currently working towards a minor in these subjects may complete them according to the requirements as outlined in the 2000-2001 Undergraduate Calendar.
B.SC. PROGRAMMES
Three-level B.Sc. programmes provide a science education which is less demanding than the honours programmes. Three-level B.Sc. programmes 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 programme requirements for B.Sc. programmes are listed under the heading Three-Level B.Sc. Programmes in this section.

ACADEMIC REGULATIONS
Students enrolled in Science programmes, in addition to meeting the General Academic Regulations of the University, shall be subject to the following Faculty Regulations:

ADMISSION TO HONOURS B.SC. PROGRAMMES
The admission criteria for the Honours B.Sc. programmes are described explicitly in the individual programmes descriptions in this section.

LIMITED ENROLMENT PROGRAMMES
Admission is limited for the following programmes:
- Honours Biochemistry (Molecular Biology Specialization)
- Honours Biochemistry (Biotechnology & Genetic Engineering Specialization)
- Honours Biology and Psychology
- Honours Molecular Biology

Each of these programmes requires a thesis or project in Level IV. Resource limitations in providing a thesis or project supervisor for each student dictates that the number of students admitted must be limited. Admission is by selection based on academic achievement.

For further information please see Admission to Level II Programmes in this section of the Calendar.

ADMISSION TO B.SC. PROGRAMMES
The admission requirements for the B.Sc. programmes, in each of the areas Geoscience, Life Science, Mathematical Science and Physical Science, are listed under the heading Three-Level B.Sc. Programmes in this section. For further information please see Admission to Level II Programmes in this section of the Calendar.

CONTINUATION IN HONOURS B.SC.
AND B.SC. PROGRAMMES
For information regarding requirements for continuing in Faculty of Science programmes, please see the General Academic Regulations section in this Calendar.

PROGRAMME PROBATION
Please refer to the General Academic Regulations section in this Calendar for changes to regulations concerning Programme Probation in the Faculty of Science.

REINSTATEMENT TO THE FACULTY OF SCIENCE
A student who is ineligible to continue in the Faculty of Science or whose Result of Session is May Not Continue at the University may normally not apply for reinstatement for one full academic year. Exceptions may be made only when there are extenuating circumstances which are supported by documentation.

Students seeking reinstatement must complete the Returning Student Application available at the Office of the Registrar or the Office of the Associate Dean of Science (Studies). The completed application and the $50 application fee must be submitted to the Office of the Registrar by July 15. Applications must be accompanied by a written explanation of the student's previous academic performance, reasons why the student would expect to succeed in the desired programme if reinstated, and activities since last registered at McMaster including all academic work. Reference letters are also recommended. Reinstatement is not guaranteed.

FORMER SCIENCE STUDENTS AND READMISSION
Students who were previously registered in a Science programme and in good standing but did not register during the last academic year (Fall/Winter or Summer session) must write to the Office of the Associate Dean of Science (Studies) to seek permission to continue their studies. The letter should explain academic activities since the last registration.

If five years have passed since the last registration at McMaster, students must apply for Readmission through the Office of the Registrar. Please see the Application Procedures section of this Calendar.

DEADLINES
The Faculty of Science will not consider applications for admis- sion: application 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 (Studies).

SEQUENCE OF COURSES
Students in the Faculty of Science must have completed or be registered in the courses required for Level I before they may register for courses beyond Level I.

LEVEL III, IV REQUIREMENTS
Students in Honours programmes are required to take a minimum of 36 units of Level III, IV work (some programmes may require more). Please see the programme descriptions in this section of the Calendar for specific courses.

COURSE SELECTION
It is the responsibility of the student to ensure that the selection of courses meets the degree requirements for the programme in which the student is registered and that the stated prerequisite courses were completed with a grade of at least D-.

COURSE CHANGES
All course changes must be made through the Office of the Associate Dean of Science (Studies) and are subject to the deadline dates for adding 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. A cancelled three-unit first-term course may not be replaced by a second-term course for students who were registered for a full academic load in September. 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.

To add a limited enrolment course or a course requiring permission, a signed permission slip must be attached to the Application for Change of Student Record.

WORKLOAD
All programmes in the Faculty of Science may be taken by full-time and part-time students, with the exception of the Honours Co-op programmes. Students enrolled in Co-op programmes must maintain a full academic load during the study terms of their programme. Three-level 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 timetabled 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 programme may do so if their Cumulative Average on completion of the previous Fall/Winter session is at least 7.0. Students registered in the final level of their programme are permitted to overload by up to six additional units in order to become eligible to graduate.

LETTER OF PERMISSION
Students enrolled in science programmes may apply to the Office of the Associate Dean of Science (Studies) to take courses at another university on Letter of Permission. Students must achieve a grade of at least C- for transfer credit. The transcript designation reads COM, indicating complete, when a grade of C- or better is attained, or NC, indicating not complete, when a grade of less than C- is attained.

Required courses given by the department offering the programme may not be taken elsewhere unless departmental approval is given. Courses required by the programme but not given by the department offering the programme may be taken elsewhere.

For example, for a student registered in a Biology programme, 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.

PROGRAMME TRANSFERS

Up to the end of Level III, students may be permitted to transfer between Faculty of Science programmes on the recommendation of the Department concerned and with the approval of the Associate Dean of Science (Studies).

Students are eligible to apply for transfer from a B.Sc. programme to a related Honours Programme or between Honours programmes provided that they have:

1. attained a Cumulative Average of at least 6.0, and
2. completed the courses required for admission to the programme.

Permission to transfer to a programme is subject to any exceptions or special restrictions outlined in the Admission statement or the Programme Notes for that programme.

Note: The minimum Cumulative Average required to transfer to an Honours programme in the Faculty of Science is 6.0. Students entering Level III of a three-level B.Sc. programme should note that if they have completed 60 units with a Cumulative Average of 5.5, they must attain a Sessional Average of at least 7.0 on 30 units of course work to raise their Cumulative Average to 6.0. Students with a Cumulative average of less than 5.5, who wish to transfer to an Honours programme, are advised to satisfy graduation requirements for their current three-level programme.

For further information please see Transfer Procedures and Transferring to Graduate with a three-level B.Sc. degree from an Honours B.Sc. programme in this section of the Calendar.

GRADUATION

From Honours B.Sc. and B.Sc. Programmes

To graduate from a programme, students must meet the course requirements stated in the Calendar in force when they enter that programme, with the exception that a later Calendar may explicitly modify such requirements.

The requirements for graduation from these programmes 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. Programme

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

Second Bachelor’s Degree Programmes

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 5.0 (overall average of C) will be required for admission.

Students will be admitted to Second Degree studies only if their studies involve a significant additional component of work in the subject of concentration of a programme. Certain subject combinations are not permitted for Second Degrees. Students interested in applying for a Second Degree programme should consult the Office of the Associate Dean of Science (Studies) for further details.

Please see the Application Procedures section of this Calendar.

Science Inquiry Course List

No more than six units of Science Inquiry may be taken unless permission for a nine unit Senior Project or Thesis is obtained.

The following are restricted to students in specified programmes:

- BIOCHEM 4G03 Inquiry in Biochemistry
- BIOCHEM 4P03 Research Project in Biochemistry
- BIOLOGY 4C09 Senior Thesis
- BIOLOGY 4P06 Senior Project
- BIOLOGY 4F03 Inquiry in Biology
- CHEM 4G06 Senior Thesis
- COMP SCI 4ZP6 Project
- GEO 4CC3 Review Paper
- GEO 4F06 Senior Thesis
- PHYSICS 4A03 Inquiry in Physics
- PSYCH 4D06 Psychology Thesis
- PSYCH 4J03 Inquiry in Psychology

The following are restricted to students in Level IV of an Honours programme in the Faculty of Science who have taken at least three units in the subject area but who are seeking neither a degree nor a minor in that subject area:

- INQUIRY 4S53 Inquiry in Science II (Biology)
- INQUIRY 4S63 Inquiry in Science II (Chemistry)
- INQUIRY 4S73 Inquiry in Science II (Geoscience)
- INQUIRY 4S74 Inquiry in Science II (Mathematics and Statistics)
- INQUIRY 4S75 Inquiry in Science II (Physics and Astronomy)
- INQUIRY 4S76 Inquiry in Science II (Psychology)
- INQUIRY 4S77 Inquiry in Science II (Radiation and Life)

The following may be taken in place of, or in addition to, any of the above Inquiry courses:

- INQUIRY 3S03 Teaching Inquiry (Peer Tutoring)

The following is restricted to students in Level IV of an Honours programme in the Faculty of Science:

- GEO 4KK3 Inquiry: Minerals and Society

The following is restricted to students with the specified course prerequisites:

- MATH 3Z03 Inquiry: History of Mathematics

FIELD COURSES

Field courses are offered through the Department of Biology and the School of Geography and Geology. Some of these courses are taken outside the Fall/Winter session, during the spring or summer.

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.

March Counselling and Important Procedures

Counselling is available throughout the year from the Office of the Associate Dean of Science (Studies) and the academic departments in the Faculty of Science. In addition, it is highly recommended that all students in the Faculty of Science make a counselling appointment with a Departmental Undergraduate Advisor during the March Counselling period.

During the March Counselling period:

1. Information sessions are held by the departments in the Faculty of Science to discuss undergraduate programmes, graduate opportunities, career options, etc.
2. Students obtain a copy of the new Undergraduate Calendar;
3. All Level I students seeking admission to a Level II programme for the following Fall/Winter session must complete an application. See Admission to Level II Programmes;
4. Students in Levels II or III who wish to transfer to another programme for the following Fall/Winter session must complete an application form. See Transfer Procedures;
5. Students wishing to take courses requiring permission for the Fall/Winter session, including limited enrolment courses and Science Inquiry courses, apply to the appropriate department for permission. See Limited Enrolment Courses.

The dates for the March Counselling period may vary 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.

ADMISSION TO LEVEL II PROGRAMMES

Any student seeking admission to a Level II programme in the Faculty of Science for the following Fall/Winter session must submit an Application for Admission to Level II through MUGSI by March 31.

The application allows students to rank four programme choices. Students will be notified of their eligibility for the Level II programmes to which they have applied on their grade reports in June.
FACULTY OF SCIENCE

Admission to limited enrolment programmes is also based on Cumulative Average achieved; students will be admitted by a selection committee. See Limited Enrolment Programmes in this section of the Calendar.

Level II students must meet the admission criteria for a Level II programme according to the Calendar in effect when they registered for Level I. Students must follow the programme requirements of the Calendar in force when they enter Level II, except when a later Calendar explicitly modifies such requirements.

Students will receive an admission decision on their grade reports in June. The Office of the Associate Dean of Science (Studies) will approve registrations only for the programme to which a student was granted admission.

Students who have a Result of Session of May Continue at the University but who do not achieve the admission requirements for any Level II programme must return to Science I, or apply to transfer to another Faculty. Students may repeat or upgrade any units of additional Level I courses but are advised to take only twelve units of additional Level I courses. Only forty-two units of Level I courses may be used as credit towards a three-level programme.

TRANSFER PROCEDURES

To be eligible to transfer between programmes in the Faculty of Science, students must meet the criteria as described under the heading of Programme Transfers in this section of the Calendar.

Students in Levels II or III who wish to transfer to another programme in the Faculty of Science for the following Fall/Winter session must complete an Application to Transfer to Another Programme during the March Counselling period. This form must be completed and returned to the Office of the Associate Dean of Science (Studies) by the end of March. Students will be notified of the results of their applications on their grade reports in early June. Programme transfers are not normally permitted during the Fall/Winter academic session.

LIMITED ENROLMENT COURSES

There are two types of limited enrolment courses as follows:

1. Limited enrolment courses requiring permission:
   These courses have a prerequisite stating as a requirement: 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 permission is given, the student may list the course on their registration form. However, if permission has not been given, registration for the course will not be approved.
   If a limited enrolment course is an absolute requirement for a programme, then students in that programme have a guaranteed place in the course. This will be noted in the course prerequisite.

2. Limited enrolment courses:
   These courses do not have a prerequisite stating as a requirement: Permission of the instructor, department, coordinator, chair, etc. Enrolment in these courses is handled on a first-come, first-served basis until the end of August. Students must state an alternate course on their registrations for each limited enrolment course they list. Students should check MUGSI in the first week of September, before classes begin, to determine if they are registered for their limited enrolment course(s) or their alternate course(s).

   Note: During the September and January Drop and Add Periods, students must obtain a signed permission slip for both types of limited enrolment courses as mentioned above. Students are encouraged to obtain permission as soon as possible. They must attach the signed permission slip to their Application for Change of Student Record form to be permitted to enter their desired limited enrolment courses.

DEPARTMENT OF BIOCHEMISTRY

WEB ADDRESS: http://www.science.mcmaster.ca/biochem/

Honours Arts & Science and Biochemistry (B.Arts.Sc; See Arts & Science Programme)

Honours Biochemistry

NOTES

1. The Honours Biochemistry programme has been restructured to consist of three options: a core and two specializations. In the core, this programme 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

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

2. Students will be registered in Honours Biochemistry (core) until they elect otherwise. Transfer between options is possible at any time, subject to satisfying the specific option requirements and enrolment limits. Registration in a specialization will be noted on the student’s transcript.

3. Students in the Molecular Biology Specialization and in the Biotechnology and Genetic Engineering 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.

4. Students may apply for admission to Honours Biochemistry Co-op regardless of their option.

ADMISSION

Completion of the Science I requirements, including:

5. units MATH 1A03, 1A04
5. units BIOLOGY 1A03, 1A04
5. units CHEM 1A03, 1A04
5. units PHYSICS 1B03
5. units from Science I Course List
5. units Level II electives
1. course SCIENCE 1A00

While STAT 1CC3 is strongly recommended, students will also be considered for admission if they have completed MATH 1A03 instead of STAT 1CC3. Students with other backgrounds such as Health Sciences I may also be admissible and are encouraged to contact the Chair of the Department of Biochemistry. Students wishing to take CHEM 2P03 and 2P04 in Level II must complete MATH 1A03.

MINIMUM AVERAGES/GRADERS:

A Cumulative Average of 5.0 and a grade of C+ in each of four of BIOLOGY 1A03, 1A04, CHEM 1A03, 1A04, 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. Although required in Level III, completion of CHEM 2N03 in Level II is recommended.

3. Students planning to apply for admission to a Biochemistry Co-op programme must take both BIOLOGY 2B03 and CHEM 2N03 in Level II.

4. A minor in Biology or Chemistry is not permitted in the Honours Biochemistry programme.

5. Students are reminded that biochemical laboratory experience is highly valuable in many careers. The laboratory course BIOCHEM 3L03 which is required for all Honours Biochemistry students may not, by itself, be sufficient for many purposes. Consequently, students who are not taking a research project or thesis course should consider BIOCHEM 4L03.
LEVEL I
30 units (See Admission above.)

LEVEL II: 30-31 UNITS
6 units BIOCHEM 2B03, 2BB3
3 units BIOLOGY 2C03
6 units from either CHEM 20A3 and 20B3, or CHEM 2B03 and 2BB3
3 units CHEM 2R03
12-13 units from the option requirements (see below)

LEVEL III: 30-31 UNITS
3 units from BIOCHEM 3B73, 3D03
3 units BIOCHEM 3L03
24-25 units from the option requirements (see below)

LEVEL IV: 30-31 UNITS
6 units BIOCHEM 4E03, 4K03
24-25 units from the option requirements (see below)

OPTIONS
Core
LEVEL II
12 units Electives

LEVEL III: 24 UNITS
0-6 units BIOLOGY 2B03, CHEM 2N03 (if not taken in Level II)
6 units from Level III, IV courses
12-18 units Electives

LEVEL IV: 24 UNITS
3 units from BIOCHEM 4C03, 4L03
3 units from BIOCHEM 3H03, 3N03, 4H03, 4L03, 4Q03 (See Note below)
6 units from Level III, IV Biochemistry, BIOLOGY 3003, 3X03, 4V03
6 units from Level III, IV courses excluding Biochemistry
6 units Electives

Molecular Biology Specialization
Enrolment is limited. See Note 1 in Honours Biochemistry above.

LEVEL II: 12 UNITS
6 units BIOLOGY 2B03, CHEM 2N03
6 units Electives

LEVEL III: 24 UNITS
6 units BIOCHEM 3C03, 3P03
6 units BIOLOGY 3003, CHEM 3F03
3 units from Level III, IV Biochemistry, Biology, Chemistry
3 units from Level III, IV courses from the Faculty of Science
6 units Electives

LEVEL IV: 24 UNITS
6-9 units from BIOCHEM 4B06, 4F09, 4L03, 4P03
3 units BIOCHEM 4E03
3-6 units from Level III, IV Biochemistry, Biology, Chemistry
3 units from Level III, IV courses from the Faculty of Science, excluding Biochemistry
6 units Electives

Biotechnology and Genetic Engineering Specialization
Enrolment is limited. See Note 1 in Honours Biochemistry above.

LEVEL II: 12-13 UNITS
6 units BIOLOGY 2B03, CHEM 2N03
3 units CHEM ENG 2B03
3-4 units Electives (CHEM ENG 3B03 and 3K04 may be of interest)

LEVEL III: 24-25 UNITS
3 units BIOCHEM 3P03
9 units BIOCHEM 3H03, 3N03, CHEM 3F03
6-7 units from Level III, IV Biochemistry, Biology, Chemistry, CHEM ENG 2B03, 3K04, 3B03
6 units Electives

LEVEL IV: 24-25 UNITS
3 units from BIOCHEM 4D03, 4L03
6 units BIOCHEM 4H03, 4P03
9-10 units from Level III, IV Biochemistry, Biology, Chemistry, Chemical Engineering
6 units Electives

Honours Biochemistry (Complementary Studies Option) (2042)

The Honours Biochemistry (Complementary Studies Option) programme is being phased out. Registration in Level III will be last available in September 2002. Students who intended to register in Level II of this programme should refer to the core options of the Honours Biochemistry (Complementary Studies Option) programme.

Students are reminded that biochemical laboratory experience is highly valuable in many careers. The laboratory course BIOCHEM 3L03 which is required for all Honours Biochemistry students may not, by itself, be sufficient for many purposes. Consequently, students who are not taking a research project or thesis course should consider completing BIOCHEM 4L03.

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses.

LEVEL III: 30 UNITS
12 units BIOCHEM 3B73, 3L03, BIOLOGY 2B03, CHEM 2N03
3 units from Level III, IV Biochemistry, Biology, Chemistry
3 units HUMAN 2C03
6 units from the Faculties of Business, Humanities, Social Sciences
6 units Electives, excluding Biochemistry

LEVEL IV: 30 UNITS
3 units from BIOCHEM 4C03, 4L03
6 units BIOCHEM 4E03, 4P03
3 units from the Science Inquiry Course List
3 units from BIOCHEM 3H03, 3N03, 4H03, 4L03, 4Q03 (See Note 3 above.)
3 units from Level III, IV Biochemistry, BIOLOGY 3003, 3X03, 4V03
6 units from Level III, IV courses, excluding Biochemistry
6 units Electives

Honours Biochemistry (Specialist Option) (2040)

The Honours Biochemistry (Specialist Option) programme is being phased out. Registration in Level III will be last available in September 2002. Students who intended to register in Level II of this programme should refer to the specialization streams of the Honours Biochemistry programme for an equivalent. Students currently registered in this programme are strongly advised to transfer to the new Honours Biochemistry programme by consulting the Department of Biochemistry.

REQUIREMENTS
120-121 units total (Levels I to IV), of which no more than 48 units may be Level I courses.

LEVEL III: 30 UNITS (BIOCHEMISTRY OPTION) (2040)
9 units BIOCHEM 3B73, 3L03, 3P03
9 units BIOLOGY 3003, CHEM 3F03
9 units from Level III, IV Biochemistry, Biology, Chemistry
6 units Electives, excluding Biochemistry

LEVEL IV: 30 UNITS (BIOCHEMISTRY OPTION)
6 units BIOCHEM 4E03, 4K03
6-9 units from BIOCHEM 4B06, 4F09, 4L03, 4P03
6-9 units from Level III, IV Biochemistry, Biology, Chemistry
3 units from Level III, IV Science courses, excluding Biochemistry
6 units Electives
LEVEL III: 31 UNITS (BIOTECHNOLOGY AND
GENETIC ENGINEERING OPTION)
9 units BIOCHEM 3BT3, 3L03, 3P03
9 units BIOLOGY 3O03, 3E03, CHEM 3F03
6-7 units from Level III, IV Biochemistry, Biology, Chemistry,
CHEM ENG 2B03, 3K04
6 units Electives, excluding Biochemistry

LEVEL IV: 30 UNITS (BIOTECHNOLOGY AND
GENETIC ENGINEERING OPTION)
15 units BIOCHEM 4E03, 4G03, 4H03, 4K03, 4P03
9 units from Level III, IV Biochemistry, Biology, Chemistry
(BIOLOGY 3X03 or 4V03 is recommended)
6 units Electives

Honours Biochemistry Co-op

The regulations governing the Honours Biochemistry Co-op
programme have remained essentially unchanged from those
in previous years. However, the Biochemistry Option has been
renamed the Molecular Biology Specialization and the Bio-
technology and Genetic Engineering Option is now called
the Biotechnology and Genetic Engineering Specialization.
This change in terminology brings these programmes in line with
the streams in the new Honours Biochemistry programmes. Stu-
dents currently in the programme will be automatically registered
in the equivalent streams but may elect to change their speciali-
ization by consulting the Department of Biochemistry.

ADMISSION

Enrolment in this programme 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 Aver-
age of at least 7.0 and completion of either Level II Honours Bio-
chemistry, Honours Biochemistry and Molecular Biology, or Hon-
ours Molecular Biology.

Information about the programme and the selection procedure
may be obtained from Science Cooperative Education and the
Chair and will be explained in the month of February in an Infor-
mation Session.

NOTES

1. This is a five-year co-op programme which includes two eight-
month work terms which must be spent in Biochemistry re-
lated placements.
2. Students must be registered full-time and take a full academic
workload.
3. Students are required to complete a Work Orientation Course
before the first work placement.
4. Students who are entering Level III Honours Biochemistry
Co-op have a choice between two streams:
   i) Molecular Biology Specialization;
   ii) Biotechnology and Genetic Engineering Specialization
5. There are Level II and III prerequisites for many Level III and
IV courses. The prerequisites should be considered when choos-
ing your Level II and III 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

LEVEL I
30 units from the Science I requirements

LEVEL II
30 units from Honours Biochemistry (BIOLOGY 2B03 and
CHEM 2N03 must be completed), Honours Biochem-

Molecular Biology Specialization

(Molecular Biology Specialization
(Formerly Biochemistry Option)

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 from BIOCHEM 3BT3, 3D03
6 units BIOCHEM 3L03, BIOLOGY 3O03
3 units from Level III, IV Biochemistry, Biology, Chemistry
3 units Electives
→ Work Orientation Course

TERM 2 AND SUMMER
Work Term

YEAR 3
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.

TERM 1
0-3 units BIOCHEM 3BT3, 3D03 (if not completed)
3 units BIOCHEM 4E03
9 units from Level III, IV Biochemistry, Biology, Chemistry
0-3 units Electives

TERM 2
9 units BIOCHEM 3C03, 3P03, CHEM 3F03; (Students who
have obtained appropriate experience during the previ-
ous work term may request permission from the
Department to take 3 units of Level III, IV Biochemis-
ty instead of BIOCHEM 3P03)
3 units from Level III, IV Biochemistry, Biology, Chemistry
(BIOCHEM 4EE3 is recommended)
3 units Electives

SUMMER
Work Term

YEAR 5 (2002-2003 ONLY)
15 units from Academic Level IV, Term 2, and completion of
the second eight-month work term, Term 1.

TERM 1
Work Term

TERM 2
3 units BIOCHEM 4P03
0-3 units BIOCHEM 4EE3 (if not completed)
3-6 units from Level III, IV Biochemistry
3 units from Level III, IV Science courses
3 units Electives

YEAR 5 (EFFECTIVE 2003-2004)
15 units from Academic Level IV, Term 2, and completion of
the second eight-month work term, Term 1.

TERM 1
Work Term

TERM 2
6 units BIOCHEM 4K03, 4P03
0-3 units BIOCHEM 4EE3 (if not completed)
3-6 units from Level III, IV Biochemistry, Biology, Chemistry
3 units Electives

Biotechnology and Genetic
Engineering Specialization

(Formerly Biotechnology and Genetic Engineering Option)

YEAR 3
15 units from Academic Level III, Term 1, plus Work Orienta-
tion course, and completion of the first eight-month
work term, Term 2 and Summer Term.

TERM 1
0-3 units CHEM ENG 2B03 (if not completed)
3 units from BIOCHEM 3BT3, 3D03
9 units BIOCHEM 3L03, BIOLOGY 3E03, 3O03
0-3 units Electives
→ Work Orientation Course

TERM 2 AND SUMMER
Work Term

YEAR 4 (2002-2003 ONLY)
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.
The Honours Biochemistry and Molecular Biology programme is being phased out. Registration in Level III will be last available in September 2002. Students who intended to register in Level II of this programme should refer to the Molecular Biology Specialization of the Honours Biochemistry programme for an equivalent. Students currently registered in this programme are strongly advised to transfer to the new Honours Biochemistry programme by consulting the Department of Biochemistry.

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I courses

LEVEL II: 30 UNITS
12 units BIOCHEM 3BT3, 3C03, 3L03, 3P03
6 units BIOLOGY 3003, CHEM 3F03
6 units from Level III, IV Biochemistry, Biology, Chemistry (BIOCHEM 3E03 is recommended)
6 units Electives, excluding Biochemistry

LEVEL IV: 30 UNITS
9 units BIOCHEM 4E03, 4E04, 4K03
6-9 units from BIOCHEM 4B06, 4F09, 4L03, 4P03
3-6 units from Level III, IV Biochemistry or Molecular Biology
3 units Level III, IV Biochemistry, Biology, Chemistry
6 units Electives

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 from Level III, IV Biochemistry

DEPARTMENT OF BIOLOGY

WEB ADDRESS: http://www.science.mcmaster.ca/biology/

Honours Arts & Science and Biology
(B.Arts Sc.; See Arts & Science Programme)

Honours Philosophy and Biology
(B.A.; See Faculty of Humanities, Department of Philosophy)

Honours Molecular Biology
(See Molecular Biology)

Honours Biology

NOTES
1. The Honours Biology programme has been restructured to consist of three options: a core and two specializations. At the end of Level I, students enter the core option with a wide choice of courses, including courses in other disciplines, or may register for a specialization which reflects the department's research strengths. All options are suitable for students wishing to pursue graduate studies in Biology. The options currently available are:
   - Biology (core)
   - Biodiversity Specialization
   - Genetics Specialization

2. 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 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:
6 units MATH 1A03, STATS 1CC3 (See Note 1 above.)
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
1 course SCIENCE 1A00
Students with other backgrounds such as Health Sciences may be admitted and are encouraged to contact the Chair of the Department of Biology.

MINIMUM AVERAGES/GRDES:
A Cumulative Average of 5.0 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
1. Students interested in registering in upper-level Biochemistry courses are encouraged to complete BIOCHEM 2BB3 and 3D03 instead of BIOCHEM 2EE3. Students completing CHEM 2BB3 must coregister for CHEM 2A03 and 2P03.
2. 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.
3. Students interested in registering in more statistics courses are encouraged to complete STAT 2MA3 in addition to STAT 1CC3. Those students wishing to include more mathematical statistics may replace STATS 1CC3, 2MA3 with STATS 2D03, 2MB3. In this case, students are advised to register in MATH 1B03 in Level I.
4. Admission to Honours Biology and Pharmacology (Co-op) requires completion of CHEM 2A03 and 2D03. Students are strongly encouraged to register in BIOLOGY 2A03 while registered in Level II.

BIOLOGY COURSE LIST
All Biology Level III and IV courses: BIOCHEM 2B03, 3B03, 3G03, 3H03, 3N03, 3P03, 3Q03, 3T03, 4F03, 4I03, 4K03, 4Q03, CHEM ENG 2B03; GEO 2A03, 2D03, 2E03, 2P03, 2Q03, 2R03, 3A03, 3B03, 3J03, 3S03, 4A03, 4B03, 4C03, 4F03, 4I03, 4L03, 4S03; MATH 1B03.

Biology (Core) [2050808]

NOTES
1. The Biology core option allows students to choose Biology courses which reflect their own interests, or to develop an interdisciplinary approach to Biology which may include obtaining a minor. Students registered in the Biology core option are encouraged to discuss their interests and course selections with a Biology undergraduate counsellor.
2. Students interested in applying to graduate or professional schools are encouraged to complete a Biology Thesis or Project and to choose their Level III and IV elective courses from the Faculty of Science.
3. Students are encouraged to take PHILOS 2D03 or 2G03 as an elective.

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses.

LEVEL I: 30 UNITS
30 units (See Admission above.)

LEVEL II: 30 UNITS
3-6 units CHEM 2E03 or both CHEM 2OA3; 2OB3
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)
3 units from Levels III, IV Biology
6 units from Biology Course List
9 units Level III, IV courses
6 units Electives

LEVEL IV: 30 UNITS
6 units from Levels III, IV Biology
6 units from Biology Course List
6 units from the Science Inquiry Course List, BIOLOGY 4F06 or
6 units BIOLOGY 4C09
9 units from Level III, IV courses
0-3 units Electives

Biodiversity Specialization [2050812]

NOTES
1. Students interested in the Biodiversity Specialization are encouraged to register in at least one of ENVIR SC 1A03, 1B03 or 1G03 in Level I or II.
2. Students registered in the Biodiversity Specialization are encouraged to complete PHILOS 2G03 as an elective.
3. Students are encouraged to complete more Statistics. (See Note 3 under Honours Biology in this section of the Calendar.)

BIODIVERSITY COURSE LIST
BIOLOGY 3B03, 3BB3, 3E03, 3MM3, 3P03, 3S03, 3T03, 3U03, 3V03, 3W03, 3MM3, 4A03, 4D03, 4D03, 4E03, 4F03, 4G03, 4H03, 4J03, 4K03, 4L03, 4M03, 4N03, 4P03, 4S03, 4T03, 4U03; GEO 2A03, 2B03, 2C03, 2D03, 2E03, 2F03, 2G03, 2H03, 2I03, 2J03, 2K03, 2L03, 2M03, 2N03, 2O03, 2P03, 3A03, 3B03, 3E03, 3FF3, 3G03, 3H03, 3I03, 3J03, 3M03, 3N03, 3O03, 3P03, 3Q03, 3R03, 3S03, 3T03, 3U03, 3V03, 3W03, 3X03, 3Y03, 3Z03, 3AA03.

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses.

LEVEL I: 30 UNITS
30 units (See Admission above.)

LEVEL II: 30 UNITS
3-6 units CHEM 2E03 or both CHEM 2OA3, 2OB3
21 units BIOCHEM 2EE3, BIOLOGY 2A03, 2B03, 2C03, 2D03, 2F03, 2G03
3-6 units Electives

LEVEL III: 30 UNITS
9 units BIOLOGY 3FF3, 3G03, 3J03
12 units from Biodiversity Course List, including at least six units from Biology courses
6 units Electives

LEVEL IV: 30 UNITS
3 units BIOLOGY 4AA3
12 units from Biodiversity Course List, including at least six units from Biology courses
9 units BIOLOGY 4C09 or BIOLOGY 4F06 and three units from Biology Course List
6 units Electives

Genetics Specialization [2050814]

NOTES
1. Students registered in the Genetics Specialization are encouraged to complete PHILOS 2D03 or 2G03 as an elective.
2. Students with mathematical interests are encouraged to register in mathematical statistics. (See Note 3 under Honours Biology in this section of the Calendar.)
3. Students in the Genetics Specialization must complete BIOCHEM 2B03, 2C03 and BIOCHEM 2EE3 in Level II. BIOLOGY 2A03 and 2F03 are strongly recommended.
4. Students interested in registering in upper-level Biochemistry courses are encouraged to complete BIOCHEM 2BB3 and 3D03 instead of BIOCHEM 2EE3. Students completing BIOCHEM 2BB3 must coregister for CHEM 2OA3 and 2P03.
Honours Biology (Specialist Option) **(2050)**

The Honours Biology (Specialist Option) programme is being phased out. Registration in Level III will be last available in September 2002. Students who intended to register in Level II of this programme should refer to the Honours Biology programme for an equivalent option. Students currently registered in this programme who wish to transfer to the new Honours Biology programme should consult the Department of Biology.

**NOTES**

1. Students are advised to note carefully the prerequisites for all Level III and IV courses listed in the following programme, particularly BIOCHEM 3G03.
2. Admission to Honours Biology and Pharmacology (Co-op) requires completion of CHEM 2OA3 and 2OB3.
3. BIOLOGY 1J03 or 1K03 should not be taken.

**COURSE LIST**

BIOCHEM 2B03, 3BT3, 3G03, 3H03, 3N03, 4E03, 4EE3, 4J03, 4K03, 4Q03; all Level III and IV Biology courses, except BIOCHEM 4C09 and 4L09; CHEM ENG 2B03; GEO 2A03, 2B03, 2C03, 2EE3, 2J03, 2Q03, 2W03, 3A03, 3I03, 3J03, 3P03, 4A03, 4B03, 4C03, 4EE3, 4I03, 4L03, 4S03; MED PHYS 3T03; MOL BIOL 4F03, 4G03, 4J03; PHARMAC 4B03; PSYCH 2F03, 2TT3, 3F03, 3FA3, 3S03, 3T03, 3Y03

**REQUIREMENTS**

120 units total (Levels I to IV), of which no more than 48 units may be Level I courses

**LEVEL III: 30 UNITS**

18 units from Levels III, IV Biology
6 units from Course List
3 units Electives, excluding Biochemistry and Biology

**LEVEL IV: 30 UNITS**

18 units from Levels III, IV Biology (which must include either BIOLOGY 4F06 or 4C03)
6 units from Course List
6 units Electives

BIOLOGY 4C09 is highly recommended

Honours Biology and Mathematics **(2050320)**

**ADMISSION**

Completion of the Science I requirements, including:

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

**MINIMUM AVERAGES/GRADES:**

A Cumulative Average of 5.0 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 programme in either the Department of Mathematics and Statistics or in the Department of Biology.
2. Students are advised to carefully note graduate programme 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 2AB3, 2R03 and either 2S03 or 2T03 in Level II, MATH 3A03 and 3X03 in Level III, and MATH 3A3 and 4X03 in Level IV. MATH 2F03 is recommended.
5. Students must complete at least nine units from Level IV Biology courses.
7. BIOLOGY 1J03 or 1K03 should not be taken.
LEVEL I
30 units (See Admission above.)

LEVEL II: 30 UNITS
12 units BIOLOGY 2A03, 2B03, 2C03, 2F03
15 units MATH 2A03, 2B03, 2C03, 2E03, 2F03
3 units Electives
If not completed: MATH 1B03

LEVEL III: 30 UNITS
12 units from Levels III, IV Biology (See Note 5 above.)
6 units MATH 3F03, 3N03
3 units from MATH 2S03, 2T03, 3A03
3-6 units STATS 2D03, 2M03
3-6 units Electives

LEVEL IV: 30 UNITS
18 units from Levels III, IV Biology, Mathematics, Statistics, PSYCH 4103 which must include at least 9 units of Level IV Biology (See Note 5 above.)
3-6 units from MATH 3A03, 3E03, 3FF3, 3X03, STATS 3D03, 3D03, 3S03, 3U03
6-9 units Electives

Honours Biology and Pharmacology (Co-op) [2050419]

ADMISSION
Enrolment in this programme is limited to a maximum of 25 students per year. Selection is based on academic and other achievement (see below) but requires, as a minimum, completion of Level II of an Honours Biology or Molecular Biology programme (including CHEM 2A03 and 2B03) with a Cumulative Average of at least 6.0.

Information about this programme 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 programme attend the Information Session in Level II.

NOTES
1. This is a five-year co-op programme, three terms of which must be spent in work related to pharmacology, toxicology or pharmacuetics. These three terms will include the summer term following the completion of Level III, the second term of Level IV and the first term of the fifth year. Level IV continues through the fourth and fifth years of the programme. A senior thesis will be completed during the summer of the fourth year. PHARMAC 3A06, 3B06, 4A03, 4A03, 4A03, 4C03, 4D03 and 4E03 will use a self-directed problem-based learning approach. PHARMAC 4B03 may be taught in a lecture format in some years.
2. Students must be registered full-time and take a full academic workload.
3. Students are required to complete a Work Orientation Course before the first work placement.
4. Students should seek academic counselling for this programme in the Department of Biology.
5. BIOLOGY 1J03 or 1K03 should not be taken.
6. Students are strongly recommended to take BIOLOGY 2A03 in Level II.

COURSE LIST
BIOCHEM 2B03, 3B03, 3G03, 3H03, 3N03; All Level III and IV Biology and Pharmacology courses; CHEM 3F03, 4D03; GEO 3J03, 4A03, 4B03; MOL BIOL 4F03, 4H03, 4J03

LEVEL II: 30 UNITS
5 units BIOLOGY 2B03, 2C03
3-6 units from BIOCHEM 2A06, 2B03, 2E03
6 units from BIOLOGY 2A03, 2D03, 2F03 (See Note 6 above.)
6 units CHEM 2A03, 2B03
3 units STAT 2M03
3-6 units Electives, excluding Biochemistry and Biology. CHEM 2R03 is recommended.

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
0-3 units from BIOCHEM 3D03, 3G03 (if BIOCHEM 2A06)
3-6 units from Course List
9 units BIOLOGY 3P03, 3U03, 3UU3
12 units PHARMAC 3A06, 3S06
3 units Electives
→ Work Orientation Course

SUMMER
Work Term
YEAR 4
15 units from Academic Level IV, Term 1, completion of second four-month work term, Term 2, completion of senior thesis, Summer Term

TERM 1
3 units HTH SCI 3I03
3 units from PHARMAC 4A03, 4B03, 4C03
9 units from Course List

TERM 2
Work Term

SUMMER
9 units PHARMAC 4F09

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 4A03, 4D03, 4E03
3 units from Course List
6 units Electives

Honours Biology and Psychology [2050460]

ADMISSION
Enrolment in this programme is limited. Selection is based on academic achievement but requires, as a minimum, completion of the Science I requirements, including:
6 units MATH 1A03, STAT 1CC3
6 units BIOLOGY 1A03, 1AA3
6 units CHEM 1A03, 1AA3
3 units PHYSICS 1B03

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>30 UNITS</th>
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<tbody>
<tr>
<td>5 units</td>
<td>BIOLOGY 2B03, 2C03</td>
</tr>
<tr>
<td>3-6 units</td>
<td>from BIOCHEM 2A06, 2B03, 2E03</td>
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<tr>
<td>6 units</td>
<td>from BIOLOGY 2A03, 2D03, 2F03 (See Note 6 above.)</td>
</tr>
<tr>
<td>6 units</td>
<td>CHEM 2A03, 2B03</td>
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<tr>
<td>3 units</td>
<td>STAT 2M03</td>
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<td>3-6 units</td>
<td>Electives, excluding Biochemistry and Biology. CHEM 2R03 is recommended.</td>
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</tbody>
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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

<table>
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<tr>
<th>TERMS 1 AND 2</th>
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<tbody>
<tr>
<td>0-3 units from BIOCHEM 3D03, 3G03 (if BIOCHEM 2A06)</td>
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<tr>
<td>3-6 units from Course List</td>
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<tr>
<td>9 units BIOLOGY 3P03, 3U03, 3UU3</td>
</tr>
<tr>
<td>12 units PHARMAC 3A06, 3S06</td>
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<tr>
<td>3 units Electives</td>
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<td>→ Work Orientation Course</td>
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<tr>
<th>SUMMER</th>
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<td>Work Term</td>
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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

<table>
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<tr>
<th>TERM 1</th>
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<tbody>
<tr>
<td>3 units HTH SCI 3I03</td>
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<tr>
<td>3 units from PHARMAC 4A03, 4B03, 4C03</td>
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<tr>
<td>9 units from Course List</td>
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<tr>
<th>TERM 2</th>
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<tbody>
<tr>
<td>Work Term</td>
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<tr>
<th>SUMMER</th>
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<tbody>
<tr>
<td>9 units PHARMAC 4F09</td>
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</table>

YEAR 5
15 units from Academic Level IV, Term 2, and completion of third four-month work term, Term 1.

<table>
<thead>
<tr>
<th>TERM 1</th>
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<tbody>
<tr>
<td>Work Term</td>
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<table>
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<tr>
<th>TERM 2</th>
</tr>
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<tbody>
<tr>
<td>6 units from PHARMAC 4A03, 4D03, 4E03</td>
</tr>
<tr>
<td>3 units from Course List</td>
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<tr>
<td>6 units Electives</td>
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Honours Biology and Psychology [2050460]
### Faculty of Science

**B.Sc. Three-Level Degree**

A three-level programme with a Biology Orientation is available under the heading **Three-Level B.Sc. Programmes**.

**Minor in Biology**

**Requirements**

- **24 units total**
  - 6 units from BIOLOGY 1A06, 1A03, 1AA3
  - 18 units from Levels II, III, IV Biology courses, including at least six units from Levels III, IV Biology courses

**Department of Chemistry**

**WEB ADDRESS**: http://www.chemistry.mcmaster.ca

**Honours Arts & Science and Chemistry (B.Arts.Sc.; See Arts & Science Programme)**

**Notes**

1. Students in all Chemistry programmes are expected to have basic skills in the use of personal computers, word processing software, and spreadsheet software. COMP SCI 1SAA or MATH 1J03 are recommended for students without these skills.

2. Students are encouraged to seek academic counselling from the Undergraduate Advisor for Chemistry programmes.

3. Students who wish to transfer from Level II or III to an Honours Chemistry programme must have a C.A. of at least 6.0 and must have completed the equivalent of Science I, including all the courses required for Admission to an Honours Chemistry programme.

4. MATH 1B03 and PHYSICS 1B3 must be completed by the end of Level II and are strongly recommended in Level I.

**Honours Chemistry**

**Notes**

1. The Honours Chemistry programme has been restructured to consist 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 study in Chemistry or Biochemistry. The options currently available are:
   - Chemistry (Core)
   - Biological Specialization
   - Physical and Analytical Specialization
   - Synthesis and Structure Specialization

2. 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, 1AA3
- 6 units MATH 1A03, 1AA3
- 3 units PHYSICS 1B03
- 9 units from Science I Course List
- 6 units Level I electives
- 1 course SCIENCE 1A00

**Minimum Averages/Grades**

A Cumulative Average of 5.0 and an average of 6.0 in CHEM 1A03, 1AA3.

**Notes**

1. All options in Honours Chemistry fulfill the academic requirements of the Canadian Society for Chemistry.

2. MATH 1J03, 2B03, PHYSICS 2A03 or 2B06 are recommended electives.
3. For those considering postgraduate studies in Chemistry, it should be noted that 18 units of Level IV Chemistry are required for consideration for admission at McMaster. CHEM 4G06 is strongly recommended. 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.

**REQUIREMENTS**

120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 96 units must be Level III, IV courses.

**Chemistry (Core)**

**LEVEL I**

3 units (See Admission above.)

**LEVEL II: 30 UNITS**

18 units CHEM 2A03, 2BA3, 2BB3, 2L03, 2PA3, 2PB3

12 units Electives

If not completed: MATH 1B03, PHYSICS 1A03 (or 1BB3)

**LEVEL III: 30 UNITS**

15 units CHEM 2A03, 3BA3, 3L13, 3P03, 3Q03

3 units from CHEM 3D03, 3F03

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 from Levels III, IV

12 units Electives

**Biological Specialization**

**LEVEL I: 30 UNITS**

6 units BIOLOGY 1A03, 1AA3

6 units CHEM 1A03, 1A3

6 units MATH 1A03, 1AA3

3 units PHYSICS 1B03

6 units from Science I Course List

3 units Level I electives

1 course SCIENCE 1A00

**LEVEL II: 30 UNITS**

18 units CHEM 2A03, 2BA3, 2BB3, 2L03, 2PA3, 2PB3

3 units BIOLOGY 2B03

9 units Electives

If not completed: MATH 1B03, PHYSICS 1A03 (or 1BB3)

**LEVEL III: 30 UNITS**

15 units CHEM 3A03, 3BA3, 3L13, 3P03, 3Q03

3 units from CHEM 3D03, 3F03

6 units BIOCHEM 2EE3, 3G03; or from BIOCHEM 2BB3, 2BB3, 3D03 (See Note 3 above.)

3 units BIOLOGY 2C03

3 units Electives

**LEVEL IV: 30 UNITS**

6 units CHEM 4G06

6 units CHEM 4D03

3 units from BIOCHEM 3D03, 4K03

3 units from BIOCHEM 3L03 or Level IV Biochemistry

3 units from Levels III, IV Biochemistry or Biology

9 units Electives

**Physical and Analytical Specialization**

**NOTES**

1. CHEM 3BB3 and 3ZZ3 require completion of Level II Mathematics and Physics courses. Therefore, students are strongly recommended to take MATH 1B03 and PHYSICS 1A03 (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, 2L03, 2PA3, 2PB3

6 units MATH 2A03, PHYSICS 2A03 (See Note 1 above.)

6 units Electives (See Note 2 above.)

If not completed: MATH 1B03, PHYSICS 1A03 (or 1BB3)

**LEVEL III: 30 UNITS**

15 units CHEM 3A03, 3BA3, 3L13, 3P03, 3Q03

6 units CHEM 3BB3, 3Z23

3 units from CHEM 3D03, 3F03

6 units Electives

If not completed: BIOCHEM 2EE3 or 3G03

**LEVEL IV: 30 UNITS**

6 units CHEM 4G06

6 units from Levels III, IV Chemistry

6 units from Levels III, IV

12 units Electives

**Synthesis and Structure Specialization**

**NOTES**

Additional Biochemistry is recommended from either BIOCHEM 2EE3, 3G03 or from BIOCHEM 2BB3, 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, 2L03, 2PA3, 2PB3

12 units Electives (See Note above.)

If not completed: MATH 1B03, PHYSICS 1A03 (or 1BB3)

**LEVEL III: 30 UNITS**

15 units CHEM 3A03, 3BA3, 3L13, 3P03, 3Q03

3 units from CHEM 3D03, 3F03

6 units from CHEM 3L03, 4A03, 4C03, 4D03, 4D03, 4P03, 4R03, 4S03

6 units Electives

If not completed: BIOCHEM 2EE3 or 3G03

**LEVEL IV: 30 UNITS**

6 units CHEM 4G06

6 units from Levels III, IV Chemistry

6 units from Levels III, IV

12 units Electives

**Honours Chemistry**

(Complementary Studies Option)

The Honours Chemistry (Complementary Studies Option) program is being phased out. Registration in Level III will be last available in September 2002. Students who intended to register in Level II of this programme should refer to the Honours Chemistry program for an equivalent option. Students currently registered in this program who wish to transfer to the new Honours Chemistry program should consult the Department of Chemistry.

**NOTES**

1. For those considering postgraduate studies in Chemistry, it should be noted that 18 units of Level IV Chemistry are required for consideration at McMaster.

2. 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.
3. Students who obtain permission to take CHEM 4G06 may substitute three units of Level III, or IV Chemistry for CHEM 4TA3 in Level IV.

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses.

LEVEL III: 30 UNITS
- 15 units CHEM 3A03, 3BA3, 3BB3, 3D03, 3Q03
- 3 units HUMAN 2C03
- 6 units from the Faculties of Business, Humanities, Social Sciences
- 6 units Electives, excluding Chemistry

LEVEL IV: 30 UNITS
- 6 units from the Science Inquiry Course List
- 3 units CHEM 4TA3
- 3 units from Levels III, IV Chemistry
- 6 units from Levels III, IV Chemistry
- 6 units Electives from Levels III, IV, excluding Chemistry
- 6 units Electives

Honours Chemistry (Specialist Option) {2070}
The Honours Chemistry (Specialist Option) programme is being phased out. Registration in Level III will be last available in September 2002. Students who intended to register in Level II of this programme should refer to the Honours Chemistry programme for an equivalent option. Students currently registered in this programme who wish to transfer to the new Honours Chemistry programme should consult the Department of Chemistry.

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses.

LEVEL III: 30 UNITS
- 21 units CHEM 3A03, 3BA3, 3BB3, 3D03, 3P03, 3Q03, 3ZZ3
- 6 units Electives, excluding Chemistry
- 3 units Electives

LEVEL IV: 30 UNITS
- 6 units from CHEM 4G06, or both CHEM 4TA3 and three units from Levels III, IV Chemistry
- 12 units from Level IV Chemistry
- 6 units from Levels III, IV Science, Engineering
- 6 units Electives

Honours Chemistry Co-op {2073}

ADMISSION
Enrolment in this programme is limited to a maximum of 10 students per year. Selection is based on academic achievement and an interview but requires, as a minimum, completion of Level II Honours Chemistry (Complementary Studies Option) or Honours Chemistry (Specialist Option) or Honours Biological Chemistry or Honours Biochemistry and Chemistry with a Cumulative Average of at least 6.0.

Information about the programme 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. Beginning in 2003-2004, admission to this programme will require completion of Level II Honours Chemistry with a Cumulative Average of at least 6.0.
2. This is a five-year co-op programme which includes two eight-month work terms that must be spent in Chemistry-related placements.
3. Students must be registered full-time and take a full academic workload.
4. Students are required to complete a Work Orientation Course before the first work placement.
5. There are Level II (and III) prerequisites for many Level III (and IV) courses. The prerequisites should be considered when choosing your Level II and III courses. Students should, in particular, note the Mathematics and Physics prerequisites for CHEM 3BB3 and 3ZZ3.
6. Students considering postgraduate studies in Chemistry should note that 18 units of Level IV Chemistry are required for consideration for admission at McMaster.
7. Effective 2003-2004, students who complete CHEM 4G06 are not required to complete courses from the Science Inquiry Course List. CHEM 3L13 and 4G06 can be taken in either order, but it is recommended that CHEM 3L13 be completed before CHEM 4G06.

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses.

LEVEL I
- 30 units from the Science I requirements

LEVEL II (2002-2003 ONLY)
- 30 units from Level II of Honours Chemistry (Complementary Studies Option), Honours Chemistry (Specialist Option), Honours Biological Chemistry, or Honours Biochemistry and Chemistry.

If not completed: MATH 1B03, PHYSICS 1A13 (or 1B13)

LEVEL II (EFFECTIVE 2003-2004)
- 30 units from Level II of Honours Chemistry, including any of the specialization streams, or Honours Biochemistry and Chemistry.

If not completed: MATH 1B03, PHYSICS 1A13 (or 1B13)

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 I (2002-2003 ONLY)
- 6 units CHEM 3BA3, 3Q03
- 3 units HUMAN 2C03
- 6 units Electives. Students who wish to take CHEM 4G06 in Year 4 must complete CHEM 3BA3 and 3I03 in Year 3.

Work Orientation Course

TERM I (EFFECTIVE 2003-2004)
- 6 units CHEM 3BA3, 3Q03
- 9 units Electives. Students who wish to register in CHEM 4G06 in Year 4 must complete CHEM 3I03 in Year 3.

Work Orientation Course

TERM 2 AND SUMMER

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 (2002-2003 ONLY)
- 12 units CHEM 3A03, 3BB3, 3I03, 4TA3
- 3 units from CHEM 3D03, 3F03
- 3 units from the Science Inquiry Course List
- 6 units from the Faculties of Business, Humanities, Social Sciences
- 6 units from Level III, IV courses, excluding Chemistry

TERM 1 AND 2 (EFFECTIVE 2004-2005)
- 12 units CHEM 3A03, 3BA3, 3I03, 3P03
- 3 units from CHEM 3D03, 3F03
- 3 units from CHEM 3BB3, 3ZZ3, 4A03, 4A03, 4C03, 4D03, 4DD3, 4PP3, 4R03, 4S03
- 6 units from Levels III, IV courses, excluding Chemistry
- 6 units Electives

SUMMER

YEAR 5
- 15 units from Academic Level IV, Term 2, plus completion of second eight-month work term, Term 1.
Honours Biological Chemistry

The Honours Biological Chemistry programme is being phased out. Registration in Level III will be last available in September 2002. Students who intended to register in Level II of this programme should refer to the Honours Chemistry programme for an equivalent option. Students currently registered in this programme who wish to transfer to the new Honours Chemistry Biological Specialization should consult the Department of Chemistry.

NOTE
A minor in Biochemistry is not permitted in the Honours Biological Chemistry programme.

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses

LEVEL III: 30 UNITS
3 units BIOLOGY 2C03
6 units from BIOCHEM 2B03, 2BB3, 2EE3, 3G03
12 units CHEM 3A03, 3B03, 3BB3, 3G03
3 units from CHEM 3D03, 3F03
6 units Electives

LEVEL IV: 30 UNITS
6 units CHEM 4D03, 4DD3
3 units from BIOCHEM 3D03, 4K03
6 units from CHEM 4G06; or both CHEM 4TA3 and three units of Levels III, IV Chemistry
3 units from BIOCHEM 3L03, Level IV Biochemistry
3 units from Levels III, IV Biology
3 units Electives, excluding Biology
6 units Electives

B.Sc. Three-Level Degree
A three-level programme with a Chemistry orientation is available through the B.Sc. in Physical Science which is listed under the heading Three-Level B.Sc. Programmes in this section.

Minor in Chemistry

REQUIREMENTS
24 units total
6 units from CHEM 1A03, 1AA3
18 units Level II, III, IV Chemistry courses, including at least 6 units from Levels III, IV Chemistry courses
OPTIONS

Core {2145826}

LEVEL II: 9 UNITS
9 units Electives of which three units must not be Computer Engineering, Computer Science or Software Engineering

LEVEL III: 9 UNITS
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: 15 UNITS
6 units COMP SCI 4ZP6 or the Science Inquiry Course List
9 units Electives of which at least six units must be from Levels III, IV

Specialized Option {2145828}

COURSE LIST
All Level III and IV Computer Science (excluding COMP SCI 4ZP6), all Level III and IV Mathematics, Statistics or Physics courses

LEVEL II: 9 UNITS
9 units Electives

LEVEL III: 9 UNITS
6 units from Levels III, IV Mathematics, Statistics
3 units Electives, excluding Computer Engineering, Computer Science, Mathematics, Software Engineering, Statistics

LEVEL IV: 15 UNITS
6 units COMP SCI 4ZP6
9 units from Course List which must include at least three units of Level IV Computer Science

Honours Computer Science (Complementary Studies Option) {2147}

The Honours Computer Science (Complementary Studies Option) is being phased out. Registration in Level III will be last available in September 2002. Students who intend to register in Level II of this programme should refer to the Honours Computer Science programme for an equivalent option. Students currently registered in this programme who wish to transfer to the new Honours Computer Science programme should consult the Department of Computing and Software.

NOTES
1. COMP SCI 3EA3 is listed as required in Level IV, but may be taken in Level III.
2. A minor in Mathematics or Mathematics and Statistics is not permitted in the Honours Computer Science (Complementary Option) programme.

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses

LEVEL III: 30 UNITS
15 units COMP SCI 3EA3, 3MG3, 3MH3, 3M13, 3TA3
3 units from COMP SCI 3CB3, 3GA3, 3IA3
6 units from Levels III, IV Mathematics, Statistics
6 units Electives, excluding Computer Science, Mathematics, Statistics

LEVEL IV: 30 UNITS
6 units COMP SCI 4MN3, 4TB3
6 units COMP SCI 4ZP6
15 units from Course List which must include at least nine units of Level IV Computer Science
3 units Electives

Honours Computer Science and Mathematics {2145320}

ADMISSION
Completion of any Level I programme, including:
6 units MATH 1A03, 1AA3
6 units COMP SCI 1MC3, 1MD3
3 units MATH 1B03
15 units Level I courses to complete a Level I programme

MINIMUM AVERAGES/GRADERS:
A Cumulative Average of 5.0 and a grade of C+ in each of COMP SCI 1MC3, 1MD3, MATH 1AA3, 1B03.

NOTE
A minor in Statistics or Mathematics and Statistics is not permitted in the Honours Computer Science and Mathematics programme.

COURSE LIST
All Level III and IV Computer Science, Mathematics and Statistics courses; MATH 2E03; NEURCOMP 3W03; PHYSICS 2C03, 2D03, 2K03, 2L03; STATS 2D03, 2MA3, 2MB3

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses

LEVEL I
36 units (See Admission above.)

LEVEL II: 30 UNITS
9 units COMP SCI 2MD3, 2MF3, 2SC3
12 units MATH 2A03, 2AB3, 2C03, 2703
9 units Electives. MATH 2T03 is recommended. If not completed: SCIENCE 1A00
LEVEL III: 30 UNITS
15 units COMP SCI 2ME3, 3MG3, 3MH3, 3M13, 3TA3
3 units from COMP SCI 3CB3, 3EA3, 3GA3, 3IA3
6 units MATH 3A03, 3X03
3 units from Levels III, IV Mathematics, Statistics
3 units Electives

LEVEL IV: 30 UNITS
9 units COMP SCI 4MN3, 4ZP6
3 units from MATH 3A03, 4C03, 4J03, 4Q03, 4S03, 4X03
6 units from Levels III, IV Mathematics, Statistics
3 units from Course List
6 units Electives, excluding Computer Science, Mathematics, Statistics
3 units Electives

Honours Computer Science \{2145542\}

ADMISSION
Completion of any Level I programme, including:
6 units MATH 1A03, 1AA3
6 units COMP SCI 1MC3, 1MD3
3 units MATH 1B03
15 units from Level I courses to complete a Level I programme

MINIMUM AVERAGES/GRADES:
A Cumulative Average of 5.0 and a grade of C+ in each of COMP SCI 1MC3, 1MD3, MATH 1AA3, 1B03.

NOTE
A minor in Mathematics or Mathematics and Statistics is not permitted in the Honours Computer Science and Statistics programme.

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
9 units COMP SCI 2MD3, 2MF3, 2SC3
15 units MATH 2A03, 2AB3, 2P03, 2S03, STATS 2D03
6 units Electives
If not completed: SCIENCE 1A00

LEVEL III: 30 UNITS
15 units COMP SCI 2ME3, 3MG3, 3MH3, 3M13, 3TA3
3 units MATH 2C03
9 units STATS 2MB3, 3D03, 3DD3
3 units Electives, excluding Computer Science, Mathematics, Statistics

LEVEL IV: 30 UNITS
3 units from COMP SCI 3CB3, 3EA3, 3GA3, 3IA3
9 units COMP SCI 4MN3, 4ZP6
6 units from Levels III, IV Mathematics
6 units from Levels III, IV Statistics
3 units from Levels III, IV Computer Science, Mathematics, Statistics, NEURCOMP 3W03

Honours Computer Science B.Sc. \{2149\}
as a Second Degree

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; completion of MATH 1A03, 1AA3, 1B03, and a grade of at least C+ in each of COMP SCI 1MC3, 1MD3 or equivalent.

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 programme.

NOTE
If a student in the programme has previously taken a required course (or its equivalent), he/she does not have to re-take the course. However, if the credit from that course has been used for a previous degree, the student will be required to take another course with the required number of units. A student is admitted to Level III of this programme.

COURSE LIST
All Level III, IV Computer Science courses (excluding 4ZP6), Mathematics and Statistics and Physics courses; MATH 2T03; NEURCOMP 3W03

REQUIREMENTS
60 units total.

LEVEL III: 30 UNITS
15 units COMP SCI 2MD3, 2ME3, 2MF3, 2M13, 2SC3
6 units MATH 2A03, 2P03
3 units COMP SCI 3TA3
6 units from Course List. MATH 2T03 is recommended.
1 course SCIENCE 1A00

LEVEL IV: 30 UNITS
15 units COMP SCI 3EA3, 3MG3, 3MH3, 3M13, 4MN3
3 units from COMP SCI 3CB3, 3GA3, 3IA3, Level IV Computer Science
6 units Level IV Computer Science
6 units from COMP SCI 4ZP6, Level IV Computer Science.

Honours Computer Science B.Sc. \{2149\}
as a Second Degree

B.Sc. Three-Level Degree
A three-level programme with a Computer Science orientation is available through the B.Sc. in Mathematical Science which is listed under the heading "Three-Level B.Sc. Programmes" in this section.

Minor in Computer Science

REQUIREMENTS
24 units total
6 units COMP SCI 1MC3, 1MD3
9 units COMP SCI 2MD3, 2ME3, 2M13
9 units from COMP SCI 2MF3, 3EA3, 3GA3, 3MG3, 3MH3, 3M13, 3TA3, 4EB3, 4IB3,

SCHOOL OF GEOGRAPHY AND GEOLOGY
WEB ADDRESS: http://www.science.mcmaster.ca/geo/geomain.html

Honours Arts & Science and Geography and
Honours Arts & Science and
Environmental Sciences
(B.Arts.Sc.; See Arts & Science Programme)

Honours Geography (B.A.),
B.A. in Geography and
Honours Geography and Environmental
Studies (B.A.)
(See B.A. programmes, Faculty of Social Sciences, School of Geography and Geology)
Honours Earth and Environmental Sciences (B.Sc.)

ADMISSION
Completion of the Science I requirements, including:
6 units MATH 1A03, STATS 1CC3
3 units BIOLOGY 1AA3
3 units CHEM 1A03, 1AA3
3 units ENVIR SC 1G03
3 units PHYSICS 1B03
3 units from ENVIR SC 1A03, 1B03
6 units Level I electives
1 course SCIENCE 1A00

Both ENVIR SC 1A03 and 1B03 must be completed by the end of Level II and are recommended in Level I.

MINIMUM AVERAGES/GRADES:
A Cumulative Average of 5.0 and a grade of C+ in ENVIR SC 1G03 and in one of ENVIR SC 1A03, 1B03.

NOTES
1. At the end of Level II, students in this programme will choose to follow one of three specializations:
   - Biogeosciences Specialization
   - Geosciences Specialization
   - Hydrosciences Specialization
   Alternatively, students may choose to register in the core programme.
2. The specializations of this programme 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 Geology during the March counselling period to ensure proper selection of courses for professional registration. The core programme 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 (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 Geology to discuss programme 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 Sciences or Environmental Science is not permitted in the Honours Earth and Environmental Sciences programme. However, a minor in Geographical Information Systems is permitted.
8. Registration in a specialization will be noted on the student's transcript.

COURSE LIST I
BIOLOGY 2D03, 2F03; CHEM 2A03, 2E03; GEO 2A03, 2C03, 2G03, 2K03, 2K3

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses

LEVEL I
30 units (See Admission above.)

LEVEL II: 30 UNITS
3 units CHEM 2R03 or GEO 2Q03
12 units GEO 2B03, 2E03, 2I03, 2W03
6 units from Course List 1
9 units Electives
If not completed: ENVIR SC 1A03, 1B03

Earth and Environmental Sciences (Core)

COURSE LIST 2
BIOLOGY 2F03, 3S33, 3TT3, 4A03, 4S03, 4Y03; CHEM 2A03, 2E03; GEO 2C03, 2G03, 2K03, 2K3, 3B03, 3C03, 3E03, 3G03, 3I03, 3J03, 3P03, 3Q03, 3V03, 3W03, 3Z03, 4B03, 4C03, 4E03, 4FE3, 4F03, 4H03, 4K03, 4L03, 4Q03

LEVEL III: 30 UNITS
3 units GEO 3F03
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

Biogeosciences Specialization

Biogeosciences Course List 1: BIOLOGY 2F03; GEO 2C03, 2G03, 3B03, 3C03, 3J03, 3Q03

Biogeosciences Course List 2: BIOLOGY 2F03, 3S33, 3TT3, 4A03, 4S03, 4Y03; CHEM 2A03 or 2E03; GEO 2C03, 2G03, 2K03, 3B03, 3C03, 3I03, 3J03, 3Q03, 3V03, 4B03, 4C03, 4E03, 4FE3, 4F03, 4H03, 4K03, 4L03, 4Q03

LEVEL III: 30 UNITS
3 units GEO 3F03
6 units GEO 3R03, 3Y03
6 units from Biogeosciences Course List 1
9 units from Biogeosciences Course List 2
6 units Electives

LEVEL IV: 30 UNITS
3 units GEO 4A03
3-6 units from GEO 4CC3, 4R06
9 units from Biogeosciences Course List 1
6-9 units from Biogeosciences Course List 2
6 units Electives

Geosciences Specialization

Geosciences Course List 1: GEO 2G03, 2K03, 2K3, 3E03, 3G03, 3Q03, 3V03, 3Z03

Geosciences Course List 2: GEO 2G03, 2K03, 2K3, 3E03, 3G03, 3I03, 3J03, 3P03, 3Q03, 3V03, 3Z03, 4B03, 4E03, 4FE3, 4F03, 4K03, 4Q03, 4T03, 4Z03, 4Z3

LEVEL III: 30 UNITS
3 units GEO 3F03
6 units GEO 3R03, 3Y03
6 units from Geosciences Course List 1
9 units from Geosciences Course List 2
6 units Electives

LEVEL IV
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

Hydrosciences Course List 1: GEO 2C03, 2G03, 3C03, 3G03, 3J03, 3W03, 3Z03

Hydrosciences Course List 2: GEO 2C03, 2G03, 2K03, 3B03, 3C03, 3G03, 3I03, 3J03, 3Q03, 3V03, 3W03, 3Z03, 4B03, 4C03, 4E03, 4FE3, 4F03, 4H03, 4K03, 4Q03, 4W03, 4WW3

LEVEL III: 30 UNITS
3 units GEO 3F03
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 4A03
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 programme 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 Earth and Environmental Sciences with a Cumulative Average of at least 6.0.

Information about the programme and the selection procedure may be obtained from Science Cooperative Education and the Coordinator of the Co-op programme in the School of Geography and Geology and will be explained during an Information Session in February.

NOTES
1. This is a five-year co-op programme 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 programme.
3. Students are required to complete a Work Orientation Course before the first work placement.
4. Students in this programme must choose to follow one of the three specializations:
   • Biogeosciences 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 Geology 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 programme. However, a minor in Geographical Information Systems is permitted.

REQUIREMENTS
120 units total (Levels I to IV) of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses

LEVEL I
30 units (See Admission above)

LEVEL II
30 units from Level II Honours Earth and Environmental Sciences (B.Sc.)

YEAR 3
15 units from Academic Level III, Term 1, plus Work Orientation course, and completion of first eight-month work term, Term 2 and Summer Term.

TERM 1
3 units GEO 3FE3
3 units GEO 3R03
6 units from Specialization Course Lists (see below)
6 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.

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

Biogeosciences Specialization {2212840}

Biogeosciences Course List 1: BIOLOGY 2F03; GEO 2C03, 2G03, 3B03, 3G03, 3J03, 3K03, 3Q03, 3Z03, 4A03, 4G03, 4H03, 4I03, 4J03, 4K03, 4L03, 4M03, 4N03, 4P03, 4Q03, 4R03, 4S03, 4T03, 4U03, 4V03, 4W03, 4X03, 4Y03, 4Z03

YEAR 3
6 units from Biogeosciences Course List 1

YEAR 4
6 units from Biogeosciences Course List 1
6-9 units from Biogeosciences Course List 2

YEAR 5
3 units from Biogeosciences Course List 1
9 units from Biogeosciences Course List 2

Geosciences Specialization {2212845}

Geosciences Course List 1: GEO 2G03, 2K03, 2KK3, 3E03, 3G03, 3J03, 3Q03, 3Z03

Geosciences Course List 2: GEO 2G03, 2K03, 2KK3, 3E03, 3G03, 3J03, 3Q03, 3Z03, 4A03, 4E03, 4F03, 4G03, 4H03, 4I03, 4J03, 4K03, 4L03, 4M03, 4N03, 4O03, 4P03, 4Q03, 4R03, 4S03, 4T03, 4U03, 4V03, 4W03, 4X03, 4Y03, 4Z03

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 2C03, 2G03, 3C03, 3G03, 3J03, 3Q03, 3Z03

Hydrosciences Course List 2: GEO 2C03, 2G03, 2KK3, 3E03, 3G03, 3J03, 3Q03, 3Z03, 4A03, 4E03, 4F03, 4G03, 4H03, 4I03, 4J03, 4K03, 4L03, 4M03, 4N03, 4O03, 4P03, 4Q03, 4R03, 4S03, 4T03, 4U03, 4V03, 4W03, 4X03, 4Y03, 4Z03

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 programme with a Geography/Geology orientation is available through the B.Sc. in Geoscience which is listed under the heading Three-Level B.Sc. Programmes in this section.

Minor in Geography

Please see Minor in Geography in the School of Geography and Geology in the Faculty of Social Sciences section of this Calendar.

Minor in Earth Science

(Formerly Minor in Geology)

REQUIREMENTS

24 units total
3 units from ENVIR SC 1G03
3 units from ENVIR SC 1A03, 1B03
18 units from GEO 2E03, 2K03, 2KK3, 2P03, 3DD3, 3E03, 3FG3, 3K03, 3P03, 3C03, 3V03, 3Z03, 3ZZ3, 4E03, 4FF3, 4K03, 4KK3, 4P03, 4Q03, 4T03, 4X03, 4Z03, 4ZZ3, including at least six units from Levels III, IV GEO courses.

Minor in Environmental Science

REQUIREMENTS

24 units total
6 units from ENVIR SC 1A03, 1B03, 1G03
18 units from BIOLOGY 2F03, 3R03, 3SS3, 3TT3, 4J03, 4Y03, CHEM 2A03, 2E03, 2R03, GEO 2A03, 2B03, 2C03, 2E03, 2G03, 2P03, 2W03, 3A03, 3B03, 3C03, 3G03, 3J03, 3Q03, 3V03, 3W03, 4A03, 4B03, 4C03, 4L03, 4Q03, 4W03, 4WW3, including at least six units from Level III, IV GEO courses and at least three units from Level II, III, or IV BIOLOGY or CHEM courses.

Minor in Geographical Information Systems (GIS)

REQUIREMENTS

24 units total
6 units from ENVIR SC 1A03, 1B03, 1G03, GEO 1HU3, 1HS3
18 units GEO 2I03, 3I03, 3S03, 3Y03, 4I03, 4S03

PROGRAMMES FOR STUDENTS WHO ENTERED PRIOR TO SEPTEMBER 2000

Honours Geography {2241}
Honours Geology {2251}
Honours Environmental Science {2211}
Honours Environmental Science Co-op (2212)

Students who entered these programmes prior to September 2000 must consult the Academic Advisor for the School of Geography and Geology to discuss ways of fulfilling their programme requirements.

DEPARTMENT OF KINESIOLOGY

WEB ADDRESS: http://kinlabserver.mcmaster.ca

The Department of Kinesiology offers two Honours programme options beyond Level I: an Honours Bachelor of Kinesiology and an Honours Bachelor of Science. The required Kinesiology courses are identical for both programmes and are differentiated only by the elective courses. Both programmes allow for the completion of prerequisites for various professional degree programmes. For further information and programme requirements for Honours Bachelor of Kinesiology, see the Faculty of Social Sciences, Department of Kinesiology section of this Calendar.

Honours Bachelor of Kinesiology (B.Kin.) and Bachelor of Kinesiology Major (B.Kin. Major)

(See Faculty of Social Sciences, Department of Kinesiology)

Honours Kinesiology {2671}

ADMISSION

Completion of the Kinesiology I requirements, including:

12 units KINESIOL 1A06, 1E03, 1H03
3 units MATH 1A03
3 units STATS 1CC3
6 units from BIOLOGY 1A03, 1A03, CHEM 1A03, 1A03, PHYSICS 1B03, 1B03, PSYCH 1A03
6 units Level I electives (See Note 3 below.)
2 courses KINESIOL 1K01 (See Note 1 below.) SCIENCE 1A00

MINIMUM AVERAGES/GRADES:

A Cumulative Average of 5.0 and an average of 6.0 in KINESIOL 1A06, 1E03, 1H03.

NOTES

1. KINESIOL 1K01 (Introduction to Kinesiology) is a non-credit requirement and must be completed in Level I.
2. Students who do not meet the admission criteria for the Honours Kinesiology programme, but whose Cumulative Average is between 3.0 and 3.9 may register in a three-level degree programme for which they qualify. Students with a Cumulative Average of at least 4.0 may transfer to the B.Kin (four level) programme.
3. BIOLOGY 1A03, 1AA3 and CHEM 1A03, 1AA3 are required for students wishing to take upper level Biology courses. PSYCH 1A03, 1AA3 are required for students wishing to take upper level Psychology courses.
4. Students wishing to complete a minor in Science must carefully choose their Level I and II electives keeping in mind the various prerequisite requirements for Level III and IV courses.

COURSE LIST

KINESIOL 3AA3, 3D03, 3E03, 3K03, 3Y03, 4A06, 4B03, 4C03, 4CC3, 4H03, 4I03, 4J03, 4K03, 4KK3, 4P03, 4Q03, 4R03, 4R6, 4S03, 4SS3, 4V03, 4W03, 4Y03

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses.

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

15 units KINESIOL 2A03, 2C03, 2G03, 2H03
9 units from the Faculty of Science
3 units HUMAN 2C03
3 units Electives

LEVELS III AND IV: 60 UNITS

30 units Level III or IV Kinesiology, including at least 18 units from Course List
6 units from Levels II, III, IV Faculty of Science courses
12 units from Levels II, III, IV courses from the Faculty of Science
6 units from the Faculties of Business, Humanities, Social Sciences
6 units Electives

ADDRESS:

http://kinlabserver.mcmaster.ca
MATERIALS SCIENCE AND ENGINEERING

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

Honours Materials Science (2360) (Specialist Option)

ADMISSION
Completion of the Science I requirements, including:
6 units MATH 1A03, 1AA3
6 units CHEM 1A03, 1AA3
3 units COMP SCI 1MC3
6 units PHYSICS 1B03, 1BAA3 (or 1BB3)
3 units MATH 1B03
6 units Level I electives
1 course SCIENCE 1A00
PHYSICS 1BAA3 is recommended.

MINIMUM AVERAGES/GRADES:
A Cumulative Average of 5.0 and a grade of at least C+ in each of CHEM 1A03, 1AA3, MATH 1AA3.

OR
Completion of the Engineering I requirements, including:
3 units CHEM 1E03
6 units ENGINEER 1A00, 1C04, 1D04
6 units MATH 1H03, 1HH
6 units MATH 1N03, 1NN3
6 units PHYSICS 1D03, 1E03
6 units Approved complementary studies electives

MINIMUM AVERAGES/GRADES:
A Cumulative Average of at least 4.0

COURSE LIST
All Level III and IV Materials courses; CHEM ENG 3Q03; ENGINEER 3R03, 4E03; ENG PHYS 3E03, 3F03, 4F03; MECH ENG 3Q04; PHYSICS 3M03, 3Q03, 4K03

REQUIREMENTS
124-125 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: 32-33 UNITS
2-3 units from CHEM 2E03, 2I03, 2WW2
6 units MATH 2A03, 2C03
7 units ENGINEER 2003 (unless MATL 1A03 already taken), 2P04
11 units MATL 2B03, 2D03, 2H03, 2X02
6 units PHYSICS 2B06

LEVEL III: 33 UNITS
4 units CHEM ENG 2A04
14 units MATL 3C03, 3D03, 3E04, 3T04
3 units MATH 3I03
3 units from STATS 3N03, 3Y03
3 units from 3M03, PHYSICS 3Q03
6 units Electives

LEVEL IV: 29-30 UNITS
8 units MATL 4A02, 4K04, 4L02
15-16 units from Course List (see above)
6 units Electives, excluding Astronomy, Chemistry, Computer Science, Engineering, Engineering Physics, Materials, Mathematics, Physics, Statistics

Minor in Materials Processing

NOTE
In order to meet prerequisite requirements, at least six units of appropriate Level II Mathematics must be taken.

REQUIREMENTS
23-25 units total
3 units from ENGINEER 2003, MATL 1A03
1 course from CHEM ENG 2A04, MATL 3A03
11-12 units from MATL 2X02, 3I05, 3C03, 3D03, 3T04
6 units MATL 2B03, 2D03

DEPARTMENT OF MATHEMATICS AND STATISTICS

WEB ADDRESS: http://www.science.mcmaster.ca/MathStat/Dept.html

Honours Arts & Science and Mathematics
(B.Arts.Sc.; See Arts & Science Programme)

Honours Biology and Mathematics
(See Department of Biology)

Honours Computer Science and Mathematics
(See Department of Computing and Software)

Honours Computer Science and Statistics
(See Department of Computing and Software)

Honours Economics and Mathematics
(B.A.: See Faculty of Social Sciences, Department of Economics)

Honours Philosophy and Mathematics
(B.A.: See Faculty of Humanities, Department of Philosophy)

Honours Mathematics and Statistics

NOTES
1. The Honours Mathematics and Statistics programmes have been restructured into a single programme consisting of four options: a core and three specializations. The core option of this programme consists of a specified set of basic requirements but otherwise allows a wide choice of other courses (including those from outside the Faculty of Science). The opportunity is therefore available for interdisciplinary studies possibly leading to a Minor in another subject. Alternatively, students may choose one of several specializations which are more appropriate for graduate studies in Mathematics or Statistics. The options currently available are:
   • Mathematics and Statistics (Core)
   • Mathematics Specialization
   • Statistics Specialization
   • Applied Mathematics Specialization
2. Students will be registered in Mathematics and Statistics (Core) unless they elect otherwise. It is possible to transfer to another option at any time subject to satisfying its requirements. Registration in a specialization will be noted on a student's transcript.
3. A Cooperative Education programme is available; see the requirements for Honours Mathematics and Statistics Co-op programmes in this section of the Calendar. Admission to the co-op programme is in Level III.

ADMISSION
Completion of a Level I programme in any Faculty, including:
9 units MATH 1A03, 1AA3, 1B03
21 units Level I courses to complete a Level I programme

MINIMUM AVERAGES/GRADES:
A Cumulative Average of 5.0 and a grade of C+ in each of MATH 1AA3, 1B03.
NOTES
1. The Mathematics and Statistics Department recommends the Mathematics Specialization or Applied Mathematics Specialization to students considering graduate studies in Mathematics and recommends the Statistics Specialization to students considering graduate studies in Statistics.
2. MATH 1J03, which is recommended for the Applied Mathematics Specialization, may be taken in Level I or Level II.

COURSE LIST
MATH 2E03, 2S03, 2T03, 3B03, 3E03, 3F03, 3FF3, 3S03, STATS 2M03, 3D03, 3D03, 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
30 units (See Admission above.)

LEVEL II: 30 UNITS
12 units MATH 2A03, 2AB3, 2C03, 2R03
3 units STATS 2D03
15 units from the option requirements (see below)

LEVEL III: 30 UNITS
6 units MATH 3A03, 3X03
6 units from Course List
3 units from Levels III, IV Mathematics and Statistics
15 units from the option requirements (see below)

LEVEL IV: 30 UNITS
15 units from Levels III, IV Mathematics and Statistics
15 units from the option requirements (see below)

OPTIONS

Core

LEVELS II, III, IV: 45 UNITS
16 units from Level III, IV courses
27 units Electives
If not completed: three units from the Science Inquiry Course List

Mathematics Specialization

LEVEL II: 15 UNITS
3 units MATH 2S03
12 units Electives

LEVEL III: 15 UNITS
9 units MATH 3A03, 3E03, 3EE3
6 units Electives

LEVEL IV: 15 UNITS
3 units from MATH 4B03, 4E03, 4G03, 4X03
12 units Electives.

Statistics Specialization

LEVEL II: 15 UNITS
3 units MATH 2S03
12 units Electives

LEVEL III: 15 UNITS
9 units MATH 3A03, 3E03, 3EE3
6 units Electives

LEVEL IV: 15 UNITS
6 units from MATH 4B03, 4G03 (See Note above.)
6-9 units Electives

Statistics Specialization

LEVEL II: 15 UNITS
3 units MATH 2S03
12 units Electives

LEVEL III: 15 UNITS
9 units MATH 3A03, 3E03, 3EE3
6 units Electives

LEVEL IV: 15 UNITS
6 units from MATH 4B03, 4G03
0-3 units STATS 4B03 (See Note above.)
6-9 units Electives

Applied Mathematics Specialization {2320838}

NOTE
Students registered in the Applied Mathematics Specialization may substitute certain courses offered by the Faculty of Engineering and the Department of Physics and Astronomy for up to 12 units of the Level III and IV Mathematics and Statistics course requirements, subject to approval by the Department of Mathematics and Statistics. Please consult with an advisor in the Department of Mathematics and Statistics for further information.

LEVEL II: 15 UNITS
3 units MATH 2T03
12 units Electives
Recommended: MATH 1J03 (may be taken in Level I or Level II) and MATH 2E03

LEVEL III: 15 UNITS
3 units MATH 3A03
6 units from MATH 3F03, 3FF3, 3Q03
6 units Electives

LEVEL IV: 15 UNITS
6 units from MATH 4G03, 4G3, 4V03, 4X03
9 units Electives

Honours Mathematics (Specialist Option) {2320}

The Honours Mathematics (Specialist Option) programme is being phased out. Registration in Level III will be last available in September 2002. Students who intended to register in Level II of this programme should refer to the Honours Mathematics and Statistics programme for an equivalent option. Students currently registered in this programme who wish to transfer to the new Honours Mathematics and Statistics programme should consult the department of Mathematics and Statistics.

NOTE
A minor in Statistics is not permitted in the Honours Mathematics (Specialist Option) programme.

COURSE LIST 1
MATH 2E03, STATS 2D03, 2MA3, 2MB3

COURSE LIST 2
All Level III and IV Mathematics and Statistics courses

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses.

LEVEL III: 30 UNITS
15 units MATH 3A03, 3A03, 3E03, 3EE3, 3X03
6 units from Course Lists 1 and 2
9 units Electives

LEVEL IV: 30 UNITS
3 units from MATH 4B03, 4E03, 4G03, 4X03
18 units from Course List 2
9 units Electives

Honours Applied Mathematics {2021}

The Honours Applied Mathematics programme has been discontinued. Students who intended to register in Level II of this programme should refer to the Honours Mathematics and Statistics programme for an equivalent option. Students currently registered in this programme who wish to transfer to the new Honours Mathematics and Statistics programme should consult the department of Mathematics and Statistics.

Honours Mathematics and Physics {2320440}

ADMISSION
Completion of the Science I requirements, including:
6 units MATH 1A03, 1A03
6 units CHEM 1A03, 1A03
6 units PHYSICS 1B03, 1B03 (or 1BB3)
3 units MATH 1B03
3 units from Science I Course List
6 units Level I electives
1 course SCIENCE 1A00
COMP SCI 1MC3 or 1SA3 is recommended in Level I.
FACULTY OF SCIENCE

MINIMUM AVERAGES/GRADERS:
A Cumulative Average of 6.0 and a grade of C+ in each of MATH 1A3, 1B3, 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 programme.

COURSE LIST
COMP SCI 2MD3, 2SC3; MATH 2E03; STATS 2D03, 2MB3; all Level III and IV Astronomy courses; 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 2A03, 2AB3, 2C03, 2R03
3 units from MATH 2S03, 2T03
13 units PHYSICS 2B06, 2H04, 2C03
3 units Electives

LEVEL III: 30 UNITS
9 units MATH 3A03, 3P03, 3X03
9 units PHYSICS 3C03, 3K03, 3MM3
3 units from Course List
9 units Electives

LEVEL IV: 30 UNITS
6 units MATH 3A03, 4X03
3 units PHYSICS 4G03
15 units from Course List
6 units Electives

Honours Mathematics and Statistics (2320542) (Complementary Studies Option)

The Honours Mathematics and Statistics (Complementary Studies Option) programme is being phased out. Registration in Level III will be last available in September 2002. Students who intended to register in Level II of this programme should refer to the Honours Mathematics and Statistics programme for an equivalent option. Students currently registered in this programme who wish to transfer to the new Honours Mathematics and Statistics programme should consult the department of Mathematics and Statistics.

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses.

LEVEL III: 30 UNITS
6 units from the Science Inquiry Course List
3 units from MATH 3A03, 3E03, 3X03
12 units from Levels III, IV Mathematics and Statistics courses, MATH 2K03
3 units from Level III, IV courses, excluding Mathematics, Statistics
6 units Electives

Honours Mathematics and Statistics (2320542) (Specialist Option)

The Honours Mathematics and Statistics (Specialist Option) programme is being phased out. Registration in Level III will be last available in September 2002. Students who intended to register in Level II of this programme should refer to the Honours Mathematics and Statistics programme for an equivalent option. Students currently registered in this programme who wish to transfer to the new Honours Mathematics and Statistics programme should consult the department of Mathematics and Statistics.

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses.

LEVEL III: 30 UNITS
18 units MATH 3A03, 3AA3, 3E03, 3X03; STATS 3D03, 3DD3
6 units from Level III, IV Mathematics
6 units Electives

LEVEL IV: 30 UNITS
6 units from MATH 3E03, 4B03, 4E03, 4G03, 4X03
6 units from Level III, IV Mathematics
6 units Electives

Honours Statistics (Specialist Option) (2542)

The Honours Statistics (Specialist Option) programme is being phased out. Registration in Level III will be last available in September 2002. Students who intended to register in Level II of this programme should refer to the Honours Mathematics and Statistics programme for an equivalent option. Students currently registered in this programme who wish to transfer to the new Honours Mathematics and Statistics programme should consult the department of Mathematics and Statistics.

NOTE:
A minor in Mathematics is not permitted in the Honours Statistics (Specialist Option) programme.

COURSE LIST 1
COMP SCI 2MD3, 2ME3, 2SC3; MATH 2E03

COURSE LIST 2
All Level III and IV Statistics courses

COURSE LIST 3
COMP SCI 3IA3; MATH 3E03, 3EE3, 3F03, 3FF3, 3Q03, 3R03, 4C03, 4J03, 4K03, 4Q03, 4W03, 4X03

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses.

LEVEL III: 30 UNITS
15 units MATH 3A03, 3AA3, 3X03; STATS 3D03, 3DD3
6 units from Course Lists 1, 2 and 3
9 units Electives

LEVEL IV: 30 UNITS
6 units from Course List 2
9 units from Course Lists 2 and 3
9 units Electives
Honours Mathematics and Statistics Co-op

ADMISSION
Enrolment in this programme 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 programme and the selection procedure may be obtained from Science Co-operative Education and will be explained in the month of March in an Information Session.

NOTES
1. This is a five-year co-op programme 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 programme.
3. Students are required to complete a Work Orientation Course before the first work placement.
4. Students must register in one of the following specializations:
   - Mathematics Specialization
   - Statistics Specialization
   - Applied Mathematics Specialization
5. Admission to Honours Mathematics and Statistics Co-op is in Level III.

COURSE LIST
MATH 2E03, 2S03, 2T03, 3B03, 3E03, 3F03, 3FF3, 3S03, STATS 2M83, 3D03, 3D33, 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 programme in any Faculty, including:
9 units MATH 1A03, 1AA3, 1B03
21 units Level I courses to complete a Level I programme

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 programme as of September 2002 and who wish to enter the Mathematics and Statistics Co-op programme, 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 from Levels III, IV Mathematics and Statistics
3 units Electives

TERM 2 AND SUMMER
Work Term

TERM 1 AND 2
9 units MATH 3AA3, 3EE3, 3X03
8 units from Course List
9 units from Levels III, IV Mathematics and Statistics
9 units Electives

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 3AA3, 3X03
6 units STATS 3DD3, 4B03
3 units from Course List
6 units from Levels III, IV Mathematics and Statistics
9 units Electives

SUMMER
Work Term

YEAR 5
15 units from Academic Level IV, Term 2, plus completion of second eight-month work term, Term 1.

TERM 1
Work term

TERM 2
6 units from Levels III, IV Mathematics and Statistics
6 units from 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 programme as of September 2002 and who wish to enter the Mathematics and Statistics Co-op programme, 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 from Levels III, IV Mathematics and Statistics
3 units Electives

TERM 2
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 3AA3, 3X03
6 units STATS 3DD3, 4B03
3 units from Course List
6 units from Levels III, IV Mathematics and Statistics
9 units Electives

SUMMER
Work Term

YEAR 5
15 units from Academic Level IV, Term 2, plus completion of second eight-month work term, Term 1.

TERM 1
Work term

TERM 2
3 units from Levels III, IV Mathematics and Statistics
6 units from Levels III, IV Statistics
6 units Electives

Applied Mathematics {2325846}

Co-op Specialization

NOTE
Students registered in the Applied Mathematics Co-op Specialization may substitute certain courses offered by the Faculty of Engineering and the Department of Physics and Astronomy for up to 12 units of the Level III and IV Mathematics and Statistics course requirements, subject to approval by the Department of Mathematics and Statistics. Please consult with an advisor in the Department of Mathematics and Statistics for further information.

LEVEL II
30 units from Level II Honours Mathematics and Statistics (Applied Mathematics Specialization). Students who have completed Level II of any Mathematics or Statistics programme as of September 2002 and who wish to enter the Mathematics and Statistics Co-op programme, should consult with the Undergraduate Advisor for the Department of Mathematics and Statistics.
**FACULTY OF SCIENCE**

**YEAR 3**
15 units from Academic Level III, Term 1, plus Work Orientation course, and completion of the first eight-month work term, Term 2 and Summer Term.

**TERM 1**
- 6 units MATH 3A03, 3F03
- 6 units from Levels III, IV Mathematics and Statistics
- 3 units Electives
  → Work Orientation Course

**TERM 2 AND SUMMER**
Work Term

**YEAR 4**
30 units from Academic Levels III, IV, Term 1, and Academic Levels III, IV, Term 2, plus beginning of second eight-month work term, Summer Term.

**TERMS 1 AND 2**
- 6 units MATH 3AA3, 3FF3, 3X03
- 12 units from Levels III, IV Mathematics and Statistics
- 9 units Electives

**SUMMER**
Work Term

**YEAR 5**
15 units from Academic Level IV, Term 2, plus completion of second eight-month work term, Term 1.

**TERM 1**
Work Term

**TERM 2**
- 3 units from MATH 3FF3, 4G03, 4GG3, 4V03
- 6 units from Levels III, IV Mathematics and Statistics
- 6 units Electives

**B.Sc. Three-Level Degree**
A three-level programme 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. Programmes in this section.

**Minor in Mathematics and Statistics**

**NOTES**
1. It is possible for a student to complete this Minor through evening and summer study.
2. MATH 2L03 should not be taken by students wishing to complete this minor.

**REQUIREMENTS**
- 27 units total
  - 9 units MATH 1A03, 1AA3, 1B03
  - 18 units from Level II, III, IV Mathematics and Statistics, including at least six units from Levels III, IV Mathematics and Statistics

**MEDICAL PHYSICS AND APPLIED RADIATION SCIENCES**

**WEB ADDRESS:** http://www.science.mcmaster.ca/medphys/index

**NOTE**
Students in Medical and Health Physics programmes are expected to have basic skills in the use of personal computers, word processing and spreadsheet software and some familiarity with a programming language. MATH 1J03 is strongly recommended.

**Honours Medical and Health Physics** *{2443}*

**ADMISSION**
Completion of the Science I requirements, including:
- 6 units MATH 1A03, 1AA3
- 6 units CHEM 1A03, 1AA3
- 3 units PHYSICS 1B03
- 3 units MATH 1B03
- 3 units from BIOLOGY 1AA3, PHYSICS 1BA3 (or 1BB3)
- 6 units Level I electives
- 1 course SCIENCE 1A00

BIOLOGY 1AA3 and PHYSICS 1BA3 (or 1BB3) must be completed by the end of Level II. PHYSICS 1BA3 (or 1BB3) is strongly recommended in Level I.

**MINIMUM AVERAGES/GRADES:**
- A Cumulative Average of 5.0, an average of 6.0 in MATH 1A03, 1AA3, 1B03 and a grade of C+ in PHYSICS 1B03.

**NOTE**
A minor in Astronomy or Mathematics or Mathematics and Statistics is not permitted in the Honours Medical and Health Physics programme.

**REQUIREMENTS**
- 120 units total (Levels I to IV), of which no more than 48 units may be from Level I courses and at least 86 units must be Level III, IV courses

**LEVEL I**
- 30 units (See Admission above.)

**LEVEL II**
- **30 UNITS**
  - 3 units BIOCHEM 2EE3
  - 3-6 units CHEM 2E03, or both CHEM 2OA3 and 2OB3
  - 9 units MATH 2A03, 2G03, 2E03
  - 12 units PHYSICS 2G06, 2D03, 2H03
  - 0-3 units Electives; BIOLOGY 2C03 is recommended.
  - If not completed: BIOLOGY 1AA3, PHYSICS 1BA3 (or 1BB3)

**LEVEL III**
- **30 UNITS**
  - 9 units BIOLOGY 2BO3; MATH 3C03, 3D03
  - 6 units MED PHYS 3R03, 3T03
  - 12 units PHYSICS 2C03, 3H03, 3MM3, 3N03
  - 3 units Electives; BIOCHEM 3G03 is recommended.

**LEVEL IV**
- **30 UNITS**
  - 3 units BIOLOGY 4U03
  - 15 units MED PHYS 4A03, 4R06, 4T03, 4XX3
  - 12 units PHYSICS 4D06, 4E03, 4K03

**Honours Medical and Health Physics Co-op** *{2330}*

**ADMISSION**
Enrolment in this programme 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 programme 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.
MOLECULAR BIOLOGY

Honours Biochemistry and Molecular Biology
(See Department of Biochemistry)

Honours Molecular Biology  {2365}

ADMISSION

Enrolment in this programme is limited. Selection is based on academic achievement but requires, as a minimum, completion of the Science I requirements, including:

- 6 units MATH 1A03, STATS 1C03
- 6 units BIOLOGY 1A03, 1A04
- 6 units CHEM 1A03, 1A04
- 3 units PHYSICS 1B03
- 3 units from Science I Course List
- 6 units Level I electives
- 1 course SCIENCE 1A00

PHYSICS 1B03 (or 1BB3) must be completed by the end of Level I and is very strongly recommended in Level I.

MINIMUM AVERAGES/GRADES:

A Cumulative Average of 5.0 and an average of 6.0 in BIOLOGY 1A03 and 1A04 and a grade of C+ in each of three of CHEM 1A03, 1A04, MATH 1A03, STATS 1C03, PHYSICS 1B03.

NOTES

1. This Honours degree programme is administered within the Faculty of Science through a Committee of Instruction and also draws on the Departments of Biology, Biochemistry and Pathology.

2. Information and counselling may be obtained through the Office of the Dean of Science (Studies).

3. A minor in Biochemistry, Biology, or Chemistry is not permitted in the Honours Molecular Biology programme.

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

21 units BIOCHEM 2B03, 2BB3; BIOLOGY 2B03, 2C03; CHEM 2A03, 2B03, 2R03
- 3 units from BIOLOGY 2A03, 2D03, CHEM 2N03
- 6 units Electives. BIOLOGY 2A03, 2D03, CHEM 2N03 are recommended

If not completed: PHYSICS 1B03 (or 1BB3)

LEVEL III: 30 UNITS

15 units from BIOCHEM 3L03; BIOLOGY 3E03, 3H03, 3Q03, 3V03
- 3 units from BIOCHEM 3T03, 3D03
- 9 units from BIOLOGY 3A03, 3B03, 3C03, 3H03, 3I03, 3N03, 3P03; HTH SCI 3I03
- 3 units Electives

LEVEL IV: 30 UNITS

6-9 units from BIOCHEM 4L03, 4P03; BIOLOGY 4F06; MOL BIOL 4R09
- 6 units BIOCHEM 4E03, 4K03
- 9-12 units from BIOCHEM 4G03, 4Q03; BIOLOGY 4B03, 4K03, 4P03, 4R03, 4T03, 4V03; HTH SCI 3I03; MOL BIOL 4F03, 4H03, 4J03; PHARMAC 4B03
- 6 units Electives

NEURAL COMPUTATION

WEB ADDRESS: http://www.psychology.mcmaster.ca/NeuraIComp

Honours Neural Computation

NOTES

1. The Honours Programme in Neural Computation has been restructured into a single programme consisting of four options: a core and three specializations. At the completion of Level I or Level II, students may choose to specialize in one of the following three options:

- Behavioural Neuroscience Specialization
- Mathematics and Statistics Specialization
- Computer Science Specialization
2. Students who choose not to specialize will remain in the Honours Neural Computation (Core) programme. Students entering Levels III or IV are advised to transfer to the new programme. Students who wish to remain in the former programme should consult the programme coordinator.

3. Registration in a specialization will be noted on the student's transcript.

**ADMISSION**

Completion of the Science I requirements, including:
- 6 units MATH 1A03, 1A43
- 3 units BIOLOGY 1A03
- 6 units COMP SCI 1MC3, 1MD3
- 3 units PSYCH 1A03
- 12 units Level I electives
- 1 course SCIENCE 1A00

**MINIMUM AVERAGES/GRADES:**

A Cumulative Average of 5.0, and a grade of C+ in each of MATH 1A03 and COMP SCI 1MD3.

**NOTES**

1. This Honours degree programme is administered within the Faculty of Science through a Committee of Instruction and also draws on the Departments Psychology, Mathematics and Statistics, and Computing and Software.

2. Information and counselling may be obtained through the Programme Coordinator in the Department of Psychology.

3. A Minor in Psychology, Computer Science or Mathematics is not permitted in Honours Neural Computation Programme, although electives may be drawn from any of these areas.

4. The Neural Computation thesis in Level IV may be taken from any participating department with permission of the Programme Coordinator. Student theses must conform with the requirements of the Department of Psychology Honours Thesis, and the final copy of the thesis must be submitted to the Department of Psychology.

5. Students in the Mathematics and Statistics Specialization must take STATS 2D03 and 2MB3 for the statistics requirements. Other students may choose to take STATS 1CC3 and PSYCH 2R3 instead of STATS 2D03 and 2MB3. Note that STATS 1CC3 is a prerequisite for PSYCH 2R3, and STATS 2D03 is a prerequisite for STATS 2MB3.

6. It is recommended that MATH 1B03 be completed in Level I and MATH 2A03, 2C03 and/or MATH 2R03 in Level II.

**COURSE LIST A**

- MATH 1J03, 2A03 or 2Q04, 2C03 or 2P04, 2E03, 2S03, 2T03, 3F03, 3N03, 4S03; STATS 3D03, 3DD3, 3U03

**COURSE LIST B**

- COMP SCI 2MJ3, 3G3, 3M3, 3T3, 4C3, 4G3, 4B3, 4I3, 4MN3, 4T3; MATH 4S03

**COURSE LIST C**

- PSYCH 2E03, 2H03, 2TT3, 3BB3, 3BL3, 3FA3, 3J03, 3WW3, 3Y03, 4BN3

**REQUIREMENTS**

120-122 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**

**Neural Computation (Core)**

**LEVEL I**

- 30 units (See Admission above.)

**LEVEL II: 30 UNITS**

- 3 units MATH 1B03
- 3 units COMP SCI 2MD3
- 3 units from STATS 1CC3, 2D03 (See Note 5 above.)
- 6 units NEURCOMP 3W03, PSYCH 2F03
- 6 units from Course Lists A, B, C
- 9 units Electives

**LEVEL III: 30-31 UNITS**

- 3-4 units from MATH 2A03 (or 2Q04), 2C03 (or 2P04), 2R03
- 3 units from PSYCH 2R3, STATS 2MB3 (See Note 5 above.)
- 3 units PSYCH 3BN3
- 9 units from Course Lists A, B, C
- 12 units Electives

**Mathematics and Statistics Specialization**

**LEVEL I**

- 30 units (See Admission above.)

**LEVEL II: 30-32 UNITS**

- 3 units MATH 1B03
- 9-11 units from MATH 2A03 (or 2Q04), 2C03 (or 2P04), 2E03
- 3 units COMP SCI 2MD3
- 3 units STATS 2D03
- 6 units NEURCOMP 3W03, PSYCH 2F03
- 6 units Electives

**LEVEL III: 30 UNITS**

- 9 units MATH 2R03, 3F03, 3N03
- 3 units STATS 2MB3
- 3 units PSYCH 3BN3
- 6 units from Course Lists A, B, C
- 9 units Electives

**LEVEL IV: 30 UNITS**

- 9 units NEURCOMP 4D09
- 3 units from Course List A
- 6 units from Course Lists A, B, C
- 12 units Electives

**Computer Science Specialization**

**LEVEL I**

- 30 units (See Admission above.)

**LEVEL II: 30 UNITS**

- 3 units MATH 1B03
- 9 units COMP SCI 2MD3, 2M3, 2MJ3
- 9 units from STATS 1CC3, 2D03 (See Note 5 above.)
- 6 units NEURCOMP 3W03, PSYCH 2F03
- 3 units from Course Lists A, B, C
- 6 units Electives

**LEVEL III: 30-31 UNITS**

- 3-4 units from MATH 2A03 (or 2Q04), 2C03 (or 2P04), 2R03
- 3 units from PSYCH 2R3, STATS 2MB3 (See Note 5 above.)
- 3 units PSYCH 3BN3
- 6 units from Course List B
- 3 units from Course Lists A, B, C
- 12 units Electives

**LEVEL IV: 30 UNITS**

- 3 units COMP SCI 4IB3
- 9 units NEURCOMP 4D09
- 6 units from Course List B
- 6 units from Course Lists A, B, C
- 9 units Electives

**Behavioural Neuroscience Specialization**

**LEVEL I**

- 30 units (See Admission above.)

**LEVEL II: 30 UNITS**

- 3 units MATH 1B03
- 3 units COMP SCI 2MD3
- 3 units from STATS 1CC3, 2D03 (See Note 5 above.)
- 3 units from PSYCH 2R3, STATS 2MB3 (See Note 5 above.)
- 6 units NEURCOMP 3W03, PSYCH 2F03
- 6 units from PSYCH 2E03, 2H03, 2TT3
- 6 units Electives

**LEVEL III: 30-31 UNITS**

- 3-4 units from MATH 2A03 (or 2Q04), 2C03 (or 2P04), 2R03
- 3 units PSYCH 3BN3
- 3 units from PSYCH 3FA3, 3J03
- 3 units from Course List C
- 6 units from Course Lists A, B, C
- 12 units Electives
LEVEL IV: 30 UNITS
3 units PSYCH 4B03
9 units NEURCOMP 4D09
3 units from Course List C
6 units from Course Lists A, B, C
9 units Electives

DEPARTMENT OF PHYSICS AND ASTRONOMY

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

Honours Arts & Science and Physics
(Formerly Interdisciplinary Stream)

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)

NOTE
• Students in all Physics programmes 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
• MATH 1J03 is recommended for students without those skills.

Honours Physics

ADMISSION
Completion of the Science I requirements, including:
6 units MATH 1A03, 1A3
6 units CHEM 1A03, 1A3
6 units PHYSICS 1B03, 1B3 (or 1BB3)
3 units from Science I Course List
9 units Level I electives
1 course SCIENCE 1A00
MATH 1B03 must be completed by the end of Level II and is
strongly recommended in Level I.

MINIMUM AVERAGES/GRADERS:
A Cumulative Average of 5.0, an average of 6.0 in MATH 1A03,
1A3 and an average of 6.0 in 6 units from PHYSICS 1B03, 1B3
(or 1BB3).

NOTES
1. This programme consists of four options: a core and three
   specializations. The core of this programme consists of a speci-
   fied set of basic requirements but otherwise allows a wide
   choice of other courses (including those from outside the Fac-
   ulty of Science). The opportunity is therefore available for inter-
   disciplinary studies possibly leading to a Minor in another sub-
   ject. Alternatively students may wish to follow one of several
   specializations which are more appropriate for graduate study-
   in Physics or Astronomy.
   The options currently available are:
   • Physics (Core) (formerly Interdisciplinary)
   • Astrophysics Specialization
   • Experimental Specialization
   • Theoretical Specialization
2. Students will be registered in the Physics (Core) (formerly Inter-
   disciplinary) until they elect otherwise. Transfer between op-
   tions is possible at any time, subject to satisfying the require-
   ments for that option. Registration in a specific specialization
   will be noted on the student’s transcript.
3. Admission to Honours Physics Co-op is in Level III and possi-
   ble from any of these options.
4. The Physics Department considers the Astrophysics, Experi-
   mental or Theoretical specializations to be more appropriate
   for graduate studies in Physics.
5. A minor in Astronomy or Mathematics or Mathematics and
   Statistics is not permitted in the Honours Physics programme.

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, 2D03, 2H04
6 units MATH 2A03, 2C03
9 units from the option requirements (see below)
If not completed: MATH 1B03

LEVEL III: 30 UNITS
6 units PHYSICS 3H03, 3MM0
6 units MATH 3C03, 3D03
18 units from the option requirements (see below)

LEVEL IV: 30 UNITS
3 units PHYSICS 4A03
9 units from Levels III, IV Astronomy, Mathematics, Physics,
6 units from the option requirements (see below)

OPTIONS

Astrophysics Specialization

LEVEL II: 9 UNITS
3 units ASTRON 1F03
6 units Electives

LEVEL III: 18 UNITS
3 units ASTRON 3X03
3 units PHYSICS 3N03
12 units Electives

LEVEL IV: 18 UNITS
3 units ASTRON 3Y03
9 units PHYSICS 4B03, 4F03, 4G03
6 units Electives

Experimental Specialization

LEVEL II: 9 UNITS
9 units Electives

LEVEL III: 18 UNITS
6 units PHYSICS 3B06
6 units PHYSICS 3K03, 3N03
6 units Electives

LEVEL IV: 18 UNITS
15 units PHYSICS 4B03, 4D06, 4F03, 4J03
3 units Electives

Theory Specialization

LEVEL II: 9 UNITS
6 units MATH 2R03, 2T03
3 units Electives

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
Honours Physics Co-op (2445)

ADMISSION
Enrolment in this programme is limited to a maximum of 10 students per year. Selection is based on academic achievement and an interview but requires, as a minimum, completion of Level II Honours Physics with a Cumulative Average of at least 6.0. Information about the programme 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 programme 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 programme.
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
18 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.

NOTE
PHYSICS 3H03 commences in Year 3, Term 1 and finishes in Year 5, Term 2.

TERM 1
3 units PHYSICS 3C03
9 units PHYSICS 3BA3, 3H03, 3N03
6 units Electives
→ Work Term

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.

NOTE
PHYSICS 4A03 commences in Year 4, Term 1 and finishes in Year 5, Term 2. It is listed in Year 5, Term 2.

TERMS 1 AND 2
3 units MATH 3D03
9 units PHYSICS 3BB3, 3K03, 3MM3
12 units PHYSICS 4B03, 4D04, 4J03
6 units Electives

SUMMER
Work Term

YEAR 5
12 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 PHYSICS 4A03
3 units from PHYSICS 4E03, 4K03
6 units Electives. PHYSICS 4F03 is strongly recommended (See Note 4 above.)

B.Sc. Three-Level Degree
A three-level programme with a Physics orientation is available through the B.Sc. in Physical Science which is listed under the heading Three-Level B.Sc. Programmes in this section.

Minor in Astronomy

REQUIREMENTS
27-30 units total
3 units from ASTRON 1F03, 2E03
6 units from MATH 2A03 and one of MATH 2C03, 2003
3-6 units from PHYSICS 2A03, 2B06
3-6 units from either one of PHYSICS 2H03, 2H04, CHEM 2P06, 2R03, or both CHEM 2P03 and 2PB3
3 units from PHYSICS 2D03, 2G03, 2K03
6 units ASTRON 3X03, 3Y03
3 units from PHYSICS 2C03, 3M03, 3O03, CHEM 3B03

Minor in Physics

NOTE
MATH 2A03 is the minimum mathematics required in order to complete a Minor in Physics. However, more flexibility is possible if one of MATH 2C03, 2003 is also completed.

REQUIREMENTS
24 units total
6 units from PHYSICS 1A06, 1B03 (or 1C03), 1B06, 1B33 (or 1BB3) 1C09
18 units from GEO 3V03, 3ZZ3, Levels II, III, IV Physics, including at least six units from Levels III, IV Physics

PROGRAMMES FOR STUDENTS WHO ENTERED PRIOR TO SEPTEMBER 2000

Honours Physics (Complementary Studies Option) (2442)

Honours Physics (Specialist Option) (2440)

Honours Astrophysics (2444)
Students who are currently registered in these programmes must consult the Academic Advisor for the Department of Physics and Astronomy to discuss ways of fulfilling their programme requirements.

DEPARTMENT OF PSYCHOLOGY

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

Honours Arts & Science and Psychology (B.Arts.Sc.; See Arts & Science Programme)

Honours Biology and Psychology (B.Sc.; See Department of Biology)

Honours Psychology (B.A.) and B.A. in Psychology
(See Faculty of Social Sciences, Department of Psychology)
Honours Psychology (B.Sc.)

NOTES
1. The Honours Psychology programme has been restructured to consist of six options: a core and five specializations. The Honours Psychology (B.Sc.) (Specialist Option) and the Honours Psychology (B.Sc.) (Complementary Studies Option) are being replaced with a single Honours Psychology B.Sc. programme. At the completion of Level I or Level II, students may choose one of the following five specializations:
   - Behavioural Neuroscience Specialization
   - Developmental Specialization
   - Evolution and Social Behaviour Specialization
   - Perception Specialization
   - Cognitive Specialization

Students who choose not to specialize will remain in the Honours Psychology (Core) programme. 2. Registration in a specialization will be noted on the student's transcript.

ADMISSION
Completion of the Science I requirements, including:
6 units MATH 1A03, STATS 1CC3 (See Note 5 below.)
3 units from BIOLOGY 1A03, 1AA3
3 units from CHEM 1A03, PHYSICS 1B03 (See Note 6 below.)
6 units PSYCH 1A03, 1AA3
6 units from Science I Course List
6 units Level I electives
1 course SCIENCE 1A00

Students will also be considered for admission if they have completed MATH 1AA3 instead of STATS 1CC3. However, STATS 1CC3 is strongly recommended and must be completed by the end of Term 1 in Level II.

MINIMUM AVERAGES/GRADRES:
A Cumulative Average of 5.0 and an average of 6.0 in PSYCH 1A03, 1AA3.

NOTES
1. Students considering applying for graduate school should complete a thesis (PSYCH 4D06).
2. 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.
3. BIOLOGY 4T03 (Neurobiology) may be taken as a substitute for three units of Level IV Psychology. KINESIOL 3E03 (Neural Control of Human Movement) may be taken as a substitute for three units of Level III Psychology. KINESIOL 4P03 (The Brain and Human Movement) may be taken as a substitute for three units of Level IV Psychology.
4. MATH 1B03 (Linear Algebra I) is strongly recommended for students intending to pursue graduate work in Psychology. MATH 1J03 (Mathematical Computing) or COMP SCI 1MC3 (Computer Science I) is highly recommended for students in the Behavioural Neuroscience and Perception Specializations, and for students intending to pursue graduate work in Psychology.
5. Students wishing to have more mathematical statistics may replace STATS 1CC3 and PSYCH 2RR3 with STATS 2D03 and 2M03. In this case, students are advised to take MATH 1B03 in Level I.
6. 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 modeling of psychological processes.

LAB COURSE LIST A
PSYCH 3BL3, 3EE3, 3L03, 3LL3, 3QQ3, 3SS3, 3V03, 4Q03

CAPSTONE COURSE LIST B
PSYCH 3J06, 4BN3, 4C03, 4D06, 4J03, 4Q03, 4QQ3, 4RR3 or courses from the Science Inquiry Course List

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)

LEVEL I
30 units (See Admission above.)

LEVEL II: 30 UNITS
3 units PSYCH 2RR3 (See Note 5 above.)
9 units from PSYCH 2E03, 2F03, 2H03, 2TT3
3 units from any courses in the Faculty of Science
15 units Electives

LEVEL III: 30 UNITS
12 units from PSYCH 2E03, 2F03, 2H03, 2TT3 (if not completed in Level II), Levels III, IV Psychology
3 units from Lab Course List A
15 units Electives

LEVEL IV: 30 UNITS
9 units from Levels III, IV Psychology
6 units from Capstone Course List B
15 units Electives

Behavioural Neuroscience

Specialization

LEVEL I
30 units (See Admission above.)

LEVEL II: 30 UNITS
3 units PSYCH 2RR3 (See Note 5 above.)
3 units PSYCH 2F03
6 units from PSYCH 2E03, 2H03, 2TT3
6 units from any courses in the Faculty of Science
12 units Electives

LEVEL III: 30 UNITS
9 units from NEURCOMP 3W03, PSYCH 3BN3, 3FA3, 3J03, 3Y03
6 units from PSYCH 2E03, 2F03, 2H03, 2TT3 (if not completed in Level II), Levels III, IV Psychology
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, NEURCOMP 3W03, PSYCH 3BN3, 3FA3, 3J03, 3Y03, 4BN3
6 units from Levels III, IV Psychology
6 units from Capstone Course List B
12 units Electives

Cognition Specialization

LEVEL I
30 units (See Admission above.)

LEVEL II: 30 UNITS
3 units PSYCH 2RR3 (See Note 5 above.)
3 units PSYCH 2F03
6 units from PSYCH 2E03, 2F03, 2H03, 2TT3
6 units from any courses in the Faculty of Science
12 units Electives

LEVEL III: 30 UNITS
9 units from PSYCH 3BB3, 3BN3, 3FA3, 3II3, 3P03, 3U03, 3V03
6 units from PSYCH 2E03, 2F03, 2H03, 2TT3 (if not completed in Level II), Levels III, IV Psychology
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 3BB3, 3BN3, 3FA3, 3II3, 3P03, 3U03, 3V03, 4BN3, 4C03, 4Z03
6 units from Levels III, IV Psychology
6 units from Capstone Course List B
12 units Electives
Developmental Specialization

LEVEL I
30 units (See Admission above.)

LEVEL II: 30 UNITS
3 units PSYCH 2RR3 (See Note 5 above.)
3 units PSYCH 2E03
6 units from PSYCH 2F03, 2H03, 2TT3
6 units from any courses in the Faculty of Science
12 units Electives

LEVEL III: 30 UNITS
3 units PSYCH 3GG3
6 units from PSYCH 3H03, 3I03, 3J03
6 units from PSYCH 2E03, 2F03, 2H03, 2TT3 (if not completed in Level II), Level III, IV Psychology
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 3H03, 3I03, 3J03, if not completed in Level III, 3B03, 3Z03, 3ZZ3, 4C03
6 units from Levels III, IV Psychology
6 units from Capstone Course List B
12 units Electives

Evolution and Social

BEHAVIOUR SPECIALIZATION

LEVEL I
30 units (See Admission above.)

LEVEL II: 30 UNITS
3 units PSYCH 2RR3 (See Note 5 above.)
3 units PSYCH 2E03
6 units from PSYCH 2F03, 2H03
6 units from any courses in the Faculty of Science
12 units Electives

LEVEL III: 30 UNITS
9 units PSYCH 2C03, 3F03, 3JJ3, 3M03, 3RR3, 3TO3, 3Y03
6 units from PSYCH 2E03, 2F03, 2H03, 2TT3 (if not completed in Level II), Level III, IV Psychology
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 from Levels III, IV Psychology
6 units from any courses in the Faculty of Science
12 units Electives

PERCEPTION SPECIALIZATION

LEVEL I
30 units (See Admission above.)

LEVEL II: 30 UNITS
3 units PSYCH 2RR3 (See Note 5 above.)
3 units PSYCH 2E03
6 units from PSYCH 2F03, 2H03, 2TT3
6 units from any courses in the Faculty of Science
12 units Electives

LEVEL III: 30 UNITS
9 units from PSYCH 3A03, 3AA3, 3BN3, 3HH3, 3J03, 3WW3
6 units from PSYCH 2E03, 2F03, 2H03, 2TT3 (if not completed in Level II), Levels III, IV Psychology
3 units from Lab Course List A, PSYCH 3EE3, 3LL3 or 3V03 is recommended.
6 units from any courses in the Faculty of Science
6 units Electives

LEVEL IV: 30 UNITS
6 units from PSYCH 3A03, 3AA3, 3BN3, 3HH3, 3J03, 3WW3, 4BN3
6 units from Levels III, IV Psychology
6 units from Capstone Course List B
12 units Electives

Honours Psychology (B.Sc.)

(Complementary Studies Option)

The Honours Psychology (B.Sc.) (Complementary Studies Option) programme is being phased out. Registration in Level III will be last available in September 2002. Students who intended to register in Level II of this programme should refer to the Honours Psychology (B.Sc.) programme for an equivalent option. Students who wish to transfer to the new Honours Psychology programme should consult the Department of Psychology.

NOTES
1. 1. In Level III or IV a student must complete at least one laboratory course in Psychology (see the Course List). Enrolment is limited in the laboratory courses.
2. In some 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.
3. KINESIOL 3E03 (Neural Control of Human Movement) may be taken as a substitute for three units of Level III Psychology. KINESIOL 4P03 (The Brain and Human Movement) may be taken as a substitute for three units of Level IV Psychology.
4. 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 modeling of psychological processes.

COURSE LIST

PSYCH 3BL3, 3EE3, 3L03, 3LL3, 3Q03, 3S03, 3V03, 4QQ3

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I courses.

LEVEL III: 30 UNITS
3 units from PSYCH 2E03, 2F03, 2H03, 2TT3, or Level III, IV Psychology
12 units from Levels III, IV Psychology, including one course from Course List (See Note 7 above.)
6 units from the Faculties of Business, Humanities, Social Sciences
6 units Electives, excluding Psychology
3 units Electives

LEVEL IV: 30 UNITS
6 units from the Science Inquiry Course List (PSYCH 4D06 may be substituted if space is available)
15 units from Levels III, IV Psychology
6 units from Level III, IV courses, excluding Psychology
3 units Electives
If not completed: one course from Course List (See Note 1 above.)

Honours Psychology (B.Sc.)

(Specialist Option)

The Honours Psychology (B.Sc.) (Specialist Option) programme is being phased out. Registration in Level III will be last available in September 2002. Students who intended to register in Level II of this programme should refer to the Honours Psychology (B.Sc.) programme for an equivalent option. Students who wish to transfer to the new Honours Psychology programme should consult the Department of Psychology.

NOTES
1. In Level III or IV a student must complete at least one laboratory course in Psychology (see the Course List). Enrolment is limited in the laboratory courses.
2. Completion of MATH 1AA3, CHEM 1A03 and PHYSICS 1B03 by the end of Level II is recommended.
3. KINESIOL 3E03 (Neural Control of Human Movement) may be taken as a substitute for three units of Level III Psychology. KINESIOL 4P03 (The Brain and Human Movement) may be taken as a substitute for three units of Level IV Psychology.
4. 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 modeling of psychological processes.
FACULTY OF SCIENCE

COURSE LIST
PSYCH 3BL3, 3EE3, 3L03, 3LL3, 3QQ3, 3S03, 3V03, 4QQ3

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses

LEVEL III: 30 UNITS
3 units from PSYCH 2E03, 2F03, 2H03, 2TT3, or Level III, IV Psychology
15 units from Levels III, IV Psychology, including one course from Course List (See Note 1 above.)
6 units from Level III, IV courses in the Faculty of Science, excluding Psychology
6 units Electives

LEVEL IV: 30 UNITS
18 units from Levels III, IV Psychology which must include PSYCH 4D06
6 units Electives, excluding Psychology
6 units Electives
If not completed: one course from Course List (See Note 1 above.)

B.Sc. Three-Level Degree

A three-level programme with a Psychology orientation is available through the B.Sc. in Life Science which is listed under the heading Three-Level B.Sc. Programmes in this section.

Minor in Psychology

NOTES
1. It is possible for a student to complete this Minor through evening and summer study.
2. When choosing Level II courses students should consider the prerequisite requirements for the various Level III courses.

REQUIREMENTS
24 units total
6 units from PSYCH 1A03, 1AA3
18 units from Level II, III Psychology courses, including at least six units from Level III Psychology courses

SCIENCE

Honours Science
(Formerly Complementary Studies Option)

NOTE
The Faculty is currently revising these Honours Programmes. Students planning to enter these programmes should consult the Academic Advisor for the specific programme.

STREAM A (GEOSCIENCE)  {2513}
STREAM B (LIFE SCIENCE)  {2514}
STREAM C (MATHEMATICAL SCIENCE)  {2515}
STREAM D (PHYSICAL SCIENCE)  {2516}

ADMISSION
Completion of Science I, including:
3 units MATH 1A03
3 units from MATH 1AA3, STATS 1CC3 (See Note 3 below.)
18 units from Science I Course List (See below for courses required for each stream.)
6 units Level I electives
1 course SCIENCE 1A00
One of ENVIR SC (or GEO) 1A03, 1B03, 1G03 must be completed by the end of Level II.

MINIMUM AVERAGES/GRADERS:
A Cumulative Average of 5.0 and one of:
for Stream A: a grade of C+ (in each of) two of ENVIR SC (or GEO) 1A03, 1B03, 1G03
for Stream B: a grade of C+ in one of BIOLOGY 1A03, 1AA3, PSYCH 1A03, 1AA3
for Stream C: a grade of C+ (in each of) two of COMP SCI 1MC3, 1MD3, MATH 1A03, 1B03
for Stream D: a grade of C+ in one of CHEM 1AA3, PHYSICS 1BA3 (or 1BB3)

NOTES
1. There are Level II (and III) prerequisites for many Level III (and IV) courses. These should be considered when choosing your Level II courses.
2. Minors within the Faculty of Science are not permitted in the Honours Science Programmes.
3. Students who choose Stream A or B must take STATS 1CC3. Students who choose Stream C or D must take MATH 1AA3.

COURSE LIST A
All Level II, III and IV Geo courses except non-science Geo courses. Non-science Geo courses contain the letter H in the course code.

COURSE LIST B
BIOCHEM 2EE3 2BB3, 2BB3, 3G03, 3H03, 3N03, 4C03, 4E03, 4K03, 4O03; MOL BIOL 4F03, 4H03; PHARMAC 4B03
All Level II, III and IV Biology courses
All Level II, III, and IV Psychology courses, except PSYCH 2AA3, 2B03, 2C03, 3Z03, 3Z33, 4D06

COURSE LIST C
All Level II, III and IV Computer Science, Mathematics and Statistics courses

COURSE LIST D
All Level II, III and IV Astronomy, Chemistry and 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

LEVEL I
30 units (See Admission above.)

LEVEL II: 30 UNITS
12 units from Level II courses in the selected stream Course List (courses may be chosen from one Course List only)
6 units from Level II courses in any Course List, excluding courses from the selected stream Course List
6 units from courses outside the Faculty of Science
6 units Electives, excluding courses from the selected stream Course List
If not completed for all streams: one of ENVIR SC (or GEO) 1A03, 1B03, 1G03
If not completed for:
Stream A: ENVIR SC (or GEO) 1A03, 1B03, 1G03
Stream B: BIOLOGY 1A03 and 1AA3, PSYCH 1A03 and 1AA3
Stream C: 9 units from COMP SCI 1MC3, 1MD3, MATH 1A03, 1B03
Stream D: CHEM 1A03 and 1AA3, MATH 1B03, PHYSICS 1B03 and 1BA3 or 1BB3

LEVEL III: 30 UNITS
12 units from Level III courses in the selected stream Course List
3 units from Level III courses in any Course List, excluding courses from the selected stream Course List
9 units from courses outside the Faculty of Science
6 units Electives, excluding courses from the selected stream Course List

LEVEL IV: 30 UNITS
6 units from the Science Inquiry Course List
12 units from Level III, IV courses in the selected stream Course List
6 units from Level III, IV courses in any Course List, excluding courses from the selected stream Course List
6 units Electives, excluding courses from the selected stream Course List

THREE-LEVEL B.SC. PROGRAMMES

B.Sc. in Geoscience

ADMISSION
Completion of the Science I requirements, including:
6 units MATH 1A03, STATS 1CC3
6 units from ENVIR SC (or GEO) 1A03, 1B03, 1G03
12 units from Science I Course List
6 units Level I electives
1 course SCIENCE 1A00
MINIMUM AVERAGES/GRADES:
A Cumulative Average of 3.5 and a grade C- in one of ENVIR SC or GEO 1A03, 1B03, 1G03.

NOTES
1. There are Level II prerequisites for many Level III courses; these should be considered when choosing your 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 programme.
2. In addition, students should seek academic counselling from the School of Geography and Geology to ensure that their choices are appropriate.

COURSE LIST 1
GEO 2A03, 2B03, 2C03, 2D03, 2E03, 2G03, 2GG3, 2I03, 2I30, 2K03, 2W03, 2WW3

COURSE LIST 2
GEO 3A03, 3CC3, 3DD3, 3E03, 3G03, 3I03, 3J03, 3K03, 3NN3, 3P03, 3Q03, 3S03, 3U03, 3V03, 3W03, 3Z03

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
15 units from Course List 1
9 units from courses outside the Faculty of Science
3 units Electives, excluding courses from Course List 1

LEVEL III: 30 UNITS
12 units from Course List 2
3-6 units from Course Lists 1 and 2
6 units from courses outside the Faculty of Science
6 units Electives, excluding courses in Course Lists 1 and 2
0-3 units Electives, excluding Biology

B.Sc. in Life Science

ADMISSION
Completion of the Science I requirements, including:
6 units: MATH 1A03, STATS 1CC3
3 units: BIOLOGY 1A03
3 units: CHEM 1A03
3 units: PSYCH 1A03
6 units: from BIOLOGY 1AA3, CHEM 1AA3, PSYCH 1AA3
3 units: from Science I Course List
6 units: Level I electives
1 course: SCIENCE 1A00

MINIMUM AVERAGES/GRADES:
A Cumulative Average of 3.5 and an average of 4.0 in six units from BIOLOGY 1A03, 1AA3, PSYCH 1A03, 1AA3.

NOTES
1. There are Level II prerequisites for many Level III courses; these should be considered when choosing your Level II courses. As an aid to choosing a coherent set of courses in a single discipline, students should consult the programme descriptions of the Honours programme in that discipline.
2. In addition, students should seek academic counselling to ensure that their choices are appropriate. For counselling, students should approach the department of Biology or Psychology.

COURSE LIST 1
BIOCHEM 2EE3, BIOLOGY 2A03, 2B03, 2C03, 2D03, 2F03; GEO 2A03, 2B03; PSYCH 2E03, 2H03, 2F03, 2TT3

COURSE LIST 2
CHEM 2E03 or 2OA3, 2OB3; STATS 2MA3, or PSYCH 2RR3

COURSE LIST 3
BIOCHEM 3G03, 3H03, 3N03, GEO 3AA3, 3J03; all Level III Biology and Level III Psychology courses

B.Sc. in Mathematical Science

ADMISSION
Completion of any Level I programme, including:
6 units: MATH 1A03, 1AA3
3 units: from COMP SCI 1MC3, MATH 1B03
21 units: Level I courses to complete a Level I programme
MATH 1B03 must be completed by the end of Level II.
Students wishing Level II Computer Science courses must take both COMP SCI 1MC3 and 1MD3.

MINIMUM AVERAGES/GRADES:
A Cumulative Average of 3.5 and an average of 4.0 in two of COMP SCI 1MC3, 1MD3, MATH 1A03, 1AA3, 1B03.

NOTES
1. There are Level II prerequisites for many Level III courses; these should be considered when choosing your Level II courses. As an aid to choosing a coherent set of courses in a single discipline, students should consult the programme descriptions of the Honours programme in that discipline.
2. In addition, students should seek academic counselling to ensure that their choices are appropriate. For counselling, students should approach the department of Mathematics and Statistics or Computing and Software.

COURSE LIST 1
COMP SCI 2MD3, 2ME3, 2MF3, 2MJ3, 2SC3; MATH 2A03, 2AB3, 2C03, 2E03, 2K03, 2R03, 2S03, 2T03; STATS 2D03, 2MB3

COURSE LIST 2
All Level III and IV Computer Science, 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
15 units from Course List 1
9 units from courses outside the Faculty of Science
3 units Electives, excluding Computer Science, Mathematics, Statistics
3 units Electives
if not completed: MATH 1B03, SCIENCE 1A00

LEVEL III: 30 UNITS
12 units from Course List 2
1 course from Course Lists 1 and 2
6 units from courses outside the Faculty of Science
6 units Electives, excluding Computer Science, Mathematics, Statistics
0-3 units Electives, excluding Biology
B.Sc. in Physical Science {1435}

ADMISSION
Completion of the Science I requirements, including:
6 units MATH 1A03, 1AA3
3 units CHEM 1A03
3 units PHYSICS 1B03
3 units from CHEM 1AA3, PHYSICS 1BA3 (or 1BB3)
9 units from Science I Course List
6 units Level I electives
1 course SCIENCE 1A00
MATH 1B03, CHEM 1AA3, PHYSICS 1BA3 (or 1BB3)
must be taken by the end of Level II and are strongly recommended in Level I.

MINIMUM AVERAGES/GRDES:
A Cumulative Average of 3.5 and an average of 4.0 in two of
CHEM 1A03, 1AA3, PHYSICS 1B03, 1BA3 (or 1BB3).

NOTES
1. There are Level II prerequisites for many Level III courses; these should be considered when choosing your Level II courses. As an aid to choosing a coherent set of courses in a single discipline, students should consult the programme descriptions of the Honours programme in that discipline.
2. In addition, students should seek academic counselling to ensure that their choices are appropriate. For counselling, students should approach the department of Chemistry or Physics.
3. Students proceeding in Physics must include PHYSICS 2B06 and MATH 2A03 and MATH 2C03 in Level II.

COURSE LIST 1
CHEM 2A03, 2B03, 2BB3, 2E03, 2I03, 2DA3, 2OB3, 2PA3, 2PB3, 2R03; MATH 2A03, 2C03; PHYSICS 2A03, 2B06, 2C03, 2D03, 2H04

COURSE LIST 2
All Level III Astronomy, Chemistry, and Physics 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
18 units from Course List 1
6 units from courses outside the Faculty of Science
6 units Electives, excluding Level II, III, IV Astronomy, Chemistry, and Physics
If not completed: MATH 1B03, CHEM 1AA3, PHYSICS 1BA3 (or 1BB3)

LEVEL III: 30 UNITS
12 units from Course List 2
9 units from courses outside the Faculty of Science
6 units Electives, excluding Astronomy, Chemistry and Physics
3 units Electives, excluding Biology
FACULTY OF SOCIAL SCIENCES

WEB ADDRESS: http://www.soscsl.mcmaster.ca/-deans
E-MAIL ADDRESS: socscfac@mcmaster.ca
Kenneth Taylor Hall, Room 120 Ext. 23772

Dean of Social Sciences
A. Harrison/B.A., M.A., Ph.D.
Associate Dean
R. Lenton/B.A., M.A., Ph.D.
Academic Assistant to the Dean
E. Frank/M.A.
Assistant to the Dean
J. Crossley/B.A.
Student Advisors
K. Cake/B.A.
E. Moore

The social sciences are concerned with the systematic study of activities and human relationships in societies which range from the pre-industrial to the post-industrial. Social scientists examine social, economic and political problems as well as the interaction between people and their natural and artificial environments. Developments in theory and refinements of method have, in recent years, given great impetus to social science studies and research.

The Faculty of Social Sciences offers degrees in the following: Anthropology, Communication Studies, Economics, Geography, Gerontology, Health Studies, Kinesiology, Labour Studies, Political Science, Psychology, Religious Studies, Social Work and Sociology.

The Faculty offers Honours Bachelor of Arts, Honours Bachelor of Kinesiology, Bachelor of Kinesiology Major, Bachelor of Social Work and Bachelor of Arts Degrees.

Students are strongly advised to take advantage of the extensive advisory services provided by the Faculty. New students in particular should plan a programme of study that will allow them a number of options for Level II.

PROGRAMMES AND DEGREES

A. Level I Programmes

SOCIAL SCIENCES I (0720)

Programme Note
Students registered in Honours B.A. or B.A. programmes in the Faculty of Social Sciences, with the exception of Honours Psychology, are required to complete six units of courses chosen from the Faculty of Humanities and/or the Department of Religious Studies. Students enrolled in Religious Studies programmes are required to complete six units from the Faculty of Humanities. It is recommended this requirement be completed in Level I.

Course List I

ANTHRO 1A03, 1B03, 1Z03
CMST 1A03, 1B03
ECOL 1A06
GEO 1H03, 1HU3
GERONT 1A06
HEALTHST 1E03, 1S03
INQUIRY 1SS3
LABR ST 1A03, 1Z03
POL SCI 1G05
PSYCH 1A03, 1AA3
RELIG ST 1B06, 1D06, 1E03, 1H03, 1I03
SOC WORK 1A06
SOCIOl 1A06

Requirements: 30 Units

12 units from Course List I
18 units Electives, which may include courses from Course List 1 (See Note 1 above.)

B. Degree Programmes

HONOURS PROGRAMMES (HONOURS BACHELOR OF ARTS AND HONOURS BACHELOR OF KINESIOLOGY)

Honours Bachelor of Arts programmes and the Honours Bachelor of Kinesiology degree programme consist of a total of 120 units of work normally completed over four years. Honours programmes 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 programme 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 Academic Regulations section in this Calendar) must also fulfill the following breadth and skills requirements prescribed by the Faculty.

Six units from the Faculty of Humanities and/or the Department of Religious Studies (Students enrolled in Religious Studies programmes are required to complete six units from the Faculty of Humanities):
- research methods/statistics as prescribed by the Department(s)
- a course in critical thinking (HUMAN 2C03).

Internship Options: The Faculty of Social Sciences offers two types of full-time, paid work opportunities for students registered in Honours programmes. Cooperative Internships that can last 8, 12 or 16 months provide intense employment opportunities for students. One-semester internships (four months), usually completed during the summer, provide valuable workplace experience, without extending the degree beyond four years. Both types of internships allow students to explore career goals, assist in the development of their employability skills and make important contacts for their employment after graduation.

Students who have successfully completed all of their respective Level II programme requirements and SOC SCI 2E05 (effective September 2002) may apply for non-credit internship options. Students who qualify compete for work opportunities with participating employers through an application process. The number of students accepted into the option is small and depends on available work opportunities. Internships must be undertaken before the student has completed all requirements for the degree. An administrative fee will be assessed following the start of the internship. At the conclusion of an internship, a job report from the student and a letter of evaluation from the employer must be submitted. If the criteria are satisfied, a brief notation describing the internship is placed on the student's transcript.

Enrolment in this Programme is limited.

Programme Notes

1. Application is made to the Kinesiology I Programme.
2. The Department of Kinesiology offers two Honours programme 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 programmes. Students who intend to register in the Honours Bachelor of Kinesiology programme may take any courses for which they have the prerequisite and who intend to register in the Honours B.Sc. programme must successfully complete MATH 1A03; STATS 1CC3; two of BIONOLOGY 1A03, 1AA3, CHEM 1A03, 1AA3, PHYSICS 1B03, 1B03 as part of their Level I electives. (See Faculty of Science, Programmes and Degrees, Level I Programme section of this Calendar.) Both programmes provide students the opportunity to complete courses required for various professional degree programmes. Students are strongly encouraged to seek advice in determining which programme option is best suited for them.
3. A Bachelor of Kinesiology Major (B.Kin.Major) Degree programme is available to students who do not qualify for an Honours Kinesiology programme.

Requirements: 30 Units

12 units KINESIOL 1A06, 1E03, 1H03
1 course KINESIOL 1KL0
18 units Electives (See Note 2 above.)

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Any interested students should consult the details of his/her programme to determine whether this option is available. Further details of cooperative internship options may be obtained from: Office of the Associate Dean, Faculty of Social Sciences, in addition to meeting the Admission to Level II Programmes requirements, a student may choose to enrol in a non-Kinesiology programme with a minimum average of 7.0 (B-) Application forms are available from the Office of the Associate Dean or the Department of Religious Studies. The application deadline is March 31 for September entry. Reinstatement is not automatic or guaranteed and 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. 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 programme 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 March 31 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, registration, or dropping and adding of courses after the deadlines stated in this Calendar under Sessional Dates and Application Procedures, unless written documentation is provided showing good cause, as determined by the Faculty Admissions, Study and Reviewing Committee.

HUMANITIES/RELIGIOUS STUDIES REQUIREMENT
Students registered in the Faculty of Social Sciences except for those in B.Kin. (Major), Honours Psychology and those completing a B.A. with a B.S.W., are required to complete six units of courses chosen from the Faculty of Humanities and/or the Department of Religious Studies. Students in the B.A. Psychology programmes should note the additional Business, Humanities or Science requirements.

TRANSFER TO THE FACULTY OF SOCIAL SCIENCES
Students from other Faculties are able to transfer to degree programmes 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
Any student seeking transfer/admission to Kinesiology I for the following Fall/Winter session must submit an Application for Admission to Level II through MUGISI by March 31. The application allows students to rank four programmes to determine whether this option is available. Further details of cooperative internship options may be obtained from: Office of the Associate Dean, Faculty of Social Sciences, in addition to meeting the Admission to Level II Programmes requirements, a student may choose to enrol in a non-Kinesiology programme with a minimum average of 7.0 (B-) Application forms are available from the Office of the Associate Dean or the Department of Religious Studies. Students transferring from another university should see the Admission Requirements and Application Procedures sections of this Calendar.

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 Register using the Returning Student Application form by the deadline for the session. See Sessional Dates section of this Calendar. Reinstatement applications will be carefully reviewed and the evidence considered will include the student's academic performance before and after admission to McMaster, letter of explanation supported by two Letters of Reference and other appropriate documentation.

Reinstatement is not automatic or guaranteed and 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. 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 programme 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 March 31 for September entry. Reinstatement is not guaranteed.
FACULTY OF SOCIAL SCIENCES

Qualified students are permitted to transfer between B.A. and Honours programmes with the approval of the Office of the Associate Dean. Transfers are subject to the deadline dates established by the University.

ACADEMIC ADVISING

The aim of academic advising is to help students tailor a programme of studies to fit their interests. Advising also involves reviewing these interests from time to time to accommodate changing plans and 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 highly recommended that students consult with a Departmental Undergraduate Advisor during March in conjunction with the distribution of the new Undergraduate Calendar.

AWARDS

Full-time students must maintain a full academic load as defined by their programme during the Fall/Winter session to be eligible for full-time, in-course 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

Students who wish to take more courses than recommended for a single level of their programme may do so if their Cumulative Average (CA) of the previous Fall/Winter session is at least 7.0. Students registered in the final level of their programme are permitted to overload by up to six additional units in order to become eligible to graduate.

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 for credit toward any degree 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 PROGRAMMES

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 programme 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 programmes 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 programmes go abroad for the third Level of their programme. Students interested in any exchange programme 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 programme. Such discussions should begin about one year before they plan to enrol elsewhere.

For further information please see International Study in the General Academic Regulations section in this Calendar. Information on the graduate McMaster Academic Scholarships Exchange Programme (CANEX), can be found in the Academic Facilities, Student Services and Organizations section of this Calendar under the heading Student Exchanges.

Acceptance to the Ontario and University-wide Exchange Programmes is by recommendation. Application forms can be obtained from:

STUDENT EXCHANGES
HAMILTON HALL, ROOM 405
TELEPHONE: (905) 525-9140, EXTENSION 24748

DEPARTMENT OF ANTHROPOLOGY

WEB ADDRESS: http://www.socsci.mcmaster.ca/~anthro

Honours Arts & Science and Anthropology

(B.Arts.Sc.; See Arts & Science Programme)

ANTHROPOLOGY SUBFIELDS

(Adaptable to all Anthropology programmes)

Anthropology includes the four major subfields of Social/Cultural Anthropology, Physical/Biological Anthropology, Archaeology, and Linguistics. Students may specialize in any one of these subfields although it is not necessary to do so. It should be noted, however, that each subfield has its own sequence of courses and prerequisites. (See the Course Listings section in this Calendar.)

CULTURAL/SOCIAL ANTHROPOLOGY

ANTHROP 2B03, 2F03, 2H03, 2P03, 2R03, 2X03, 2Z03, 3B03, 3C03, 3F03, 3G03, 3L03, 3P03, 3R03, 3Y03, 4T03, 4Y03

PHYSICAL/BIOLOGICAL ANTHROPOLOGY

ANTHROP 2A03, 2D03, 2E03, 2F03, 2A03, 2E03, 3A03, 3N03, 3P03, 3Z03, 4A03, 4D03, 4F03, 4G03, 4Y03

LINGUISTICS

ANTHROP 2LC3, 2L03, 2L03, 2L03, 2P03, 3I03, 3I03, 4LB3, 4LC3, 4XX3

OTHER COURSES

Courses not distinguished by subfield include the independent study course ANTHROP 3I03; topic courses ANTHROP 3W03, 3W03, 4G03, 4G03, as well as the seminar courses ANTHROP 4B03 and 4B03.

In planning a programme, it is important for students to take note of the prerequisites of certain upper-level courses.

COOPERATIVE INTERNSHIP OPTIONS

FOR HONOURS ANTHROPOLOGY STUDENTS

The Faculty of Social Sciences offers two types of full-time, paid work opportunities for students registered in Honours programmes. Effective September 2002, students must complete SOC SCI 2E0L before participating in an internship. For further information see Degree Programmes, Internship Options, in the Faculty of Social Sciences section of this Calendar.

Honours Anthropology

[2010]

ADMISSION

Completion of any Level I programme with a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units from ANTHROP 1A03, 1B03, 1Z03.

NOTE

Students who have completed ANTHROP 2013 are not required to take ANTHROP 3L03.

REQUIREMENTS

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

30 units from the Level I programme completed prior to admission to the programme. (See Admission above.)

12 units from ANTHROP 2E03, 2F03, 2P03, 3I03 (See Note above.)

3 units from ANTHROP 2D03, 2F03, 2Z03, 3H03, 3K03, 3P03

3 units from ANTHROP 2B03, 2P03, 2V03, 2VV3, 2W03, 3A03, 3B03, 3D03, 3F03

3 units ANTHROP 4I03

[3003]
Combined Honours in Anthropology and Another Subject

ADMISSION
Completion of any Level I programme with a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units from ANTHROP 1A03, 1B03, 1Z03. Satisfaction of admission requirements for the Honours programme 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 programmes in the Faculty of Humanities and with the Arts and Science programme.
2. Students who have completed ANTHROP 203 are not required to take ANTHROP 3L03.

REQUIREMENTS
120 units total (Levels I to IV), of which 48 units may be Level I
- 30 units from the Level I programme completed prior to admission to the programme. (See Admission above.)
- 12 units ANTHROP 2E03, 2F03, 2PA3, 3L03 (See Note 2 above.)
- 3 units from ANTHROP 2DD3, 2F03, 2PA3, 2W03, 3K03, 3P03
- 3 units from ANTHROP 2B03, 2P03, 2V03, 2V03, 2W03, 3A03, 3B03, 3C03, 3F03
- 3 units CMST 2103
- 3 units Level IV Anthropology
- 12 units Level II, III or IV Anthropology
- 36 courses specified for the other subject
- 3 units SOC SCI 2J03 or STATS 1CC3* or in combined programmes within the Faculty of Social Sciences, the Research Methods/Statistics requirement specified for the other subject.
- 3 units HUMAN 2C03. Students combining Honours Arts and Science with Anthropology are exempt from this requirement.
- 12 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies. Students combining Anthropology with Arts and Science, or with a Humanities subject, are exempt from this requirement.

*If requirement completed in Level I, these units will be taken as electives.

120 units total (Levels I to IV), of which 48 units may be Level I
- 30 units from the Level I programme completed prior to admission to the programme. (See Admission above.)
- 12 units ANTHROP 2E03, 2F03, 2PA3, 3L03 (See Note 2 above.)
- 3 units from ANTHROP 2DD3, 2F03, 2PA3, 2W03, 3K03, 3P03
- 3 units from ANTHROP 2B03, 2P03, 2V03, 2V03, 2W03, 3A03, 3B03, 3C03, 3F03
- 3 units CMST 2103
- 3 units Level IV Anthropology
- 12 units Level II, III or IV Anthropology
- 36 courses specified for the other subject
- 3 units SOC SCI 2J03 or STATS 1CC3* or in combined programmes within the Faculty of Social Sciences, the Research Methods/Statistics requirement specified for the other subject.
- 3 units HUMAN 2C03. Students combining Honours Arts and Science with Anthropology are exempt from this requirement.
- 12 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies. Students combining Anthropology with Arts and Science, or with a Humanities subject, are exempt from this requirement.

*If requirement completed in Level I, these units will be taken as electives.

B.A. in Anthropology {1010}

ADMISSION
Completion of any Level I programme 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
90 units total (Levels I to III), of which 42 may be Level I
- 30 units from the Level I programme completed prior to admission to the programme. (See Admission above.)
- 6 units from ANTHROP 2E03, 2F03, 2PA3
- 18 units Level II, III or IV Anthropology
- 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 Anthropology

REQUIREMENTS
24 units total
- 6 units from ANTHROP 1A03, 1B03, 1Z03
- 3 units from ANTHROP 2E03, 2F03, 2PA3
- 15 units Level II, III or IV Anthropology

INTERDISCIPLINARY MINOR IN ARCHAEOLOGY

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

COMMUNICATION STUDIES

WEB ADDRESS: http://www.humanities.mcmaster.ca/cmst

Honours Communication Studies
(See Faculty of Humanities, Communication Studies)

COOPERATIVE INTERNSHIP OPTIONS FOR HONOURS COMMUNICATION STUDIES AND ANOTHER SUBJECT STUDENTS

The Faculty of Social Sciences offers two types of full-time, paid work opportunities for students registered in Honours programmes. Effective September 2002, students must complete SOC SCI 2E03 before participating in an internship. For further information see Degree Programmes, Internship Options, in the Faculty of Social Sciences section of this Calendar.

Combined Honours in Communication Studies and Another Subject

ADMISSION
Completion of any Level I programme and a Cumulative Average of at least 6.0 including an average of at least 7.0 in CMST 1A03 and 1B03. Satisfaction of the admission requirements for the Honours programme in the other B.A. subject. In their Level I programme, 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 Social Sciences should follow the requirements as outlined below. Those students wishing to combine Communication Studies with a subject in the Faculty of Humanities should follow the requirements as outlined in Combined Honours in Communication Studies and Another Subject in the Faculty of Humanities section of this Calendar. (See Faculty of Humanities section of this Calendar.)
2. Students in this programme must complete one of the following Streams:

The Language and Discourse Stream involves the study and discovery of patterns in human language and society. Focus is placed on the art and science of persuasion, rhetoric and the importance of language in political and social life.

The Cultural Studies Stream analyses cultural texts (e.g. television shows or magazine advertisements) and cultural practices (e.g. shopping, eating or drinking) with the aim of understanding their significance as forms of communication in a broader social, economic and political context.

The Performance Studies Stream examines artistic and everyday performances (from theatre, concerts, and performance art to storytelling, ceremonies and public protests) and the relationships between them, with a particular emphasis on the role of the body in social communication.

The Mass Communication Stream focuses on the organization and functioning of information media such as television, radio and the press as major institutions and sources of knowledge and understanding about society.

3. Students must take at least three units of Level IV courses in their Stream.
4. It is recommended that students, especially those in the Language and Discourse Stream, take six units of a language other than English.

COURSE LIST 1 - LANGUAGE AND DISCOURSE STREAM

6 units CMST 2E03, 3G03
- 12 units from CMST 2F03, 2U03, 2V03, 2W03, 3C03, 3D03, 3E03, 3V03, 3W03, 3W03, 3Y03, 4G03, 4H03, 4I03, 4J03, PSYCH 2C03, 2H03, 3U03

COURSE LIST 2 - CULTURAL STUDIES STREAM

6 units CMST 2J03, 2X03
- 12 units from CMST 2I03, 2M03, 2MM3, 2N03, 2O03, 2P03, 2T03, 2Y03, 3B03, 3CC3, 3F03, 3P03, 3SS3, 3T03, 3U03, 3W03, 3W03, 3X03, 4F03, 4FF3
COURSE LIST 3 - PERFORMANCE STUDIES STREAM

6 units CMST 2G03, 4C03
6 units from CMST 2H03, 2P03, 2R03, 2G03, 2U03
6 units from CMST 2G03, 3H03, 3M03, INDG ST 3G03, KINESIO 4J03

COURSE LIST 4 - MASS COMMUNICATION STREAM

3 units from CMST 2K03, 2L03, 2G03
3 units from CMST 2C03, 2D03
12 units from CMST 2K03, 2L03, 2G03, 2C03, 3C03, 3D03 (if not already completed), 3I03, 3K03, 4D03, 4E03

REQUIREMENTS

120 units total (Level I to IV)
30 units from the Level I programme completed prior to admission to the programme. (See Admission above.)
9 units CMST 2B03, 2C03, 2D03
3 units CMST 2A03 or, with permission of the Department of Mass Communications Committee of instruction, an equivalent research methods/statistics course as prescribed by the Social Sciences programmes
3 units from CMST 3A03, 3B03
3 units from CMST 4A03, 4B03
18 units from one of the Course Lists (See Note 1 above.)
36 units Courses specified for the other subject
5-6 units from SOC SCI 2J03 or STATS 1CC3 or in combined programmes within the Faculty of Social Sciences, the Research Methods/Statistics requirement specified for the other subject.
3 units HUMAN 2C03
9-12 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/ or the Department of Religious Studies.

DEPARTMENT OF ECONOMICS

WEB ADDRESS: http://www.sosc.sci.mcmaster.ca/-econ

Honours Arts & Science and Economics (B.Arts.Sc.; See Arts & Science Programme)

COOPERATIVE INTERNSHIP OPTIONS FOR HONOURS ECONOMICS STUDENTS

The Faculty of Social Sciences offers two types of full-time, paid work opportunities for students registered in Honours programmes. Effective September 2002, students must complete SOC SCI 2E00 before participating in an internship. For further information see Degree Programmes, Internship Options, in the Faculty of Social Sciences section of this Calendar.

Honours Economics (Specialist Option) (2151)

ADMISSION

Completion of any Level I programme with a Cumulative Average of at least 6.0 including a grade of B- in ECON 1A06. Credit in OAC Calculus (or Advanced Functions and Introductory Calculus U) or MATH 1K03 or equivalent.

NOTES

1. In 2002-2003, ECON 3A03 will be offered and ECON 3AA3 will not be offered. In 2003-2004, ECON 3AA3 will not be offered and ECON 3A03 will be offered. In subsequent years each of these courses will be offered every other year.
2. ECON 2CC3 and ECON 2L03 may not be used to satisfy economics unit requirements, but may be used as electives.

REQUIREMENTS

120 units total (Level I to IV), of which 48 may be Level I
30 units from the Level I programme completed prior to admission to the programme. (See Admission above.)
30 units ECON 2G03, 2G03, 2H03, 2I03, 3A03, 3A03, 3F03, 3G03, 3L03, 4A03
21 units Level II, III, IV Economics with no more than six units from ECON 2A03, 2C03, 2D03, 2E03, 2F03, 2I03, 2J03, 2N03, 2P03, 2T03 (See Note 2 above.)
6 units ECON 2B03 and 3U03
3 units from MATH 1A03 or 1M03
3 units from STATS 1L03, 2D03 (or OAC Finite Math or Mathematics of Data Management U)
3 units HUMAN 2C03
4 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.

Honours Economics (2150)

ADMISSION

Completion of any Level I programme with a Cumulative Average of at least 6.0 including a grade of B- in ECON 1A06. Credit in OAC Calculus (or Advanced Functions and Introductory Calculus U) or MATH 1K03 or equivalent.

NOTE

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 may be Level I
30 units from the Level I programme completed prior to admission to the programme. (See Admission above.)
21 units ECON 2G03, 2G03, 2H03, 2I03, 3A03, 3F03, 3L03, 4A03
21 units Level II, III, IV Economics with no more than six units from ECON 2A03, 2C03, 2D03, 2E03, 2F03, 2I03, 2J03, 2N03, 2P03, 2T03 (See Note above.)
6 units ECON 2B03 and 3U03
3 units from MATH 1A03 or 1M03
3 units from STATS 1L03, 2D03 (or OAC Finite Math or Mathematics of Data Management U)
3 units HUMAN 2C03
33 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/ or the Department of Religious Studies. The number of units of Economics courses above Level I (excluding ECON 2B03 and 3U03) must not exceed 60.

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 approved only if both subjects are offered within the Faculty, with programmes in the Faculty of Humanities and with the Arts and Science programme.
2. One of OAC Finite Math (or Mathematics of Data Management U), STATS 1L03, or STATS 2D03 is a prerequisite for the research methods/statistics course as prescribed by the Department of Economics (ECON 2B03).
3. Students registered in Combined Honours programmes 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. 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 may be Level I
30 units from the Level I programme completed prior to admission to the programme. (See Admission above.)
21 units ECON 2G03, 2G03, 2H03, 2I03, 3A03, 3F03, 3L03, 4A03
(See Note above.)
Honours Economics (2150145) and Computer Science

ADMISSION
Completion of any Level I programme with a Cumulative Average of at least 6.0, including a grade of at least B- in ECON 1A06, and a weighted average of at least 7.0 in ECON 1A06, COMP SCI 1M03, 1MD3, MATH 1A03, 1A04 and 1B03. MATH 1B03 may be postponed until Level II.

NOTE
- 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
- 12 units Level II, III, IV Economics with no more than six units from ECON 2A03, 2B03, 2D03, 2F03, 2G03, 2H03, 2I03, 2J03, 2K03, 2L03, 2M03, 2N03, 2P03, 2Q03, 2R03, 2S03, 2T03 (See Note above.)
- 36 units courses specified for the other subject
- 6 units ECON 2B03 and 3U03 or, in combined programmes within the Faculty of Social Sciences, the Research Methods/Statistics requirement specified for the other subject. (See Note 4 above.)
- 3 units* from MATH 1A03 or 1M03
- 3 units** from STATS 1L03, 2D03 (or OAC Finite Math or Mathematics of Data Management U)
- 3 units HUMAN 2C03. Students combining Honours Arts & Science with Economics are exempt from this requirement.
- 6 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 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 OACs (or Grade 12 U or UC courses), these units will be taken as electives.

Honours Economics and Mathematics (2150320)

ADMISSION
Completion of any Level I programme with a Cumulative Average of at least 6.0 including a grade of at least B- in each of ECON 1A06, MATH 1A03, 1A04 and 1B03.

NOTE
- 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 programme completed prior to admission to the programme. (See Admission above.)
- 21 units ECON 2G03, 2G53, 2H03, 2H13, 3F03, 3L03, 4A03
- 15 units Level II, III, IV Economics with no more than six units from ECON 2A03, 2B03, 2D03, 2E03, 2F03, 2G03, 2J03, 2K03, 2M03, 2P03, 2R03 (See Note above.)
- 24 units COMP SCI 2MD3, 2ME3, 2MF3, 2MJ3, 3MG3, 3MH3, 4EP3, 42P3
- 6 units Level II, III or IV Computer Science. (COMP SCI 3EA3, 3M13 and 4EB3 are recommended as preparation for Business Data Processing.)
- 9 units from STATS 2D03 and either STATS 2M03, or 3D03 and 3DD3 (or 3D06); or ECON 2B03 and 3U03
- 3 units* HUMAN 2C03
- 12-15 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the department of Religious Studies.

Honours Geography (2240)

ADMISSION
Completion of any Level I programme with a Cumulative Average of at least 6.0 including an average of at least 6.0 in six units from GEO 1H01, 1H03, 3UD3.

NOTE
- Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

B.A. in Economics (1150)

ADMISSION
Completion of any Level I programme with a Cumulative Average of at least 3.5 and a grade of at least C- in ECON 1A06. Credit in OAC Calculus (or Advanced Functions and Introductory Calculus U) or MATH 1K03 or equivalent.

NOTE
- ECON 2CC3 and ECON 2L03 may not be used to satisfy economics unit requirements, but may be used as electives.

REQUIREMENTS
90 units total (Levels I to III), of which 42 units may be Level I
- 30 units from the Level I programme completed prior to admission to the programme. (See Admission above.)
- 15 units Level II, III, IV Economics with no more than six units from ECON 2A03, 2B03, 2D03, 2E03, 2F03, 2G03, 2J03, 2M03, 2P03, 2R03 (See Note above.)
- 3 units* from MATH 1A03 or 1M03
- 3 units** from STATS 1L03, 2D03 (or OAC Finite Math or 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 OACs (or Grade 12 U or UC 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. ECON 2CC3 and ECON 2L03 may not be used to satisfy economics unit requirements.

REQUIREMENTS
24 units total
- 6 units ECON 1A06
- 18 units Level II, III, IV Economics with no more than six units from ECON 2A03, 2B03, 2D03, 2E03, 2F03, 2G03, 2J03, 2M03, 2P03, 2R03. (See Notes above.)

SCHOOL OF GEOGRAPHY AND GEOLOGY

WEB ADDRESS: http://www.science.mcmaster.ca/geo/geomain.html

Honours Arts & Science and Geography (B.Arts.Sc.; See Arts & Science Programmes)

Honours Geography (B.Sc.), and

Honours Geology (B.Sc.)

(See Faculty of Science, School of Geography and Geology)

COORDINATE INTERNSHIP OPTIONS FOR HONOURS GEOGRAPHY STUDENTS

The Faculty of Social Sciences offers two types of full-time, paid work opportunities for students registered in Honours programmes. Effective September 2002, students must complete SOC SCI 2EL0 before participating in an internship. For further information see Degree Programmes, Internship Options, in the Faculty of Social Sciences section of this Calendar.

Honours Geography (2240)

ADMISSION
Completion of any Level I programme with a Cumulative Average of at least 6.0 including an average of at least 6.0 in six units from GEO 1H01, 1H03, 3UD3.
NOTES
1. One of SOC SCI 2J03 or STATS 1CC3 must be completed by the end of 60 units.
2. Students are encouraged to check prerequisites of upper-level GEO courses and to speak with an Undergraduate Advisor in the School of Geography and Geology regarding course selection.
3. Students who entered the programme 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. Programme 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 programme.
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 Programme.

REQUIREMENTS
120 units total (Level I to IV of which 48 units may be Level I)

LEVEL I: 30 UNITS
from the Level I programme completed prior to admission to the programme (See Admission above.)

LEVEL II: 30 UNITS
3 units GEO 2103
3 units from GEO 2E03, 2HR3
12 units Level II or III Geo, excluding GEO 2GG3, 2HC3, 2HJ3, 2WW3, 3CC3, 3DD3, 3HJ3, 3HR3 (See Note 5 above.)
3 units from SOC SCI 2J03 or STATS 1CC3* (See Note 1 above.)
3 units HUMAN 2C03
6 units Elective

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
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

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 GEO 3A03, 3HE3, 3HG3, 3HJ3
9 units GEO 4A03, 4HJ3, 4HY3
8 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.
Combined Honours B.A. in Geography and Another Subject

ADMISSION
Completion of any Level I programme with a Cumulative Average of at least 6.0 including an average of at least 6.0 in six units from GEO 1H3, 1H3, ENVIR SC 1A30, 1B03, 1G03 and satisfaction of admission requirements for the Honours programme 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 programmes in the Faculty of Humanities and with the Arts and Science programmes.
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 Geology regarding course selection.
3. Students who entered the programme prior to September 2001, may substitute 3 units of Level IV GEO with electives.
4. Students in a combined Honours programme 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 2N06, SOCIOLOGY 2Z03).

REQUIREMENTS
120 units total (Levels I to IV) of which 48 units may be Level I
30 units from the Level I programme completed prior to admission to the programme. (See Admission above.)
6 units GEO 2103, 3R03
3 units from GEO 2E03, 2HR3 (See Note 4 above.)
3 units from GEO 3FE3, 3RF3
5 units Level III GEO, excluding GEO 3CC3, 3DD3, 3HJ3, 3HR3
9 units Level II or III GEO, excluding GEO 2GG3, 2HC3, 2HU3, 2WW3, 3CC3, 3DD3, 3HJ3, 3HR3
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 honours seminar specified by the department for the other subject (See Note 3 above.)
36 units courses specified for the other subject
3 units from SOC SCI 2J03 or STATS 1C3
3 units HUMAN 2C03. Students combining Honours Arts & Science with Geography are exempt from this requirement.
6-9 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies. Students combining Geography and Arts & Science or with a Humanities subject, are exempt from this requirement.

*If requirement completed in Level I, these units will be taken as electives.

B.A. in Geography {1240}

ADMISSION
Completion of any Level I programme with a Cumulative Average of at least 3.5 including an average of at least 4.0 in six units from GEO 1H3, 1H3, 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 programme completed prior to admission to the programme. (See Admission above.)
12 units Level III GEO with no more than six units from GEO 3CC3, 3DD3, 3HJ3, 3HR3
12 units Level II GEO with no more than six units from GEO 2GG3, 2HC3, 2HU3, 2WW3
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, 1H6, 1HS3, 1HU3, ENVIR SC 1A03, 1B03, 1G03, 1H03
18 units Level II, III or IV GEO, including at least 6 units of Level III or IV. No more than six units may be from GEO 2GG3, 2HC3, 2HU3, 2WW3, 3CC3, 3DD3, 3HJ3, 3HR3.

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 Programme.
2. At least nine of the 12 Course List units must be selected from outside the student's own department or school.
3. At least six Course List units must be outside of GEO

COURSE LIST
ANTHROP 2A3, 2F03, 2H03, 2U03, 3CC3, 3H03, 3R03, 4A03, 4P03
BIOLOGY 2D03, 2E03, 2F03, 3SS3, 4TT3, 4Y03
ECON 2J03, 3W03
GEO 2A03, 2G03, 2WW3, 3A03, 3CC3, 3H03, 3HS3, 4A03, 4HH3, 4HY3
HEALTHST 4E03
PHILOS 2G03, 2N03
POL SCI 2E06, 3Z03, 3ZZ3, 4D06
RELIG ST 2W03

REQUIREMENTS
24 units total
3 units from GEO 1HS3, 1HU3
3 units from ENVIR SC 1A03, 1B03, 1G03, 1H03
6 units from GEO 2A03, 3A03, 4A03
12 units from Course List including at least 6 units from Level III or IV (See Notes 2 and 3 above.)

Minor in Geographic Information Systems (G.I.S.)
NOTES
1. The Minor in Geographic Information Systems (G.I.S.) is not permitted for students who are registered in the Honours Geography/G.I.S. and Spatial Analysis Specialization Programme.
2. Students registered in the Honours Geography (B.A.) or any Earth and Environmental Sciences (B.Sc.) programme may use 6 units from GEO 1H3, 1HU3, ENVIR SC 1A03, 1B03, 1G03, 1H03 and GEO 2I03 and 3Y03 toward both their programme requirements and the G.I.S. Minor.
3. Progression to Level III courses is conditional upon achieving a grade of at least C+ in GEO 2I03. Students who do not meet this requirement may not complete the Minor.

REQUIREMENTS
24 units total
6 units from ENVIR SC 1A03, 1B03, 1G03, 1H03, GEO 1HS3, 1HU3 (See Note 2 above.)
18 units GEO 2I03, 3I03, 3S03, 3Y03, 4I03, 4S03 (See Notes 2 and 3 above.)

GERONTOLOGICAL STUDIES

WEB ADDRESS: http://www.socsci.mcmaster.ca/~geros

COORDINATE INTERNSHIP OPTIONS FOR HONOURS GERONTOLOGY STUDENTS
The Faculty of Social Sciences offers two types of full-time, paid work opportunities for students registered in Honours programmes. Effective September 2002, students must complete SOC SCI 2E0L before participating in an internship. For further information see Degree Programmes, Internship Options, in the Faculty of Social Sciences section of this calendar.
Combined Honours B.A. in Gerontology and Another Subject

ADMISSION
Enrolment in this programme is limited. Admission is by selection but requires, as a minimum, completion of any Level I programme with a minimum Cumulative Average of 6.0 including a grade of at least B- in GERONT 1A06 (or its equivalent), and satisfaction of admission requirements for the Honours B.A. programme in the other subject.

NOTES
1. Students enrolled prior to September 2002 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 programme requirements.
2. Application for admission, including a statement explaining the applicant's interest in the programme, must be made to the Chair of the Committee of Instruction, by March 31. See Admission to Level II Programmes in Academic Regulations in this section of the Calendar. The Admissions Committee may wish to interview the applicant.
3. Students who have not taken GERONT 1A06 in Level I may be considered for admission to the programme if they have an equivalent introductory gerontology course. Such students must consult the Chair of the Committee of Instruction regarding GERONT 1A06 equivalency prior to applying.
4. Courses other than those listed in Course List 1 may be substituted with the prior permission of the Chair of the Committee of Instruction.
5. GERONT 2C03 and SOC SCI 2J03 (or GERONT 3G03 or another approved three or six unit statistics course) must be completed 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 GERONT 4A06 with six units of Level III or IV Gerontology or courses from Course List 1. This substitution must be approved by the Chair of the Gerontology Committee of Instruction.
7. Students are strongly recommended to complete GERONT 2E03 prior to registration in GERONT 3B03.

COURSE LIST 1

ANTHRO 3Z03
ECON 3D03, 3Q03, 3Z03
GEO 3H3
HEALTHST 2C03, 2D03
HTH SCI 3B03
KINESIO 3F03
PHILOS 3C03
RELIG ST 2M03, 2N03, 2WW3
SOC WORK 3C03, 4L03, 4R03
SOCIOl 3C03, 3G03, 3HH3 or other designated and approved courses. (See Note 4 above.)

REQUIREMENTS
120 units total (Levels I to IV), of which 48 units may be Level I
30 units from the Level I programme completed prior to admission to the programme. (See Admission above.)
6 units GERONT 2B03, 2D03
6 units GERONT 3B03, 3D03 (See Note 7 above.)
6 units GERONT 4A06 if available, a thesis in the other subject (See Note 6 above.)
3 units Level IV Gerontology
12 units Level II, III or IV Gerontology or courses from Course List 1 (See Note 7 above.)
36 units Courses as specified for the other subject
3 units GERONT 2C03
3-6 units from SOC SCI 2J03, STATS 1C03 (or GERONT 3G03)*, or in combined programmes within the Faculty of Social Sciences, the Research Methods/Statistics requirement specified for the other subject.
3 units HUMAN 2C03. Students combining Arts and Science with Gerontology are exempt from this requirement.
9-12 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

*If requirement completed in Level I, these units will be taken as electives.

B.A. in Gerontology and Another Subject

ADMISSION
Enrolment in this programme is limited. Admission is by selection but requires, as a minimum, completion of any Level I programme with a minimum Cumulative Average of 3.5 including a grade of at least C- in GERONT 1A06 (or its equivalent), and satisfaction of admission requirements for the B.A. in the other subject.

NOTES
1. Application for admission, including a statement explaining the applicant's interest in the programme, must be made to the Chair of the Committee of Instruction, by March 31. See Admission to Level II Programmes in Academic Regulations in this section of the Calendar. The Admissions Committee may wish to interview the applicant.
2. Students who have not taken GERONT 1A06 in Level I may be considered for admission to the programme if they have an equivalent introductory gerontology course. Such students must consult the Chair of the Committee of Instruction regarding GERONT 1A06 equivalency prior to applying.
3. Courses other than those listed in Course List 1 may be substituted, with the prior permission of the Chair of the Committee of Instruction.
4. No more than six units of work in the other subject of the combined programme which are also in Course List 1 may be used to fulfill the requirements of both programme components.
5. Students in the B.A. in Gerontology and Another Subject/Bachelor of Social Work programme should consult with the Chair of the Committee of Instruction regarding GERONT 3B03 (the Gerontology Field Observation Requirement) and SOC WORK 3D06.
6. Students are strongly recommended to complete GERONT 2E03 prior to registration in GERONT 3B03.

COURSE LIST 1

ANTHRO 3Z03
ECON 3D03, 3Q03, 3Z03
GEO 3H3
HEALTHST 2C03, 2D03
HTH SCI 3B03
KINESIO 3F03
PHILOS 3C03
RELIG ST 2M03, 2N03, 2WW3
SOC WORK 3C03, 4L03, 4R03
SOCIOl 3C03, 3G03, 3HH3 or other designated and approved courses. (See Note 3 above.)

REQUIREMENTS
(For the B.A. in Gerontology and Sociology programme requirements see below.)
90 units total (Levels I to III), of which 42 units may be Level I
30 units from the Level I programme completed prior to admission to the programme (See Admission above.)
6 units GERONT 2B03, 2D03
3 units GERONT 2C03
6 units GERONT 3B03, 3D03 (See Note 6 above.)
9 units Level II, III or IV Gerontology or courses from Course List 1 (See Note 6 above.)
24 units courses specified for the other subject (See Note 4 above.)
12 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

B.A. in Gerontology and Sociology \(1265520\)

(Programme requirements only)
For admission information and programme notes, see B.A. in Gerontology and Another Subject (above).

COURSE LIST 1

ANTHRO 3Z03
ECON 3D03, 3Q03, 3Z03
GEO 3H3
HEALTHST 2C03, 2D03
HTH SCI 3B03
KINESIO 3F03
PHILOS 3C03
RELIG ST 2M03, 2N03, 2WW3
SOC WORK 3C03, 4L03, 4R03
or other designated and approved courses. (See Note 3 above.)
REQUIREMENTS

90 units total (Levels I to III), of which 42 units may be Level I

30 units from the Level I programme completed prior to admission to the programme. (See Admission, B.A. in Gerontology and Another Subject above.)

6 units GERONTOL 2B03, 2D03
6 units GERONTOL 3B03, 3D03 (See Note 6 above.)
9 units Level II, III or IV Gerontology or courses from Course List 1 (See Note 6 above.)
3 units GERONTOL 2C03 or SOCIOL 2Z03
6 units SOCIOL 2506
15 units Level II or III Sociology
15 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

B.A. in Gerontology as a Second Degree (1265)

ADMISSION

Enrolment in this programme is limited. Admission is by selection but requires, as a minimum, completion of an undergraduate degree from a recognized university normally with a minimum Cumulative Average of 3.5 (or its equivalent), a grade of at least C- in GERONTOL 1A06 (or its equivalent), and evidence of a personal interest in Gerontological Studies, which may be evaluated by one, or a combination of a written statement and an interview.

An applicant is normally required to complete the prerequisite undergraduate degree work by April of the year in which application is made.

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 Gerontology as a Second Degree. This application step must be completed by March 1. A supplementary application for admission to the Gerontology programme will then be sent to the applicant from the Office of the Registrar (Admissions).

The supplementary application, including a statement explaining the applicant's interest in the programme, must be addressed to the Chair of the Committee of Instruction and sent to the Office of the Registrar (Admissions) prior to May 15.

Students who have not included GERONTOL 1A06 in their first degree programme may be considered for admission to the programme if they have an equivalent introductory gerontology course. Such students must consult the Chair of the Committee of Instruction regarding GERONTOL 1A06 equivalency prior to applying.

NOTES

1. Students who wish to enter a graduate or professional programme after completion of their second degree in Gerontology are advised to choose courses required for entry to these programmes. These may include research methods courses, advanced seminar in gerontology, a directed research course for second degree students and other courses at Level IV. Students should consult the requirements for their post-graduate or professional programme of choice.

2. Students are required to complete a total of 30 units for the second degree, all of which must be completed at McMaster. Students may apply for permission to the Chair of the Committee of Instruction for credit in equivalent Gerontology courses or courses from Course List 1 as part of their first degree. If the requirement is waived, additional courses must be taken at McMaster to total 30 units.

3. Courses other than those listed below in Course List 1 may be substituted with the prior permission of the Chair of the Committee of Instruction.

4. Students who have completed the methods requirement in their first degree should consult the Chair of the Gerontology Committee of Instruction.

5. Students are strongly recommended to complete GERONTOL 2E03 prior to registration in GERONTOL 3B03.

COURSE LIST 1

ANTHROP 3Z03
ECON 3D03, 3Q03, 3Z03
GEO 3HH3
HEALTHST 2C03, 2D03
HTH SCI 3B03

REQUIREMENTS (MINIMUM)

30 units total

6 units GERONTOL 2B03, 2D03
6 units GERONTOL 3B03, 3D03 (See Note 6 above.)
3 units GERONTOL 2C03 (See Note 4 above.)
9 units Level II, III or IV Gerontology or courses from Course List 1
6 units Electives

Combined Honours in Gerontology and Another Subject as a Second Degree

ADMISSION

Enrolment in this programme is limited. Admission is by selection and only former McMaster students who have completed a three-level B.A. degree in Combined Gerontology and Another Subject may apply to the Combined Honours in Gerontology and Another Subject as a Second Degree if they have a minimum Cumulative Average of 6.0. The other subject must be the same as in the first degree and students must be accepted for Honours both by Gerontology and by the other department.

Applicants must first apply for admission to the University through the Office of the Registrar (Admissions) indicating they wish to apply for Honours Gerontology and Another Subject as a Second Degree. This application step must be completed by March 31. A supplementary application for admission to the Gerontology programme will then be sent to the applicant from the Office of the Registrar (Admissions).

The supplementary application, including a statement explaining the applicant's interest in the programme, must be addressed to the Chair of the Committee of Instruction and sent to the Office of the Registrar (Admissions) prior to May 15.

NOTES

1. Students are required to take courses to total at least 30 units, including all outstanding Honours requirements for both subjects. All units for the second degree must be completed at McMaster.

2. Courses other than those listed below in Course List 1 may be substituted with the prior permission of the Chair of the Committee of Instruction.

3. Students who have completed the methods requirement in their first degree should consult the Chair of the Gerontology Committee of Instruction.

COURSE LIST 1

ANTHROP 3Z03
ECON 3D03, 3Q03, 3Z03
GEO 3HH3
HEALTHST 2C03, 2D03
HTH SCI 3B03

REQUIREMENTS (MINIMUM)

30 units total

Gerontology courses or courses from Course List 1 to complete the Honours requirements including six units of research methods/statistics, if not already completed. Courses specified for the other subject.
COOPERATIVE INTERNSHIP OPTIONS FOR HONOURS HEALTH STUDIES AND ANOTHER SUBJECT STUDENTS

The Faculty of Social Sciences offers two types of full-time, paid work opportunities for students registered in Honours programmes. Effective September 2002, students must complete SOC SCI 2E00 before participating in an internship. For further information see Degree Programmes, Internship Options, in the Faculty of Social Sciences section of this Calendar.

Combined Honours in Health Studies and Another Subject

ADMISSION

Enrolment in this programme is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I programme with a minimum Cumulative Average of 6.0 including a grade of at least B- in 3 units from HEALTHST 1E03 or HEALTHST 1A03 or SOC SCI 1H13, and satisfaction of admission requirements for the Honours B.A. programme in the other subject.

NOTES

1. Application for admission must be made by March 31. See Admission to Level II Programmes in Academic Regulations in this section of the Calendar.
2. Students are strongly encouraged to complete HEALTHST 2B03 to satisfy the Research Methods requirement of the degree.

COURSE LIST 1

HEALTHST 2C03, 2D03, 2H03, 3C03, 3D03, 3E03, 3F03, 3Y03, 4C03, 4D03, 4E03, 4F03, 4G03, 4H03

COURSE LIST 2

(Students are responsible for ensuring that course prerequisites are fulfilled.)

ANTHROP 2AN3, 2U03, 3C03, 3Q03, 3Y03, 3Z03, 3ZZ3

ECON 2CC3, 3Z03

GEO 3HH3, 4HH3

GERONTOL 2B03, 3Q03

HTH SCI 2G03, 2I03, 3Y03

HISTORY 3Y03

INDIG ST 3H03, 3H-H3

KINESIOL 3S33

LABR ST 3D03

PHILOS 2D03, 3C03

PSYCH 3B03, 3N03, 3NN3

RELIG ST 2C03, 2M03, 2N03, 2WW3

SCIENCE 2G03

SOC WORK 3C03

SOCII 3G03, 3H-H3

WOMEN ST 2H-H3

REQUIREMENTS

- 120 units total (Levels I to IV), of which 48 units may be Level I
- 30 units from the Level I programme completed prior to admission to the programme. (See Admission above.)
- 15 units HEALTHST 2A03, 3A03, 3B03, 4A03, 4B03
- 9 units from Course List 1
- 9 units from Course List 2
- 36 units courses specified for the other subject
- 3 units HEALTHST 2B03 or an equivalent research methods course if required by the other subject. (See Note 2 above.)
- 3-6 units from SOC SCI 2J03 or STATS 1CC3 or an equivalent statistics course as prescribed by other Social Sciences Programmes
- 3 units HUMAN 2C03
- 9-12 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/ or the Department of Religious Studies.

*If requirement completed in Level I, these units will be taken as electives.

Combined Honours in Gerontology, Health Studies and Another Subject

It is no longer necessary for students to include a third subject when combining two interdisciplinary programmes. Therefore, the Combined Honours programme in Gerontology, Health Studies and Another Subject is being phased out and replaced with the Combined Honours programme in Health Studies and Another Subject (see above). Level I students who had intended to register in this programme or students who registered prior to September 2002 should see an Academic Advisor in the Office of the Associate Dean, Social Sciences for programme requirements and individual counselling.

Combined B.A. in Health Studies and Another Subject

ADMISSION

Enrolment in this programme is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I programme with a minimum Cumulative Average of 3.5 including a grade of at least C- in HEALTHST 1E03 or 1A03 (or their equivalent), and satisfaction of admission requirements for the B.A. in the other subject.

NOTES

1. Application for admission must be made by March 31. See Admission to Level II Programmes in Academic Regulations in this section of the Calendar.
2. Courses other than those listed below in Course List 2 may be substituted with the prior permission of the Director of Health Studies Programme. Students wishing to apply for substitutions must contact the Administrative Co-ordinator of the Health Studies Programme.
3. No more than six units of work in the other subject of the combined programme which are also in Course List 2 may be used to fulfill the requirements of both programme components.
4. Students are strongly encouraged to complete HEALTHST 2B03 to satisfy the Research Methods requirement of the degree.

COURSE LIST 1

HEALTHST 2C03, 2D03, 2H03, 3C03, 3D03, 3E03, 3F03, 3Y03, 4C03, 4D03, 4E03, 4F03, 4G03, 4H03

COURSE LIST 2

(Students are responsible for ensuring that course prerequisites are fulfilled.)

ANTHROP 2AN3, 2U03, 3C03, 3Q03, 3Y03, 3Z03, 3ZZ3

ECON 2CC3, 3Z03

GEO 3HH3, 4HH3

GERONTOL 2B03, 3Q03

HTH SCI 2G03, 2I03, 3Y03

HISTORY 3Y03

INDIG ST 3H03, 3H-H3

KINESIOL 3S33

LABR ST 3D03

PHILOS 2D03, 3C03

PSYCH 3B03, 3N03, 3NN3

RELIG ST 2C03, 2M03, 2N03, 2WW3

SCIENCE 2G03

SOC WORK 3C03

SOCII 3G03, 3H-H3

WOMEN ST 2H-H3

REQUIREMENTS

- 90 units total
- 30 units from the level I programme completed prior to admission to the programme. (See Admission above.)
- 9 units HEALTHST 2A03, 3A03, 3B03
- 3 units HEALTHST 2B03, or an equivalent research methods course
- 6 units from Course List 1
- 6 units from Course List 2
- 24 units courses specified for the other subject
- 12 units Electives
B.A. in Health Studies as a Second Degree {1273}

ADMISSION
Enrolment in this programme is limited. Selection is based on academic achievement but requires, as a minimum, completion of an undergraduate degree from a recognized university normally with a minimum Cumulative Average of 3.5 (or its equivalent), a grade of at least C- in 3 units from HEALTHST 1A03, 1E03, 1S03 (or their equivalents). 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 Health Studies as a Second Degree. This application step must be completed by March 1.

Students who have not included a Level I Health Studies course in their first degree programme may be considered for admission to the programme if they have an equivalent introductory Health Studies programme. Such students must consult the Administrative Co-ordinator of the Health Studies Programme regarding level equivalency prior to applying.

NOTES
1. Students who wish to enter a graduate or professional programme after completion of their second degree in Health Studies are advised to choose courses required for entry to these programmes. Students should consult the requirements for their post-graduate or professional programme of choice.

2. Students are required to complete a total of 30 units for the second degree, all of which must be completed at McMaster. Students may apply for permission to the Health Studies Programme for credit in equivalent Health Studies courses or courses from Course List 1 or Course List 2 completed as part of their first degree. If the requirement is waived, additional courses must be taken at McMaster to total 30 units.

3. Courses other than those listed below in Course List 2 may be substituted with the prior permission of the Director of the Health Studies Programme. Students wishing to apply for substitutions should consult the requirements for their post-graduate or professional programme of choice. Such students should contact the Administrative Co-ordinator of the Health Studies Programme.

4. Students who have completed the methods requirement in their first degree should consult the Director of the Health Studies Programme. Such students must contact the Administrative Co-ordinator of the Health Studies Programme.

COURSE LIST 1

| HEALTHST 2C03, 2D03, 2H03, 3C03, 3D03, 3E03, 3F03, 3Y03, 4C03, 4D03, 4E03, 4F03, 4G03, 4H03 |

COURSE LIST 2

(Students are responsible for ensuring that course prerequisites are fulfilled.)

| ANTHROP 2AN3, 2U03, 3C03, 3Q03, 3Y03, 3Z03, 3Z33 |
| ECON 2CC3, 3Z03 |
| GEO 3HH3, 4HH3 |
| GERONTOL 2B03, 3Q03 |
| HTH SCI 2G03, 2J03, 3Y03 |
| HISTORY 3Y03 |
| INDIG ST 3H03, 3HH3 |
| KINESIOL 3SS3 |
| LABR ST 3D03 |
| PHIL0S 2D03, 3C03 |
| PSYCH 3B03, 3N03, 3NN3 |
| RELIG ST 2C03, 2M03, 2N03, 2WW3 |
| SCIENCE 2G03 |
| SOC WORK 3C03 |
| SOCIOL 3G03, 3HH3 |
| WOMEN ST 2HH3 |

REQUIREMENTS

30 units total
9 units HEALTHST 2A03, 3A03, 3B03
3 units HEALTHST 2B03, or an equivalent research methods course
6 units from Course List 1
6 units from Course List 2
6 units Electives

Minor in Health Studies

NOTES
1. Students are responsible for ensuring that course prerequisites are fulfilled.

2. Students who completed HISTORY 3S03, HEALTHST 1A03, HTH SCI 3B03 or SOC SCI 1H03 before September 2001, may use these as units toward the minor requirements.

COURSE LIST

| ANTHROP 2AN3, 2U03, 3C03, 3Q03, 3Y03, 3Z03, 3Z33 |
| ECON 2CC3, 3Z03 |
| GEO 3HH3, 4HH3 |
| GERONTOL 2B03, 3Q03 |
| HEALTHST 1E03, 1S03, 2C03, 2D03, 2H03, 3C03, 3D03, 3E03, 3F03, 3Y03, 4C03, 4D03, 4F03, 4H03 |
| HTH SCI 2G03, 2J03, 3Y03 |
| HISTORY 3Y03 |
| INDIG ST 3H03, 3HH3 |
| KINESIOL 3SS3 |
| LABR ST 3D03 |
| PHIL0S 2D03, 3C03 |
| PSYCH 3B03, 3N03, 3NN3 |
| RELIG ST 2C03, 2M03, 2N03, 2WW3 |
| SCIENCE 2G03 |
| SOC WORK 3C03 |
| SOCIOL 3G03, 3HH3 |
| WOMEN ST 2HH3 |

REQUIREMENTS

24 units total
24 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://klinlabserver.mcmaster.ca

Honours Kinesiology (B.Sc.)
(See B.Sc. Programmes in Kinesiology, Faculty of Science, Department of Kinesiology)

COOPERATIVE INTERNSHIP OPTIONS FOR HONOURS KINESIOLOGY STUDENTS

The Faculty of Social Sciences offers two types of full-time, paid work opportunities for students registered in Honours programmes. Effective September 2002, students must complete SOC SCI 2E03 before participating in an internship. For further information see Degree Programmes, Internship Options, in the Faculty of Social Sciences section of this Calendar.

Honours Bachelor of Kinesiology {2303}

ADMISSION

Completion of Kinesiology I with a Cumulative Average of at least 6.0 including an average of at least 6.0 in KINESIOL 1A06, 1E03, 1H03.

NOTES

1. Students may register in a maximum of 15 units of Level III or IV Kinesiology courses in Level III of their programme.

2. At some time during their programme, students must complete a minimum of six units from the Faculty of Humanities and/or the Department of Religious Studies.

REQUIREMENTS

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

LEVEL I: 30 UNITS

30 units from Kinesiology I completed prior to admission to the programme. (See Admission above.)
LEVEL II: 30 UNITS
15 units KINESIOL 2A03, 2C06, 2G03, 2H03
3 units HUMAN 2C03
3 units from SOC SCI 2J03, STATS 1CC3*
9 units Electives

LEVELS III AND IV: 60 UNITS
30 units Level III or IV Kinesiology (See Note 1 above.)
30 units Electives (See Note 2 above.)

*If requirement completed in Level I these units may be taken as electives.

Bachelor of Kinesiology Major {3308}
(Formerly Bachelor of Kinesiology)

ADMISSION
Completion of Kinesiology I with a Cumulative Average of at least 4.0.

NOTES
1. The Bachelor of Kinesiology Major programme is being phased out. Last entry into Level II of the programme for qualified students will be in September 2003.
2. Students may register in a maximum of 9 units of Level III or IV Kinesiology courses in Level III of their programme.

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 programme. (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
18 units Level III or IV Kinesiology (See Note 2 above.)
42 units Electives

*If requirement completed in Level I, these units may be taken as electives.

LABOUR STUDIES

WEB ADDRESS: http://www.socsci.mcmaster.ca/labrst

COOPERATIVE INTERNSHIP OPTIONS
FOR HONOURS LABOUR STUDIES STUDENTS
The Faculty of Social Sciences offers two types of full-time, paid work opportunities for students registered in Honours programmes. Effective September 2002, students must complete SOC SCI 2E01 before participating in an internship. For further information see Degree Programmes, Internship Options, in the Faculty of Social Sciences section of this Calendar.

Honours Labour Studies {2641}
(Specialist Option)

Level I students who had intended to register in this programme or students who registered prior to 2001 should see a Student Advisor in the Office of the Associate Dean for programme requirements.

Honours Labour Studies {2640}

ADMISSION
Enrolment in this programme is limited. Selection is based on academic achievement and a supplementary letter but requires, as a minimum, completion of any Level I programme with a Cumulative Average of at least 6.0 including an average of at least 7.0 in LABR ST 1A03 and 1Z03 (or 1AA3). Satisfaction of admission requirements for the Honours B.A. programme 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 programmes in the Faculty of Humanities and with the Arts and Science programme.
2. Application for admission, including a statement explaining the applicant's interest in the programme, must be made by March 31. See Admission to Level II Programmes in Academic Regulations in this section of the Calendar.
4. Students may not transfer to another Labour Studies programme 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. Electives: SOCIOl 1A06, ECON 1A06 and six units from the Faculty of Humanities and/or the Department of Religious Studies should be included in the Level I programme to provide some electives in this programme.
7. 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 Programmes may complete the Honours Seminar requirement as modified by the other Department and replace LABR ST 4A06 with six units Level III Labour Studies courses.

3. Students may not transfer to another Labour Studies programme 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.

COURSE LIST 1
COMMERC 2B03, 4B03, 4D03
LABR ST 2B03, 2B03, 2I06, 3A03, 3B03, 3C03, 3D03, 3E03, 3F03

COURSE LIST 2
COMMERC 3B03
ECON 2C03, 2E03, 2F03, 2K03, 2N03
GERONTO 3J03
HISTORY 3N03
POL SCI 3D03, 3E03, 3EE3, 3F03
SOCIOI 2E06, 2H03, 2R03, 2V06, 3F06, 3LL3

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 programme completed prior to admission to the programme. (See Admission above.)

LEVEL II: 30 UNITS
21 units LABR ST 2A03, 2C03, 2D03, 3G03, 3H03, 4A06
15 units from Course List 1, where at least 9 units must be selected from Level III or IV courses
3 units from LABR ST 4C03, 4D03
3-6 units from Course List 2
3 units from SOC SCI 2J03 or STATS 1CC3* or an equivalent Research Methods/Statistics course as prescribed by the other Social Sciences Programmes. (See Note 4 above.)
3 units HUMAN 2C03
12 units* SOCIOI 1A06 and ECON 1A06 which must be completed by the end of 60 units
27-30 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

*If requirement completed in Level I, these units will be taken as electives.

Combined Honours in Labour Studies and Another Subject

ADMISSION
Enrolment in this programme is limited. Selection is based on academic achievement and a supplementary letter but requires, as a minimum, completion of any Level I programme with a Cumulative Average of at least 6.0 including an average of at least 7.0 in LABR ST 1A03 and 1Z03 (or 1AA3). Satisfaction of admission requirements for the Honours B.A. programme 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 programmes in the Faculty of Humanities and with the Arts and Science programme.
2. Application for admission, including a statement explaining the applicant's interest in the programme, must be made by March 31. See Admission to Level II Programmes in Academic Regulations in this section of the Calendar.
4. Students may not transfer to another Labour Studies programme 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. Electives: SOCIOI 1A06, ECON 1A06 and six units from the Faculty of Humanities and/or the Department of Religious Studies should be included in the Level I programme to provide some electives in this programme.
7. 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 Programmes may complete the Honours Seminar requirement as modified by the other Department and replace LABR ST 4A06 with six units Level III Labour Studies courses.
Courses 1

**FACULTY OF SOCIAL SCIENCES**

**DEPARTMENT OF POLITICAL SCIENCE**

**Honours Arts & Science and Political Science**

<table>
<thead>
<tr>
<th>Course List 1</th>
<th>Commerce 2BA3, 4BC3, 4BD3</th>
</tr>
</thead>
<tbody>
<tr>
<td>LABR ST</td>
<td>2B03, 2BB3, 2106, 3A03, 3B03, 3C03, 3D03, 3E03, 3F03</td>
</tr>
</tbody>
</table>

**REQUIREMENTS**

- 120 units total (Levels I to IV), of which 48 units may be Level I
- 30 units from the Level I programme completed prior to admission to the programme. (See Admission above.)
- 21 units LABR ST 2A03, 2C03, 2D03, 3G03, 3H03, 4A06 (See Note 7 above.)
- 12 units from Course List 1, where at least 9 units must be selected from Level III or IV
- 3 units from LABR ST 4C03, 4D03
- 24 units courses specified for the other subject
- 3 units from SOC SCI 2J03 or STATS 1CC3 or an equivalent Research Methods/Statistics course specified by the other subject. (See Note 5 above.)
- 3 units HUMAN 2C03. Students combining Honours Arts & Science with Labour Studies are exempt from this requirement.
- 12 units* SOCIOI 1A06 and ECON 1A06 which must be completed by the end of 60 units
- 0-15 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies. Students combining Labour Studies with Arts & Science, or with a Humanities subject are exempt from this requirement.
- *If requirement completed in Level I, these units will be taken as electives.

**B.A. in Labour Studies**

**ADMISSION**

Enrolment in this programme is limited. Selection is based on academic achievement and a supplementary letter but requires, as a minimum, completion of any Level I programme with a Cumulative Average of at least 3.5 including an average of at least 4.0 in LABR ST 1A03 and 1203 (or 1AA3).

**NOTES**

1. Application for admission, including a statement explaining the applicant's interest in the programme, must be made by March 31. See Admission to Level II Programmes in Academic Regulations in this section of the Calendar.
2. Students are encouraged to consult the Labour Studies Web Page at: http://www.socsci.mcmaster.ca/labrst
3. Students may not transfer to another Labour Studies programme except by the normal application process.

**COURSE LIST 1**

<table>
<thead>
<tr>
<th>Commerce 2BA3, 4BC3, 4BD3</th>
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</thead>
<tbody>
<tr>
<td>LABR ST 2B03, 2BB3, 2106, 3A03, 3B03, 3C03, 3D03, 3E03, 3F03</td>
</tr>
</tbody>
</table>

**REQUIREMENTS**

- 90 units total (Levels I to III), of which 42 units may be Level I
- 30 units from the Level I programme completed prior to admission to the programme. (See Admission above.)
- 15 units LABR ST 2A03, 2C03, 2D03, 3G03, 3H03, 4A06 (See Note 7 above.)
- 15 units from Course List 1, where at least 9 units must be selected from Level III or IV courses
- 12* units SOCIOI 1A06 and ECON 1A06 which must be completed by the end of 60 units
- 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.
- *If requirement completed in Level I, these units will be taken as electives.

**Minor in Labour Studies**

**ENROLMENT IS LIMITED.**

Labour Studies will admit a maximum of 10 students to the Minor each year.

**NOTES**

1. Application for admission (forms available from Labour Studies Office), including a statement explaining the applicant's interest in the programme, should be made to the Chair, Admissions Committee, by March 31.

2. Students working towards a Minor in Labour Studies may take no more than three units of Level IV Labour Studies courses.
3. Students are encouraged to consult the Labour Studies Web Page at: http://www.socsci.mcmaster.ca/labrst
4. Students may not transfer from the Minor in Labour Studies to another Labour Studies programme except by the normal application process.
5. Students who have completed LABR ST 2A06 may take nine units Level II, III, IV Labour Studies instead of 12 units.

**REQUIREMENTS**

- 6 units LABR ST 1A03 and 1Z03 (or 1AA3)
- 6 units LABR ST 2A03, (See Note 5 above.) 2C03
- 12 units Level II, III or IV Labour Studies (See Note 2 above.)
- 12 units ECON 1A06 and SOCIOI 1A06

**WEB ADDRESS:** http://www.socsci.mcmaster.ca/~polisci/

**Honours Political Science**

<table>
<thead>
<tr>
<th>Admission</th>
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<tbody>
<tr>
<td>Completion of any Level I programme with a Cumulative Average of at least 6.0 including a grade of at least B- in POL SCI 1G06 or 1A06.</td>
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</tbody>
</table>

**NOTES**

1. 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.
2. POL SCI 3N06 and 2O6 are required for students enrolled in Honours Political Science programmes and they are recommended for students in the B.A. programme.

**REQUIREMENTS**

- 120 units total (Levels I to IV), of which 48 units may be Level I
- 30 units from the Level I programme completed prior to admission to the programme. (See Admission above.)
- 6 units POL SCI 2O6
- 24 units Level II, III, IV Political Science of which a maximum of 12 units may be Level II
- 12 units Level IV Political Science
- 6 units POL SCI 3N06
- 3 units HUMAN 2C03
- 39 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies. (The maximum Political Science courses to be taken is 60 units.)

**Combined Honours in Political Science and Another Subject**

**ADMISSION**

Completion of any Level I programme 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 programme 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 programmes in the Faculty of Humanities and with the Arts and Science programme.
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 programmes and they are recommended for students in the B.A. programme.

REQUIREMENTS

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

30 units from the Level I programme completed prior to admission to the programme. (See Admission above.)

6 units POL SCI 2006
9 units Level III Political Science
9 units Level II, III, IV Political Science
6 units Level IV Political Science
36 units courses specified for the other subject
6 units POL SCI 3N06 or in combined programmes within the Faculty of Social Sciences, the Research Methods/Statistics course specified for the other subject.
3 units HUMAN 2G03. Students combining Honours Arts and Science with Political Science are exempt from this requirement.
15 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/ or the Department of Religious Studies. Students combining Political Science with Arts & Science, or with a Humanities subject, are exempt from this requirement. (The maximum Political Science courses to be taken is 54 units.)

B.A. in Political Science [1450]

ADMISSION

Completion of any Level I programme, 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 Level II and III courses that are required to qualify for a number of Level IV courses. Students who wish to enter courses but who lack the necessary prerequisites must obtain the permission of the instructor.

2. POL SCI 2006 and 3N06 are required for students enrolled in Honours Political Science programmes and they are recommended for students in B.A. programmes.

REQUIREMENTS

90 units total (Levels I to III), of which 42 units may be Level I

30 units from the Level I programme completed prior to admission to the programme. (See Admission above.)

12 units Level II Political Science
12 units Level III Political Science
36 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/ or the Department of Religious Studies. (The maximum Political Science courses to be taken is 36 units.)

Minor in Political Science

NOTE

Level IV courses have limited enrolment with preference given to Honours Political Science students. Students must apply by ballot through the Department.

REQUIREMENTS

24 units total

6 units Level I Political Science
18 units Level II, III, IV Political Science of which up to 12 units may be Level II
4. For students who enter Level II in September of 2002, one of BIOLOGY 1K03, 1A03, 1AA3 must be completed by the end of Level II. Students who entered prior to September 2002, must complete three units from the Faculty of Science, excluding the Math and Statistics courses required for the programme. Credit or registration in BIOLOGY 1A03 or 1K03 is a prerequisite for PSYCH 2F03.

5. Students considering applying to graduate school should complete a thesis (PSYCH 4D06).

6. 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.

7. BIOLOGY 4T03 (Neurobiology) may be taken as a substitute for three units of Level IV Psychology. KINESIOL 3E03 (Neural Control of Human Movement) may be taken as a substitute for three units of Level III Psychology. KINESIOL 4P03 (The Brain and Human Movement) may be taken as a substitute for three units of Level IV Psychology.

8. MATH 1B03 (Linear Algebra 1) is strongly recommended for students intending to pursue graduate work in Psychology. MATH 1J03 (Mathematical Computing) or COMP SCI 1MC3 (Computer Science I) is highly recommended for students in the Behavioural Neuroscience and Perception specializations, and for students intending to pursue graduate work in Psychology.

9. Students who entered the programme prior to September 2002, may replace six units of courses chosen from the Course List 2 (Capstone Courses) with any six units of Level III or IV Psychology.

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**COURSE LIST 1 (LAB COURSES)**

PSYCH 3BL3, 3EE3, 3L03, 3LL3, 3QQ3, 3S03, 3V03, 3QQ3

**COURSE LIST 2 (CAPSTONE COURSES)**

PSYCH 3J06, 3L03, 3NB3, 3C03, 3D06, 3J03, 3Q03, 3Q03, 4R03

**REQUIREMENTS**

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

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**LEVEL I: 30 UNITS**

30 units from the Level I programme completed prior to admission to the programme. (See Admission above.)

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**LEVEL II: 30 UNITS**

6 units STATS 1CC3*, PSYCH 2RR3

9 units from PSYCH 2E03, 2F03, 2H03, 2TT3 (Students interested in completing a specialization should review admission requirements below.)

3 units* from BIOLOGY 1A03, 1AA3, 1K03 (See Note 4 above.)

3 units HUMAN 2C03

9 units Electives

*If requirement completed in Level I, these units will be taken as electives.

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**LEVELS III AND IV: 60 UNITS**

(See below for the Level III and IV requirements for specializations.)

21 units Level III, IV Psychology; or three units from PSYCH 2E03, 2F03, 2H03, 2TT3 (if not taken in Level II) and 18 units of Level III, IV Psychology from Course List 2 (Completion recommended by the end of 90 units.)

6 units from Course List 2 (See Note 9 above.)

30 units Electives

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**Honours Psychology Specializations**

Upon satisfactory completion of Level II Honours Psychology, and subject to meeting the admission requirements, students may choose to register in one of the following five specializations. Students who choose not to specialize will remain registered in the Honours Psychology programme.

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**Behavioural Neuroscience**

**ADMISSION**

Completion of Level II Honours Psychology, including PSYCH 2F03.

**NOTE**

Completion of MATH 1J03 or COMP SCI 1MC3 in Level I is highly recommended for students intending to complete this specialization.

**REQUIREMENTS**

**LEVELS III AND IV: 60 UNITS**

15 units from PSYCH 3BB3, 3BN3, 3FA3, 3J03, 3V03, 4BN3, BIOLOGY 4T03, NEUROCOMP 3W03

3 units from Course List 1. One of PSYCH 3BL3, 3EE3, 3L03 or 3V03 is recommended. (Completion is recommended by the end of 90 units.)

12 units Level III, IV Psychology; or three units from PSYCH 2E03, 2H03, 2TT3 (if not taken in Level II) and nine units of Level III, IV Psychology.

6 units from Course List 2 (See Note 9 above.)

24 units Electives

**Cognition Specialization**

**ADMISSION**

Completion of Level II Honours Psychology, including PSYCH 2H03.

**REQUIREMENTS**

**LEVELS III AND IV: 60 UNITS**

15 units from PSYCH 3BB3, 3BN3, 3FA3, 3J03, 3P03, 3U03, 3V03, 3W03, 4BN3, 4C03, 4Z03

3 units from Course List 1. One of PSYCH 3EE3, 3L03 or 3V03 is recommended. (Completion is recommended by the end of 90 units.)

12 units Level III, IV Psychology; or three units from PSYCH 2E03, 2F03, 2TT3 (if not taken in Level II) and nine units of Level III, IV Psychology.

6 units from Course List 2 (See Note 9 above.)

24 units Electives

**Developmental Specialization**

**ADMISSION**

Completion of Level II Honours Psychology.

**REQUIREMENTS**

**LEVELS III AND IV: 60 UNITS**

3 units PSYCH 3G03

6 units from 3J03, 3JJ3, 3HH3

6 units from 3L03, 3JJ3, 3L03 (if not already taken), 3B03, 3Z03, 3Z23, 4C03

3 units from Course List 1. One of PSYCH 3EE3, 3L03 and 3V03 is recommended. (Completion is recommended by the end of 90 units.)

12 units Level III, IV Psychology; or three units from PSYCH 2E03, 2F03, 2H03, 2TT3 (if not taken in Level II) and nine units of Level III, IV Psychology.

6 units from Course List 2 (See Note 9 above.)

24 units Electives

**Evolution and Social**

**ADMISSION**

Completion of Level II Honours Psychology, including PSYCH 2TT3.

**REQUIREMENTS**

**LEVELS III AND IV: 60 UNITS**

15 units from PSYCH 2C03, 2F03, 3JJ3, 3M03, 3RR3, 3T03, 3V03, 4R03

3 units from Course List 1. One of PSYCH 3LL3 or 3S03 is recommended. (Completion is recommended by the end of 90 units.)

12 units Level III, IV Psychology; or three units from PSYCH 2E03, 2F03, 2H03, 2TT3 (if not taken in Level II) and nine units of Level III, IV Psychology.

6 units from Course List 2 (See Note 9 above.)

24 units Electives
Perception Specialization {2460882}

**ADMISSION**
Completion of Level II Honours Psychology, including PSYCH 2E03.

**REQUIREMENTS**

**LEVELS III AND IV: 60 UNITS**

15 units from PSYCH 3A03, 3AA3, 3BB3, 3CH3, 3J03, 3W03, 4NN3

3 units from Course List 1. One of PSYCH 3EE3, 3LL3 or 3VV3 is recommended. (Completion is recommended by the end of 90 units.)

12 units Level III, IV Psychology; or three units from 2F03, 2H03, 2TT3 (if not taken in Level II) and nine units of Level III, IV Psychology

6 units from Course List 2 (See Note 8 above.)

24 units Electives

**Combined Honours in Psychology and Another Subject (B.A.)**

**ADMISSION**
Completion of any Level I programme with a Cumulative Average of at least 6.0, an average of at least 7.0 in PSYCH 1A03 and 1AA3 or a grade of at least B- in PSYCH 1A06 and credit in MATH 1A03 or a grade of at least C- in MATH 1M03. Satisfaction of the admission requirements for the Honours programme 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 programmes in the Faculty of Humanities and with the Arts and Science programme.

2. Credit in MATH 1A03 or 1M03 with a grade of at least C- must be completed before entrance into Level II of the programme.

3. STATS 1C03 and PSYCH 2RR3 must be completed before entrance into Level III of the programme.

4. At some time during the programme, the student:
   a) must meet a laboratory requirement by completing one of PSYCH 3L3, 3EE3, 3LL3, 3QQ3, 3SS03, 3VV3, 4QQ3. Enrollment in Psychology Laboratory courses is limited.
   b) must complete HUMAN 2C03.

5. Beginning September 2002 students entering Level II of an Honours Psychology programme will be required to complete one of BIOLOGY 1K03, 1A03, 1AA3, by the end of 60 units.

**COURSE LIST 1**

**PSYCH**

3LL3, 3EE3, 3L03, 3LL3, 3QQ3, 3SS03, 3VV3, 4GG03, 4QQ3

**REQUIREMENTS**

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

**LEVEL II: 30 UNITS**

6 units STATS 1C03*, PSYCH 2RR3

6 units from PSYCH 2E03, 2F03, 2H03, 2TT3

3 units* from the Faculty of Science, excluding the Psychology and the Mathematics courses taken to satisfy the admission or programme requirements. BIOLOGY 1A03 or 1K03 is a prerequisite for PSYCH 2F03.

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 III: 30 UNITS**

12 units Level III Psychology, or three units from PSYCH 2E03, 2F03, 2H03, 2TT3 (if not taken in Level II) and nine units of Level III Psychology. (See Note 5 (a) above.)

12 units courses as specified for the other subject

6 units Electives (See Note 5 (b) above)

**LEVEL IV: 30 UNITS**

12 units Level III or IV Psychology including one course from Course List I, if not already completed. (See Note 5 (a) above.)

12 units courses as specified for the other subject

6 units Electives (See Note 5 (b) above)

B.A. in Psychology {1460}

**ADMISSION**
Completion of any Level I programme with a Cumulative Average of at least 3.5 and an average of at least 4.0 in PSYCH 1A03 and 1AA3 or a grade of at least C- in PSYCH 1A06.

**NOTES**

1. Completion of one of MATH 1A03, 1K03 or 1M03 is required in Level II. Completion in Level I is highly recommended.

2. One of PSYCH 2G03, STATS 1A03 or 1CC3 must be completed before entrance into Level III of the programme.

3. Beginning September 2002 completion of one of BIOLOGY 1K03, 1A03, 1AA3 by the end of 60 units is required for all Honours B.A. Psychology programmes and is strongly recommended for B.A. programmes.

**REQUIREMENTS**

90 units total (Levels I to III), of which 42 units may be Level I

**LEVEL II: 30 UNITS**

3 units from PSYCH 2G03, STATS 1A03, 1CC3* (See Note 2 above.)

6 units from PSYCH 2E03, 2F03, 2H03, 2TT3

3 units Level II Psychology

3 units* from MATH 1A03, 1K03 or 1M03 (See Note 1 above.)

6 units from Business, Humanities or Science, excluding Psychology

6 units Electives, excluding Psychology

3 units Electives

*If requirement completed in Level I, these units will be taken as electives.

**LEVEL III: 30 UNITS**

12 units Level III Psychology, or three units from PSYCH 2E03, 2F03, 2H03, 2TT3 (if not taken in Level II) and nine units from Level III Psychology

6 units from Business, Humanities or Science, excluding Psychology

6 units Electives, excluding Psychology

6 units Electives

**Minor in Psychology**

**NOTE**

When choosing Level II Psychology courses, students should consider the prerequisite requirements for the various Level III courses as most require completion of a statistics course and three to six units from PSYCH 2E03, 2F03, 2H03, 2TT3.

**REQUIREMENTS**

24 units total

6 units PSYCH 1A03 and 1AA3; or PSYCH 1A06

12 units Level II or III Psychology

6 units Level III Psychology

**DEPARTMENT OF RELIGIOUS STUDIES**

**WEB ADDRESS:** www.socsci.mcmaster.ca/relstud/

Honours Arts & Science and Religious Studies (B.Arts.Sc.; See Arts & Science Programme)

**Fields of Study**

The Department offers courses in four fields of study. Students are encouraged to specialize in any one of these fields. Level II, III and IV courses are allocated to the fields as follows:

I. ASIAN RELIGIONS

RELG ST 2E03, 2F03, 2L03, 2P06, 3AA3, 3E03, 3L03, 3S03, 3U03, 3VV3

SANSKRIT 3A06, 4B06

II. BIBLICAL STUDIES

RELG ST 2B03, 2D03, 2EE3, 2GG3, 2HH3, 2VV3, 2YY3, 2Z03, 3DDD3, 3M03, 3N03, 3PO3, 3T03

HEBREW 2A03, 2B03, 3A03, 3B03

III. WESTERN RELIGIOUS THOUGHT

RELG ST 2C03, 2JJ3, 2KK3, 2MM3, 2UU3, 2ZZ3, 3B03, 3DD3, 3E03, 3S03, 3U03, 3V03, 3W03

IV. CONTEMPORARY AND COMPARATIVE RELIGIONS

RELG ST 2AA3, 2BB3, 2DD3, 2EE3, 2HH3, 2M03, 2N03, 2Q03, 2QQ3, 2S03, 2V03, 2W03
NOTE
Students wishing to specialize in Asian Religions should consider beginning language training in Sanskrit or Japanese or both early in their programme (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 programme with a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units of Religious Studies courses, preferably including one Level I Religious Studies course.

NOTES
1. All honours students are strongly urged to consult a departmental undergraduate advisor in the selection of their Level III and IV courses.
2. Part-time students should note that RELIG ST 3F03 and 4A06 are regularly offered in the evening. Other courses required for completion of the degree are offered in the evening whenever possible. Students who anticipate difficulty in fulfilling programme requirements should consult a departmental undergraduate advisor as early as possible in their programme.
3. With the written approval of a departmental undergraduate advisor, courses from other departments may be substituted for Religious Studies.

REQUIREMENTS
120 units total (Levels I to IV), of which 48 units may be Level I
30 units from the Level I programme completed prior to admission to the programme. (See Admission above.)
6 units from Asian Religions
3 units from Biblical Studies
3 units from Western Religious Thought
3 units from Comparative and Comparative Religions
15 units RELIG ST 3F03, 4A06, 4J06
18 units Level II, III or IV Religious Studies of which at least six units must be from Level III. Level III courses which have been taken to satisfy the above fields of study requirements may be subtracted from these six units of Level III.
6 units* from Linguistics, a language other than English or Statistics
3 units HUMAN 2C03
33 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities.

*If requirement completed in Level I, these units will be taken as electives.

Combined Honours in Religious Studies and Another Subject

ADMISSION
Completion of any Level I programme with a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units of Religious Studies courses, preferably including one Level I Religious Studies course. Satisfaction of the admission requirements for the honours programme 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 programmes in the Faculty of Humanities and with the Arts and Science programme.
2. All honours students are required to consult a departmental undergraduate advisor in the selection of their Level three and four courses.
3. Part-time students should note that RELIG ST 3F03 and 4A06 are regularly offered in the evening. Other courses required for completion of the degree are offered in the evening whenever possible. Students who anticipate difficulty in fulfilling programme requirements should consult a departmental undergraduate advisor as early as possible in their programme.
4. With the written approval of a departmental undergraduate advisor, courses from other departments may be substituted for Religious Studies.
5. Students must consult both departments to determine the manner in which the Research Methods/Statistics requirement is to be satisfied.
6. Students requiring to complete a thesis in the other subject may replace RELIG ST 4A06 and 4J06 with 12 units of Levels III or IV Religious Studies courses. This substitution must be approved in writing by a departmental undergraduate advisor.

REQUIREMENTS
120 units total (Levels I to IV), of which 48 units may be Level I
30 units from the Level I programme completed prior to admission to the programme. (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
15 units RELIG ST 3F03, 4A06, 4J06 (See Note 6 above.)
12 units Level II, III or IV Religious Studies of which at least six units must be Level III. Level III courses which have been taken to satisfy the above fields of study requirements may be subtracted from these six units of Level III.
36 units courses specified for the other subject
6 units* from Linguistics, a language other than English, Statistics or in combined programmes within the Faculty of Social Sciences, the Research Methods/Statistics course specified for the other subject. (See Note 5 above.)
3 units HUMAN 2C03. Students combining Honours Arts and Science with Religious Studies are exempt from this requirement.
9 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities. Students combining Religious Studies with Arts and Science, or with a Humanities subject are exempt from this requirement.

*If requirement completed in Level I, these units will be taken as electives.

B.A. in Religious Studies  {1475}

ADMISSION
Completion of any Level I programme 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 programme requirements should consult a departmental undergraduate advisor as early as possible in their programme.
3. With the written approval of a departmental undergraduate advisor, courses from other departments may be substituted for Religious Studies.

REQUIREMENTS
90 units total (Levels I to III), of which 42 units may be Level I
30 units from the Level I programme completed prior to admission to the programme. (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
3 units RELIG ST 3F03
12 units Level II, III or IV Religious Studies of which at least six units must be Level III. Level III courses which have been taken to satisfy the above fields of study requirements may be subtracted from these six units of Level III.
36 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities. (The maximum Religious Studies courses to be taken is 48 units.)
Minor in Religious Studies

REQUIREMENTS
24 units total
24 units Religious Studies courses with no more than six units from Level I

SCHOOL OF SOCIAL WORK

WEB ADDRESS: http://www.socsci.mcmaster.ca/-socwork

Combined Bachelor of Arts/Bachelor of Social Work (B.A./B.S.W.)

ADMISSION
Completion of any Level I programme, including two of PSYCH 1A03 and 1AA3 or (1A06), SOCIOL 1A06, SOC WORK 1A06, normally with a CA of at least 6.0 and evidence of personal suitability, which may be evaluated by one or a combination of written statements, tests, or interviews. An applicant must complete Level I (30 units) by April of the year in which application is made. In choosing Level I courses, the student should take care to include those courses that will allow entry to the B.A. programme. Students should consult the relevant sections of the Calendar and/or the Office of the Associate Dean.

Enrolment in the Combined B.A./B.S.W. programme is limited.

Students who intend to apply for the combined B.A. and B.S.W. programme must consult the School of Social Work prior to application.

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. First Nations students may select an alternate application process. Those who wish to do so should consult the School of Social Work for details.

Applicants transferring from other universities (see Two-Tier Applications below) must also apply through the Ontario Universities' Application Centre (OUAC) and are required to meet the introductory Psychology and Sociology prerequisites.

Students admitted to the Combined programme who have completed B.A. work beyond Level I normally will require three years after admission to complete the programme.

TWO-TIER APPLICATIONS
If you are transferring from a university other than McMaster, or a college, you must complete two application forms as follows:

1. General Application (December 1)
   If you wish to study full-time, obtain a 105D application form from the Admissions Office of any Ontario university. Complete the form showing both your interest in the B.A./B.S.W. programme, and the subject you wish to take for the B.A. component. The form should be returned to OUAC, with the appropriate fee.
   If you wish to study part-time, complete a McMaster University Application form which can be obtained from OUAC or directly from McMaster, at the Office of the Registrar, Gilmour Hall, Room 108. Return this form to OUAC with the appropriate fee.
   To allow adequate time for the processing of the General Application, applicants are advised to submit their applications by December 1.

2. Supplementary Application (March 1)
   After the General Application has been received at McMaster, the School of Social Work will mail you a Supplementary Application form, which must be completed and returned directly to the School of Social Work by March 1. To avoid delay, you should request this form personally through direct contact with the School of Social Work. 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 admission process. Therefore, it is impossible to consider applicants whose Supplementary Application arrives after the March 1 deadline.

NOTES
1. Course Groupings: There are two groups of courses in the Social Work programme:
   - Foundation for Social Work includes core courses which are required.

FOUNDATION FOR SOCIAL WORK
SOC WORK 2A06, 2B03, 2BB3, 2E03, 3A03, 3D06, 3D66, 4D66, 4D6D, 4G03, 4X03

SOCIAL AND POLITICAL CONTEXT OF SOCIAL WORK
SOC WORK 3C03, 3H03, 3J03, 3K03, 4B03, 4C03, 4F03, 4G03, 4I03, 4J03, 4L03, 4M03, 4R03, 4V03

2. Progression Within Programme: Students must achieve a minimum grade of C+ in each of SOC WORK 2A06, 2B03, 2BB3, 2E03, 3A03, 3D06, 4D66, 4J03, 4M03, and 4X03, a Pass in SOC WORK 3D66 and 4D6D and a CA of at least 6.0.

3. Students must complete three units of Social Sciences Research Methods (eg. SOCIOL 2Z03, or GERONTOl2C03). 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 Social Work degree component and 12 units Social and Political Context of Social Work courses including SOC WORK 4J03 as elective for the B.A. programme.
   The B.S.W. degree component will be granted only if the student has achieved a minimum grade of C+ in each of SOC WORK 2A06, 2B03, 2BB3, 2E03, 3A03, 3D06, 4D66, 4J03, 4M03, and 4X03, a Pass in SOC WORK 3D66 and 4D6D and a CA of at least 6.0.

5. Students are expected to assume the cost of travelling to and from field practice agencies.

REQUIREMENTS
138 units total (Levels I to IV), of which 48 units may be Level I
30 units from the Level I programme completed prior to admission to the programme. (See Admission above.)
15 units SOC WORK 2A06, 2B03, 2BB3, 2E03, (which must be completed prior to enrolling in SOC WORK 3D06 and 3D66)
12 units SOC WORK 3D06, 3D66 (which must be completed prior to enrolling in SOC WORK 4D66 and 4D6D)
12 units SOC WORK 4D66, 4D6D
9 units SOC WORK 3A03, 4C03, 4X03
12 units SOC WORK 4J03 and nine additional units selected from the Social and Political Context of Social Work courses. (See Note 4 above.)
3 units Social Sciences Research Methods. (These units will be taken as electives for the B.A. (See Note 3 above.)
24 units courses specified for the B.A. (This may vary according to the B.A. programme.)
21 units Electives. (Other requirements may be specified by the B.A. programme.)

Bachelor of Social Work (B.S.W.)

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 1A06, SOC WORK 1A06) normally with an average of at least 6.0 or its equivalent, and evidence of personal suitability which may be evaluated by one or a combination of written statements, interviews, or tests.

First Nations students may select an alternate application process. Those who wish to do so should consult the School of Social Work for details.
An applicant is required to complete the prerequisite undergraduate degree work by April of the year in which application is made. Emolnent in the B.S.W. programme is limited. Students who intend to apply to the B.S.W. programme must consult the School of Social Work prior to application.

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. Applicants must also apply to the University.

TWO-TIER APPLICATIONS
Individually interested in the B.S.W. programme must complete two application forms as follows:

1. General Application (December 1)
If you wish to study full-time, you must obtain either a 1050 application form from the Admissions Office of any Ontario university or, if you are a McMaster graduate, obtain the McMaster Returning Student Application form from the Office of the Registrar, Gilmour Hall, Room 108. You must return the completed form to the appropriate office (either the Ontario Universities' Application Centre (OUAC) or to the Office of the Registrar, 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)
After the General Application has been received at McMaster, the School of Social Work will mail you a Supplementary Application form, which must be completed and returned directly to the School of Social Work by March 1. To avoid delay, you are advised to request this form personally through direct contact with the School of Social Work. 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 an applicant whose Supplementary Application arrives after the March 1 deadline.

NOTES
1. Course Groupings: There are two groups of courses in the Social Work programme:
   - Foundation of Social Work includes core courses which are required;

FOUNDATION OF SOCIAL WORK
SOC WORK 2A06, 2B03, 2BB3, 2E03, 3A03, 3D06, 3D06, 4D06, 4D06, 4D03, 4D03

SOCIAL AND POLITICAL CONTEXT OF SOCIAL WORK
SOC WORK 3C03, 3H03, 3D03, 4B03, 4C03, 4F03, 4G03, 4I03, 4J03, 4L03, 4M03, 4R03, 4W03

2. Progression Within Programme: 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 3D6 and 4D6, and a CA of at least 6.0.

3. Study Plan involves three units of Social Sciences research Methods (e.g. SOCIOl 2Z03 or GERONTOL 2C03). If this requirement was completed prior to admission in the B.S.W. programme, 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 3D6 and 4D6, and a CA of at least 6.0.

5. Students are expected to assume the cost of travelling to and from field practice agencies.

REQUIREMENTS
60 units total
15 units SOC WORK 2A06, 2B03, 2BB3, 2E03 (which must be completed prior to enrolling in SOC WORK 3D06 and 3D06)
12 units SOC WORK 3D06, 3D06 (which must be completed prior to enrolling in SOC WORK 4D06 and 4D06)
12 units SOC WORK 4D06, 4D6
9 units SOC WORK 3A03, 4003, 4X03
9 units SOC WORK 4J03 and six additional units selected from the Social and Political Context of Social Work courses
3 units Social Sciences Research Methods. If requirement was completed prior to admission, these units must be chosen from Social and Political Context of Social Work courses. (See Note 3 above.)

DEPARTMENT OF SOCIOLOGY

WEB ADDRESS: http://www.mcmaster.ca/socsci/docs/sochome.htm

Honours Arts & Science and Sociology (B.Arts.Sc.; See Arts & Science Programme)

COOPERATIVE INTERNSHIP OPTIONS

FOR HONOURS SOCIOLOGY STUDENTS
The Faculty of Social Sciences offers two types of full-time, paid work opportunities for students registered in Honours programmes. Effective September 2002, students must complete SOC SCI 2E10 before participating in an internship. For further information see Degree Programmes, Internship Options, in the Faculty of Social Sciences section of this Calendar.

Honours Sociology (Specialist Option) (2522)
Students who registered in this programme prior to 2001 may see an Academic Advisor in the Office of the Associate Dean for programme requirements.

Honours Sociology (2520)

ADMISSION
Completion of any Level I programme 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 3G03 and 4G03

REQUIREMENTS
120 units total (Levels I to IV), of which 48 units may be Level I
30 units from the Level I programme completed prior to admission to the programme. (See Admission above.)
6 units from SOCIOl 2506
3 units from SOCIOL 3A03, 3P03, 3PP3
3 units from SOCIOL 3I03, 3C03, 3W03
12 units Level IV Sociology
18 units Level II or III Sociology
3 units SOCIOl 2Z03 which must be completed by the end of 60 units
6 units SOCIOl 3H06
3 units HUMAN 2G03
36 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.
Combined Honours in Sociology and Another Subject

ADMISSION
Completion of any Level I programme 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 programme 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 programmes in the Faculty of Humanities and with the Arts and Science programme.
2. Students who choose to complete a thesis (or independent research) in the other subject may replace 6 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 nine combined units of SOCIOL 3G03 and 4G03.

REQUIREMENTS
120 units total (Levels I to IV), of which 48 units may be Level I
30 units: from the Level I programme completed prior to admission to the programme. (See Admission above.)
6 units: SOCIOL 2S06
3 units: from SOCIOL 3A03, 3P03, 3PP3
3 units: from SOCIOL 3I03, 3O03, 3W03
12 units: Level IV Sociology (See Note 2 above.)
12 units: Level II or III IV Sociology
36 units: courses specified for the other subject
6-9 units: SOCIOL 2Z03 which must be completed by the end of 60 units, and SOCIOL 3H06 or, in combined programmes within the Faculty of Social Sciences, the six units Research Methods/Statistics course specified for the other subject.
3 units: HUMAN 2C03. Students combining Honours Arts and Science with Sociology are exempt from this requirement.
6-9 units: Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies. Students combining Sociology with Arts & Science, or with a Humanities subject, are exempt from this requirement.

B.A. in Sociology {1520}

ADMISSION
Completion of any Level I programme, 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 programme should refer to Gerontological Studies in this section of this Calendar for programme 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 programme completed prior to admission to the programme. (See Admission above.)
6 units: SOCIOL 2S06
3 units: SOCIOL 2Z03
15 units: Level II or III Sociology
36 units: Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

Minor in Sociology

NOTES
1. Students who have already completed SOCIOL 2006 or 2S06 may use these units towards this requirement of the minor.
2. Students should check both this Calendar and the Departmental Handbook for prerequisites and course descriptions.

REQUIREMENTS
24 units total
6 units: SOCIOL 1A06
6 units: from SOCIOL 2C06, 2D06, 2R03 and 2Q03, 2V06 (See Note 1 above.)
12 units: Level II or III Sociology
COMBINED B.A. IN
INDIGENOUS STUDIES
AND ANOTHER SUBJECT

WEB ADDRESS: http://www.mcmaster.ca/indigenous/
Chester New Hall, Room 228
Ext. 27426

Director
D.J. Martin-Hill/B.A., M.A., Ph.D.

Indigenous Student Counselor
B. Freeman/B.A.

ACADEMIC REGULATIONS

The Combined B.A. Programme in Indigenous Studies is governed by the general Academic Regulations of the University and the regulations described below.

Combined B.A. Programme in
Indigenous Studies and Another Subject

ADMISSION

Completion of any Level I programme, with a Cumulative Average of at least 3.5 including an average of at least 4.0 in six units from INDIG ST 1A03, 1AA3, CAYUGA 1Z03, MOHAWK 1Z03, OJIBWE 1Z03 and satisfaction of admission requirements for the B.A. programme in the other subject.

NOTE

Three units of work in the other subject of the combined programme which are also in the Course List may be used to fulfill the requirements of both programme components.

COURSE LIST 1

ANTHROP 2B03, 2H03, 2V03, 3F03, 3Y03
POL SCI 3C03
SOC WORK 4103

REQUIREMENTS

90 units total (Levels I to III), of which 42 may be Level I

30 units

from the Level I programme completed prior to admission to the programme. (See Admission above.)

6 units

from INDIG ST 2A03, 2A06, 2AA3

3 units

from INDIG ST 2C03, 2D03

12 units

from INDIG ST 2B03, 2E03, 3A03, 3B03, 3BB3, 3C03, 3CC3, 3D03, 3E03, 3F06, 3G03, 3H03, 3HH3, 3I03, 3J03, 3K03, CAYUGA 2Z03, MOHAWK 2Z03, OJIBWE 2Z03 or courses from Course List 1.

3 units

Level III Indigenous Studies or courses from Course List 1 (See Note above.)

24 units

courses specified for the other subject

12 units

electives

Minor in Indigenous Studies

NOTES

1. In order to qualify for the Indigenous Studies Minor, students must be registered in a four- or five-level programme.

2. The Minor consists of 24 units including INDIG ST 1A03 and 1AA3.

3. No more than six of the 18 units from Course List 2 may be Level I courses.

4. At least 12 of the 18 units required for the Minor must be Indigenous Studies or Indigenous language courses.

COURSE LIST 2

INDIG ST 1A03
INDIG ST 1AA3
INDIG ST 2A03
INDIG ST 2AA3
INDIG ST 2B03
INDIG ST 2C03
INDIG ST 2D03
INDIG ST 2E03
INDIG ST 3A03
INDIG ST 3B03
INDIG ST 3C03
INDIG ST 3D03
INDIG ST 3E03
INDIG ST 3F03
INDIG ST 3G03
INDIG ST 3H03
INDIG ST 3I03
INDIG ST 3J03
INDIG ST 3K03
CAYUGA 1Z03
CAYUGA 2Z03
MOHAWK 1Z03
MOHAWK 2Z03
OJIBWE 1Z03
OJIBWE 2Z03
ANTHROP 2B03
ANTHROP 2H03
ANTHROP 2V03
ANTHROP 3F03
ANTHROP 3Y03
POL SCI 3C03
SOC WORK 4103

REQUIREMENTS

6 units

18 units

from INDIG ST 1A03, 1AA3, CAYUGA 1Z03, MOHAWK 1Z03, OJIBWE 1Z03
from Course List 2 (See Notes 3 and 4 above.)
INTERDISCIPLINARY MINORS AND THEMATIC AREAS

INTERDISCIPLINARY MINORS

The following two listings constitute University-sanctioned Minors in Archaeology and Jewish Studies.

No degree is granted for these programmes of study, but students registered in four- or five-level programmes can receive a Minor designation on their transcripts following graduation if their chosen Minor programme 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
Michele George (Classics)

Committee of Instruction
Aubrey Cannon (Anthropology)  
Laura Finsten (Anthropology)  
Eduard Reinhardt (Geography and Geology)  
W. Jack Rink (Geography and Geology)  
Shelley Saunders (Anthropology)  
Henry Schwarz (Geography and Geology)

The Interdisciplinary Minor in Archaeology is based on archaeology and archaeology-related courses offered in the School of Geography and Geology, 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 that interest them 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 1LL3 (History and Archaeology of the Ancient World II).

COURSE LIST

ANTHROP 2FF3 Human Skeletal Biology and Bioarchaeology  
ANTHROP 2GG3 North American Prehistory  
ANTHROP 2HH3 The Ancient Maya  
ANTHROP 3AS3 Archaeology and Society  
ANTHROP 3CG6 Archaeological Field School  
ANTHROP 3DD3 Archaeology of Death  
ANTHROP 3EO3 Special Topics in Archaeology I  
ANTHROP 3EE3 Special Topics in Archaeology II  
ANTHROP 3K03 Archaeological Interpretation  
ANTHROP 3NO3 Primate Evolution  
ANTHROP 3PP3 Paleopathology  
ANTHROP 4FO3 Archaeological Theory  
ANTHROP 4HF3 Archaeology of Hunters and Foragers  
ANTHROP 4RO3 Skeletal Biology of Earlier Human Populations  
ANTHROP 4U03 Prehistory of the British Isles  
CLASSICS 2B03 Greek Art  
CLASSICS 2CG3 Roman Art  
CLASSICS 3G03 Greek Sanctuaries  
CLASSICS 3G03 Roman Society in the Ancient World  
CLASSICS 4B03 Seminar in Classical Archaeology  
GEO 2B03 Soils and the Environment  
GEO 2E03 Earth History  
GEO 2G03 Earth Surface Processes  
GEO 2GG3 Natural Disasters  
GEO 2J03 GIS and Digital Cartography  
GEO 3D03 Geoarchaeology

REQUIREMENTS

24 units total

12 units from the following courses:

ANTHROP 3BO3 (or 3Z03, if completed prior to 1999),  
ANTHROP 3BO3 (formerly CLASSICS 2A03),  
ENVIR 1C03

12 units from List A (see above). At least nine of the twelve units must be selected from outside the student's own department.

Please see the Course Listings section for a detailed description of the above courses.

Jewish Studies

Jewish Studies is an international, multidisciplinary field devoted to the study of Judaism, Jewish history, culture and community. The Minor in Jewish Studies is open to all students registered in a four- or five-level programme 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 programme. Details are available through the Department of Religious Studies, University Hall, Room 104, ext. 24567, or the Office of International Affairs, Kenneth Taylor Hall, Room 239.

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

HEBREW 2A03 Introduction to Biblical Hebrew I  
HEBREW 2B03 Introduction to Biblical Hebrew II  
HEBREW 3A03 Intermediate Hebrew I  
HEBREW 3B03 Intermediate Hebrew II  
RELIG 2R03 Women in the Biblical Tradition  
RELIG 3R03 The Five Books of Moses  
RELIG 3EE3 Prophets of the Bible  
RELIG 3V03 Bible as Story  
RELIG 3Y03 The Bible and Film  
RELIG 3Z03 The Jewish World in New Testament Times  
RELIG 3M03 Songs of David: Poetry in the Hebrew Bible  
RELIG 3F03 Death and the Afterlife in Early Judaism and Christianity  
RELIG 3Z03 Judaism, the Jewish People and the Birth of the Modern World  
RELIG 3ZZ5 Judaism and the Jewish People in the Twentieth Century

LIST B

ANTHROP 3BO3 Ethnology: Europe  
ANTHROP 3G03 Comparative Mythology  
ANTHROP 4H03 Anthropological Demography  
CLASSICS 2A03 Islamic and Mediterranean Society, 600-1300  
CLASSICS 2E03 Islam in the World, 1300-1800  
CLASSICS 3A03 The Modern Middle East  
CLASSICS 3I03 The International Relations of the European Powers, 1870-1945  
PHILOS 2A03 Ancient Greek Philosophy
PHILOS 2D03 Moral Issues
PHILOS 3A06 From Kant to Hegel
PHILOS 3H03 Philosophy of Religion
POL SCI 3AA3 International Politics in the Postwar Period
POL SCI 4D06 Human Rights and International Politics
SOC WORK 4C03 Racism and Social Marginalization in Canadian Society
SOC WORK 4J03 Social Change: Social Movements and Advocacy
SOC WORK 4M03 International and Comparative Social Welfare
SOCIOL 2EO6 Racial and Ethnic Group Relations
SOCIOL 3Z03 Ethnic Relations

Please see the Course Listings section for a detailed description of the above courses.

Peace Studies
See Minor in Peace Studies in the Peace Studies, Faculty of Humanities section of this Calendar for requirements.

THEMATIC AREAS

The following listing is designed to assist you in choosing courses in areas of study, in which there is currently no B.A. programme.

Asian Studies
While there is no B.A. programme in Asian Studies, students interested in concentrating in this area may choose from among the following courses offered by various departments. Those desiring further information on specific courses should consult the departmental listing in the Calendar. (Students interested in Japanese Studies should enquire about the Combined Honours programme in Japanese Studies and Another Subject.)

Students wishing to pursue Asian Studies may obtain further information from Dr. D. Barrett, Chester New Hall, Room 625, ext. 24130, or Dr. K. Shinohara, University Hall, Room 126, ext. 2393.

COURSES DEALING STRICTLY WITH ASIAN MATERIAL

CMST 2AA3 Japanese Communication
COMMERCE 4SF3 Japanese Business
COMP LIT 3TT3 Modern Japanese Literature in Translation
GEO 3H3 Geography of Japan
HISTORY 2EA3 Islam and Mediterranean Society, 600-1300
HISTORY 2EB3 Islam in the World, 1300-1900
HISTORY 2GG3 China: Historical Foundations
HISTORY 3AA3 The Modern Middle East
HISTORY 3BO3 Modern Japan
HISTORY 3GG3 China: the Revolutionary Century, 1895-1995
HISTORY 4BB6 Special Topics in the History of Modern Japan
HISTORY 4GG6 Topics in Middle Eastern and Islamic History
RELIG ST 2EO3 Engaged Buddhism
RELIG ST 2FO3 Storytelling in East Asian Religions
RELIG ST 2JO3 Storytelling in Indian Religion
RELIG ST 2LO3 Life, Work and Teachings of Mahatma Gandhi
RELIG ST 2PO6 Japanese Civilization
RELIG ST 3AA3 Popular Religion in India
RELIG ST 3EO3 Japanese Religion
RELIG ST 3LO3 The Indian Religious Tradition
RELIG ST 3SO3 The East Asian Religious Tradition
RELIG ST 3U03 The Buddhist Tradition in India
RELIG ST 3U3 Buddhist in East Asia
RELIG ST 3V03 Indian Philosophy
RELIG ST 4AA3 Advanced Reading: Asian Religions
THR&FLM 2H03 The Contemporary Japanese Film

COURSES WITH SIGNIFICANT ASIAN CONTENT

ECON 2C03 Asian-Pacific Economies
POL SCI 4MM6 Topics in International Political Economy
RELIG ST 1B06 World Religions
RELIG ST 2BB3 Images of the Divine Feminine
RELIG ST 2HO3 Theory and Practice of Non-Violence
RELIG ST 2QQ3 Cults in North America
RELIG ST 2SS3 Women and Religion
RELIG ST 2WW3 Health, Healing and Religion

LANGUAGE COURSES

CHINESE 2A03 Introductory Modern Chinese I
CHINESE 2AA3 Introductory Modern Chinese II
JAPANESE 1Z03 Beginner's Intensive Japanese I
JAPANESE 1ZZ3 Beginner's Intensive Japanese II
JAPANESE 2Z03 Intermediate Intensive Japanese I
JAPANESE 2Z3 Intermediate Intensive Japanese II
JAPANESE 3A03 Advanced Intensive Japanese I
JAPANESE 3AA3 Advanced Intensive Japanese II
JAPANESE 3B03 Business Japanese I
JAPANESE 3CC3 Business Japanese II
JAPANESE 4L03 Japanese Literature
JAPANESE 4Z03 Advanced Practice in Japanese
JAPAN ST 4A06 Guided Reading in Japanese Studies
JAPAN ST 4B03 Guided Reading in Japanese Studies
SANSKRIT 3A06 Introduction to Sanskrit Grammar
SANSKRIT 4B06 Readings in Sanskrit Texts

Please see the Course Listings section for a detailed description of the above courses.

Canadian Studies

There is no B.A. in Canadian Studies, but students interested in this area may choose from among the following courses, subject to meeting the prerequisites.

HUMANITIES

ART HIST 3B03 Aspects of Canadian Art
ENGLISH 2C03 Contemporary Canadian Fiction
FRENCH 2E03 Literature of Quebec
FRENCH 3AA3 The Modern French-Canadian Novel
FRENCH 4U03 Topics in French-Canadian Literature
HISTORY 2T03 Survey of Canadian History, Beginnings to 1885
HISTORY 2TT3 Survey of Canadian History, 1885 to the Present
HISTORY 3G03 Business History: The Canadian Experience in International Perspective
HISTORY 3K03 Canadian Political Development Since 1840
HISTORY 3P03 The History of the Canadian Working Class
MUSIC 3T03 Canadian Music

SOCIAL SCIENCES

ANTHROP 3F03 Contemporary Northern Peoples
ANTHROP 3Y03 Aboriginal Community Health and Well-Being
ECON 2K03 Economic History of Canada
GEO 2HC3 Canada
GEO 3HT3 Geography of Planning
GEO 4H3 The Landscape of Urban Housing
GEO 4HC3 Politics and Government
POL SCI 1G06 Participation and Elitist Politics in Canada
POL SCI 1GD3 Canadian Foreign Policy
POL SCI 3G03 Federalism: Theoretical, Constitutional and Institutional Issues
POL SCI 3H03 Intergovernmental Policy Issues in Canada
POL SCI 3JJ3 Provincial Politics in Canada
POL SCI 4G06 Canadian Public Policy
POL SCI 4S06 Canadian Political Theory

Please see the Course Listings section for a detailed description of the above courses.
PART-TIME DEGREE STUDIES

The University offers a broad range of educational opportunities if you wish to take degree studies on a part-time basis. In addition to the daytime offerings in the Fall/Winter there is a wide selection of evening classes available in the Fall/Winter and Spring/Summer sessions. There is a limited number of daytime classes scheduled for the Spring/Summer session.

If you take degree courses, you will associate with one of the undergraduate Faculties (Business, Health Sciences, Humanities, Science or Social Sciences). By 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 programme 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 programmes of study. The programmes of study which are available entirely through evening and summer courses are indicated on the Degrees by Programme chart. In the Degrees, Programmes 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 programme descriptions found in the specific Faculty sections.

ADMISSION

Before you register for any degree course or programme, 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 programme.
- If you satisfy the University's normal admission requirements for full-time study, you may choose to register for part-time study in most programmes.
- If you do or 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 Programme Coordinator, Part-Time Degree Studies, Tina Horton at (905) 525-4600 for counselling and to discuss preparation and plans for degree study. 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 concerning programmes and courses is provided by the Academic Counsellors within each Faculty as follows:

- Business: ext. 23941
- Humanities: ext. 24326
- Science: ext. 27590
- Social Sciences: ext. 24604

Information about application procedures and admission regulations is available through the Office of the Registrar, Gilmour Hall, Room 108, (905) 525-4600.

Information about non-degree courses and programmes is available through the Centre for Continuing Education (905) 525-9140, ext. 24321.

MOHAWK/McMASTER EDUCATION INFORMATION CENTRE

The Mohawk/McMaster Education Information Centre in downtown Hamilton exists to provide information and maintain comprehensive collections of calendars and brochures concerning educational opportunities across Canada. The staff can help you to make contact with the appropriate persons at McMaster.

The Information Centre is at the Hamilton Public Library (Central Branch), 55 York Boulevard, Hamilton, L8R 3K1, just off Jackson Square, telephone (905) 522-3361.

MAPS

The McMaster Association of Part-time Students (MAPS) maintains an office and student lounge in the McMaster University Student Centre, Room 234, telephone (905) 525-9140, ext. 22021, and publishes a newsletter, The Link, which is sent to all part-time students. The office and lounge are open from Monday to Thursday, day and evening, and Friday during the day.

MAPS Executive Director, Jackie Osterman, is available during these hours to help students. All part-time students are invited to use these facilities and to assist their Association in its efforts to improve the quality and range of educational opportunities available to students who can only attend university on a part-time basis.
CERTIFICATE AND DIPLOMA PROGRAMMES

CENTRE FOR CONTINUING EDUCATION

Located at 50 Main Street East, Hamilton, 2nd Floor, the Centre for Continuing Education offers Certificate and Diploma programmes. 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.mcmasterce.com

CERTIFICATE AND DIPLOMA PROGRAMMES APPROVED FOR ADVANCED CREDIT

All CCE Certificate and Diploma programmes 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 Programmes in the Admission Requirements section of this Calendar.

ACCOUNTING, DIPLOMA IN (8956)
Maximum Credit Toward Degree Studies - 24 units
This eleven-course programme is designed for individuals planning a career in managerial or financial accounting. All courses satisfy programme requirements for both the Society of Management Accountants of Ontario (SMA) and the Certified General Accountants Association (CGA).

ADDITION CARE WORKER, 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.

ADDITION STUDIES, CERTIFICATE IN (8969)
Maximum Credit Toward Degree Studies - 15 units
This 15 unit programme is designed to provide elective studies in the field of addictions.

CASE MANAGEMENT, CERTIFICATE IN (8939)
Maximum Credit Toward Degree Studies - 15 units
This six-course programme 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.

FAMILY MEDIATION, CERTIFICATE/DIPLOMA IN (8938)
Maximum Credit Toward Degree Studies - 15 units (Certificate) - 24 units (Diploma)
This five-course (Certificate)/eight-course (Diploma) programme offers a rewarding career opportunity for people in a variety of professions to either gain new or expand their skills and knowledge in the field of alternative dispute resolution.

GEOGRAPHICAL INFORMATION SYSTEMS SPECIALIST, MOHAWK-MCMASTER, CERTIFICATE IN (8947)
Maximum Credit Toward Degree Studies - 15 units
This collaborative six-course programme is designed for those who have some experience in the field of GIS and who have some computer background.

HUMAN RESOURCES MANAGEMENT, DIPLOMA IN (8958)
Maximum Credit Toward Degree Studies - 24 units
This eight-course programme covers concepts and practices, current issues and areas of specialization important to human resources management. All courses satisfy requirements for the CHRP and HRPAO designations.

INFORMATION TECHNOLOGY (INFOTECH), CERTIFICATE IN (8920)
Maximum Credit Toward Degree Studies - 15 units
Designed to develop expertise in the new technologies entering the workplace, the programme consists of two levels of six courses each (Infotech Coach and Infotech Advisor). The emphasis is on computer knowledge and skills. Coach level courses are each three days (or six evenings), and Advisor courses are four days (or eight evenings) in duration. Courses are limited enrolment.

MANAGEMENT STUDIES, DIPLOMA IN (8929)
Maximum Credit Toward Degree Studies - 24 units
This eight course programme 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 programme comprehensively covers metallurgical principles involved in the extraction, refining and manufacturing of ferrous products.

MICROCOMPUTER SYSTEMS, DIPLOMA IN (8954)
Maximum Credit Toward Degree Studies - 12 units
This eight-course programme provides students with a thorough background in the fundamentals of computer science within the context of microcomputers.

MULTIMEDIA STUDIES, DIPLOMA IN (8930)
Maximum Credit Toward Degree Studies - 24 units
This programme focuses on technical, design and communication skills development in the multimedia field.

POLICE STUDIES, DIPLOMA IN (8921)
Maximum Credit Toward Degree Studies - 24 units
This programme (24 units) is designed to develop a capacity for critical inquiry at the university level, while augmenting the training received by police and security personnel.

VISUAL ART FOUNDATION STUDIES, DIPLOMA IN (8937)
Maximum Credit Toward Degree Studies - 24 units
This one year full-time programme is a joint partnership between McMaster University and the Dundas Valley School of Art. Offered fully on-site at DVSA, the programme provides a solid base for those seeking a foundation for further advanced study in the Visual Arts.

WRITING, CERTIFICATE IN (8941)
Maximum Credit Toward Degree Studies - 15 units
This programme covers the fundamentals and advanced study of writing and publishing across many different genres. It has been developed in collaboration with the Faculty of Humanities and members of the local writing community.

PROFESSIONAL ASSOCIATIONS AND INSTITUTES

Many McMaster Certificate and Diploma credit courses are recognized as course equivalencies by the following external associations and institutes:

- Addiction Intervention Association (AIA)
- Association of Administrative Assistants (QAA)
- Canadian Institute of Certified Administrative Managers (CAM)
- Canadian Institute of Management (CIM)
- Certified General Accountants Association of Ontario (CGA)
- Credit Union Institute of Canada (CUI)
- Credit Institute of Canada
- Human Resources Professionals Association of Ontario
- Institute of Canadian Bankers (ICB)
- Institute of Risk Management (CRM and FRM)
- Insurance Institute of Canada-Fellowship (IIFC)
- 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.

For information concerning other Diploma programmes offered at the University, please see the Post-Professional Health Sciences Education Programmes in the Faculty of Health Sciences section as well as the Diploma in Music Performance in the Faculty of Humanities section of this Calendar.
### COURSE LISTINGS

The courses listed in this section include all courses approved for the undergraduate curriculum for the 2002-2003 academic year. Not all courses in the approved curriculum will be offered during the year. Students are advised to refer to the course timetables available annually in March, May and August to determine which specific courses will be offered in the upcoming sessions.

#### ANTHROPOLOGY

**WEB ADDRESS:** [http://www.socsci.mcmaster.ca/~anthro](http://www.socsci.mcmaster.ca/~anthro)

**Chester New Hall, Room 524 Ext. 24423**

**Faculty as of January 15, 2002**

**Chair**
Matthew Cooper

**Professors**
Matthew Cooper/B.A. (Brooklyn College), M.Phil., Ph.D. (Yale)
Harvey Flat/B.A. (Queen's), M.A. Ph.D. (McGill)
William L. Rodman/B.A. (Sydney), M.A., Ph.D. (Chicago)
Shelley Saunders/B.A., M.A., Ph.D. (Toronto)

**Adjunct Professors**
Regina Daemel/Western Ontario) B.A. (Byrn Mawr), M.A., Ph.D. (Pennsylvania/ part-time
Michael Spence/Western Ontario) B.A., M.A., (Toronto), Ph.D. (Southern Illinois) part-time

**Associate Professors**
Ellen Badone/B.A., M.A. (Toronto), Ph.D. (California-Berkeley)
Aubrey Cannon/B.A. (Simon Fraser), Ph.D. (Cambridge)
Laura Finsten/B.A. (Western Ontario), M.A. (Calgary), Ph.D. (Purdue)
D.A. Herrington/B.A., M.A., Ph.D. (Toronto)
Trudy Nicks/Royal Ontario Museum) B.A., M.A., Ph.D. (Alberta) part-time
Petra Reithmann/B.A. (Vienna), M.A. (Munich), Ph.D. (McGill)
Wayne Warry/B.A., M.A. (McMaster), Ph.D. (ANU)
Dennis Willims/B.A. (Waterloo), M.A. (McMaster), Ph.D. (British Columbia)

**Adjunct Associate Professors**
Christopher Ellis/Western Ontario) B.A. (Waterloo), M.A. (McMaster),
Ph.D. (Simon Fraser) part-time
Dan W. Jorgenson/Western Ontario) B.A. (California State), Ph.D. (British Columbia) part-time

**Assistant Professors**
Eva Mackey/B.A. (Toronto), M.A., Ph.D. (Sussex)
Andrew Martindale/B.A. (Toronto), M.A. (Trent), Ph.D. (Toronto)
Christina Moffat/B.Sc. (Toronto), B.A., Ph.D. (McMaster)
Ana Nig/B.A., M.A., Ph.D. (York)

**Adjunct Assistant Professor**
Robert W. Park/Waterloo) B.A. (Toronto), M.A. (McMaster), Ph.D. (Alberta)

**Associate Members**
Eduard G. Reinhardt/Geography and Geology) B.A., Ph.D. (Carleton)

**Department Notes:**
1. Not all Anthropology courses listed in this Calendar are taught every year. Students are advised to consult the department’s webpage and the timetable which is published annually by the Registrar’s Office to determine whether a course is offered.
2. Registration in all courses with a course code ending “**” as listed as selected topics and independent research require prior arrangement with the instructor; otherwise, no grade will be submitted for the course.
3. To identify Anthropology courses by subdiscipline, students should refer to the lists of courses under Anthropology Subfields in the section Faculty of Social Sciences, Department of Anthropology.

### Courses

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 existing peoples, their ways of life, and the ways in which they interpret and experience their world. The course discusses a broad range of societies in order to explore some fundamental issues involving human knowledge and behaviour.
Two hours (lecture), one hour (tutorial); one term

**ANTHROP 1B03**  **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 1C03**  **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. Pre-historic, historic, and contemporary human nutrition, emphasizing links with the environment.
Three hours (lectures and discussion); one term

**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 2D03**  **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 2E03**  **HUMAN VARIATION AND EVOLUTIONARY CHANGE**
An introduction to the study of human evolution and variability in living species of man and non-human primates.
Three hours (lecture and discussion); one term
Prerequisite: Six units of Level I Anthropology. ANTHROP 1203 is strongly recommended.
This course is required of all students registered in an Honours Programme in Anthropology, and is a prerequisite for advanced courses in Physical Anthropology.

**ANTHROP 2F03**  **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.
This course is required of all students registered in an Honours Programme in Anthropology.

**ANTHROP 2FA3**  **FORENSIC ANTHROPOLOGY IN THE FORENSIC SCIENCES**
General introduction to anthropological methods used in the collection and analysis of legal evidence. Also examines the nature of evidence, professionalism, and human rights applications.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II and above
Offered in alternate years.

**ANTHROP 2FF3**  **HUMAN SKELETAL BIOLOGY AND BIOARCHAEOLOGY**
Study of the human skeleton (bones and dentition) for application in archaeology and forensic anthropology. Includes determination of sex, age, stature and other individual characteristics.
Three hours (lectures, discussion and lab); one term
Prerequisite: Registration in an Honours Anthropology programme. Completion of ANTHROP 1203 is strongly recommended.
Enrolment is limited.
ANTHROP 2Q03  READINGS IN MYTHOLOGY
This course will acquaint students with the myths of Ancient Greece, Ancient India, the Kelts, and the Norse. Other traditions may also be examined.
Three hours (lectures and discussion); one term

ANTHROP 2H03  ENVIRONMENT AND CULTURE
Relationships between human societies and their environments are examined. A focus is on how culture shapes our ideas of nature and the consequence of our actions. Case studies explore both environmental movements and aboriginal societies.
Three hours (lectures and discussion); one term

ANTHROP 2JJ3  HUMAN GROWTH AND CONSTITUTION
Variation in body form and composition examined in the context of normal growth and evolutionary development.
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 1AA3 or permission of the instructor
Cross-list: LINGUIST 2L03

ANTHROP 2LC3  LINGUISTICS AND CULTURE: 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 2G03/LINGUIST 2G03, ANTHROP 3L03

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 1AA3 (or 1A08); or permission of the Department
Cross-list: LINGUIST 2L03

ANTHROP 2LLP3  LANGUAGE AND PREHISTORY
A survey of the language families of the world, emphasizing the historical implications of language distributions. Historical linguistic methods will be introduced and compared with archaeological findings for prehistoric Eurasia, Africa, Oceania and North America.
Three hours (lectures and discussion); one term

ANTHROP 2M03  PHILOLOGY
A study of the patterns of distinctive sounds in the world's languages.
Three hours (lectures); one term
Prerequisite: One of ANTHROP 2L03, LINGUIST 1AA3 or 2L03
Cross-list: LINGUIST 2M03

ANTHROP 2O03  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 Programme in Anthropology.

ANTHROP 2R03  RELIGION, MAGIC, AND WITCHCRAFT
Selected issues in the study of religion, magic, and witchcraft, science, and the supernatural. Perspectives from history, psychology, and sociology also will be discussed.
Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 1A03 or 2F03

ANTHROP 2S03  PEOPLES OF RUSSIA
This survey course will examine the ethnicity, languages and histories of the people that fall or once fell within the lands that make up or adjoin the territory that was once the Soviet Union. Where possible, discussion of present conflicts or future tensions will be couched in terms of historical influences.
Three hours (lectures); one term

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
Antirequisite: ANTHROP 2V03

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 2W03

ANTHROP 2X03  VIOLENCE IN ANTHROPOLOGICAL PERSPECTIVE
The aim of the course is to assess the extent to which violence is both controlled and an expression of society and culture.
Three hours (lectures and discussion); one term

ANTHROP 2XX3  CONFLICT, CULTURE AND THE QUEST FOR PEACE
An interdisciplinary introduction to everyday violence, ethnic conflict, nonviolence, war and peace-building, from the perspectives of Anthropology and Peace Studies.
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 an Anthropology programme
Cross-list: SOCIOL 2Z03
Antirequisite: CMST 2A03, GEO 2H03, GERONTOL 2C03, HEALTH 2B03

ANTHROP 3A03  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  ETHNOLOGY: EUROPE
A comparative ethnological survey of selected societies in Europe.
Three hours (lectures and discussion); one term
Prerequisite: Six units of Social/Cultural 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: Registration in Level III or IV of any programme. ANTHROP 2E03 is highly recommended.

ANTHROP 3C06  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 3C03  CULTURE AND NATIONALISM
An examination of the interplay of culture and nationalism as found in today's wars. Current conflicts in the Balkans and Caucasus will serve as case studies.
Three hours (lectures and discussion); one term
ANTHROP 3D3 **ARCHAEOLOGY OF DEATH**
Archaeological analysis and interpretation of burial practices and other
death-r ritual.
Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 2PA3
Not open to students with credit in either ANTHROP 3E03 or ANTHROP 3EE3 if the topic was the Archaeology of Death.

ANTHROP 3E3 **SPECIAL TOPICS IN ARCHAEOLOGY I**
The topic varies with each instructor (e.g. one class may examine Anci ent Mesopotamian and Mesopotamian 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**
As per ANTHROP 3E03.
Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 2PA3

ANTHROP 3F03 **CONTEMPORARY NORTHERN PEOPLES**
An examination of current issues in relation to aboriginal peoples in selected northern regions of the world.
Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 1A03 or registration in a Health Sciences programme

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.

ANTHROP 3I3 **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, 3M03 or permission of the Department
Cross-list: LINGUIST 3I3
Offered in alternate years.

ANTHROP 3I3 **INDEPENDENT STUDY IN ANTHROPOLOGY**
Independent study of a research problem through published materials and/or fieldwork. It is incumbent upon the student to secure arrangements with the supervising instructor prior to registration in this course; otherwise, no grade will be submitted.
One term
Prerequisite: Registration in any programme in Anthropology and permission of the instructor
ANTHROP 3I3 may be repeated, if on a different topic, 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 2I03
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.

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 3NN3

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 programme in Anthropology

ANTHROP 3Q03 **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 2F03
Enrolment is limited.

ANTHROP 3R03 **ANTHROPOLOGICAL APPROACHES TO THE STUDY OF AGING**
An examination of the contribution of anthropology to the study of aging with an emphasis on cross-cultural comparisons, and including an assessment of the anthropological literature relating to the biological basis of aging in modern and prehistoric populations.
Three hours (lectures and discussion); one term
Prerequisite: Six units of Social/Cultural Anthropology or registration in any programme in Gerontology
Cross-list: GERONTOL 3R03

ANTHROP 3S03 **GENETICS IN ANTHROPOLOGY**
This course surveys genetic studies in anthropology, and considers key issues in the field, such as the human genome diversity project.
Three hours (lectures), one term
Prerequisite: ANTHROP 1203 or 2E03

ANTHROP 3T03 **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 an Anthropology programme

ANTHROP 3V3 **CULTURAL PSYCHOLOGY**
An introduction to concepts and topics in the anthropology of affect and emotion. The course attempts to widen issues of depression, violence, trance, and identity.
Three hours (lectures and discussion); one term
Prerequisite: Six units of Social/Cultural Anthropology

ANTHROP 3W03 **SPECIAL TOPICS IN ANTHROPOLOGY I**
The topic varies with each instructor (e.g. one class may examine Current Issues in Medical Anthropology and other classes may focus on Readings in Myth or Contemporary Issues in Archaeology.
One term
Prerequisite: Registration in any programme in Anthropology

ANTHROP 3W03 **SPECIAL TOPICS IN ANTHROPOLOGY II**
As per ANTHROP 3W03.
One term
Prerequisite: Registration in any programme in Anthropology
ANTHROP 3Y03  ABORIGINAL COMMUNITY HEALTH AND WELL-BEING
A critical examination of the determinants of health in Aboriginal communities, processes of community revitalization, and recent government policy initiatives.
Three hours (lecture and discussion); one term

ANTHROP 3Z03  MEDICAL ANTHROPOLOGY: THE BIOMEDICAL APPROACH
Patterns of stress and disease with emphasis on the modern biomedical approach. Disease in the evolutionary context with emphasis on disease as a failure of adaptation and response.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level III or IV of any programme. ANTHROP 2E03 or 2F03 is highly recommended.

ANTHROP 3ZZ3  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 programme. ANTHROP 2E03 or 2F03 is highly recommended.

ANTHROP 3AE3  ANTHROPOLOGY AND ENVIRONMENT
This course examines the different and rapidly changing ways in which anthropologists study human-environmental relationships. 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 programme, or permission of the instructor.

ANTHROP 4B03  CURRENT PROBLEMS IN ANTHROPOLOGY I
The topic varies with each instructor.
Three hours (seminar); one term
Prerequisite: Registration in Level IV Honours Anthropology or permission of the instructor.

ANTHROP 4BB3  CURRENT PROBLEMS IN ANTHROPOLOGY II
As per ANTHROP 4B03.
Three hours (seminar); one term
Prerequisite: Registration in Level IV Honours Anthropology

ANTHROP 4C03  COLONIAL HISTORIES, LIBERAL PRACTICES
This course examines issues of power and colonization, and the effects of decolonization and liberationist movements on the colonized.
Three hours (seminar); one term
Prerequisite: Registration in Level IV Honours Anthropology

ANTHROP 4D03  APPLIED ANTHROPOLOGY
An examination of how anthropology is applied to solve human problems. Includes discussion of how students can use their anthropological training in non-academic occupations.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level IV Honours Anthropology

ANTHROP 4E03  ADVANCED TOPICS IN ARCHAEOLOGY I
Study at an advanced level of selected topics in the sub-discipline. Topics may change from year to year.
Three hours (seminar); one term
Prerequisite: ANTHROP 2PA3

ANTHROP 4EE3  ADVANCED TOPICS IN ARCHAEOLOGY II
As per ANTHROP 4E03.
Three hours (seminar); one term
Prerequisite: ANTHROP 2PA3

ANTHROP 4F03  ARCHAEOLOGICAL THEORY
A seminar in current topics and issues in archaeological theory.
Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 2PA3 and registration in any honours programme

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 practice 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 grades will be submitted.
One term
Prerequisite: Registration in any programme in Anthropology and/or permission of the instructor.

ANTHROP 4G03**  INDEPENDENT RESEARCH II
As per ANTHROP 4G03**, but on a different topic.
One term
Prerequisite: Registration in Level IV Honours Anthropology

ANTHROP 4H03  ARCHAEOLOGY OF HUNTERS AND FORAGERS
Study of the prehistoric technologies and organizational strategies used in making a living from the natural environment, and examination of the cultural contexts of foraging economies.
Three hours (seminar); one term
Prerequisite: ANTHROP 2F03

ANTHROP 4I03  CONTEMPORARY ANTHROPOLOGICAL THEORY
Seminar on selected recent developments in anthropological theory.
Three hours (seminar); one term
Prerequisite: ANTHROP 2E03

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 2F03

ANTHROP 4J13  ADVANCED TOPICS IN PHYSICAL ANTHROPOLOGY II
As per ANTHROP 4J03.
Three hours (seminar); one term
Prerequisite: ANTHROP 2E03

ANTHROP 4L83  STRUCTURE OF A LANGUAGE (I)
An in depth examination of a language, usually one from the Caucasus, such as Circassian, Georgian, or Chechen. The phonetics, phonology, and morphology will be emphasized. The utility of current linguistic theory will be appraised.
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 the Calendar)
Cross-list: LINGUIST 4L83
Antirequisite: ANTHROP 4LA3, LINGUIST 4LA3

ANTHROP 4LC3  STRUCTURE OF A LANGUAGE (II)
An in depth examination of a language, usually one from the Caucasus, such as Circassian, Georgian, or Chechen. The phonetics, phonology, and morphology will be emphasized. The utility of current linguistic theory will be appraised.
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 the Calendar)
Cross-list: LINGUIST 4LC3
Antirequisite: ANTHROP 4LA3, LINGUIST 4LA3

ANTHROP 4M03  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 an Honours programme in Social Sciences

ANTHROP 4P03  ANTHROPOLOGY OF SPACE AND PLACE
This course will consider recent research drawn from a number of disciplines concerned with the human environment as a social and cultural construction. Topics may include: experience and sense of place; the social construction of urban space; ideology and built form; spatial discourses.
Three hours (seminar); one term
Prerequisite: Registration in Level IV Honours Anthropology or permission of the instructor.

ANTHROP 4Q03  GLOBAL PROCESSES AND LOCAL CONSEQUENCES
The seminar seeks: 1) to discern the linkages between some of the main processes at work in global systems; 2) to discuss in what ways these processes are global and in what ways they are systematic; 3) to develop hypotheses for the framework of global-scale social theory.
Three hours (seminar); one term
Prerequisite: Registration in an Honours programme in Social Sciences.
ART 4R03 SKELETAL BIOLOGY OF EARLIER HUMAN POPULATIONS

The analysis of human skeletal samples, including such topics as paleopathology, paleodentigraphy, palaeoentrophy and biological distance analyses.

Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 2F03
Antirequisite: ANTHROP 3C06

ANTHROP 4G03 THE ANTHROPOLOGY OF INFECTIOUS DISEASE

The critical examination of the role of infectious diseases in the course of human history and contemporary society. Self-directed learning format.

Three hours (seminar); one term
Prerequisite: ANTHROP 2E03 and registration in Level IV Honours Anthropology

Not open to students with credit in ANTHROP 4J03 if the topic was Infectious Disease and Human Evolution.

ANTHROP 4U03 PREHISTORY OF THE BRITISH ISLES

A seminar course in the archaeology of Great Britain and Ireland from the Lower Paleolithic to the Bronze Age. Within these limits, chronology and topical emphasis may vary.

Three hours (seminar); one term
Prerequisite: ANTHROP 2P03

ANTHROP 4X03 ADVANCED TOPICS IN LINGUISTIC THEORY

Issues in different aspects of Linguistic Theory and Advanced Philology. Consult the Department of Modern Languages and Linguistics for the topics to be offered.

Two hours (seminar); one term
Prerequisite: One of ANTHROP 3I03, 3M03, LINGUIST 3I03, 3M03
Cross-list: LINGUIST 4X03
ANTHROP 4X03/LINGUIST 4X03 may be repeated, if on a different topic, to a total of six units.
Offered in alternate years.

ANTHROP 4Y03 DEVELOPING SOCIETIES

Topics may include, for example, the meaning of development, innovation and technological change, urbanization and protest movements.

Three hours (lectures and discussion); one term
Prerequisite: Registration in Level III or IV Honours Anthropology

ART

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

Courses and programmes 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 programme in Honours Art.

Courses

ART 1F06 STUDIO PRACTICE

An introduction to visual art fundamentals.

Six hours; two terms
Prerequisite: Permission of the School of the Arts based on a required portfolio interview. If you intend to take ART 1F06 which is required for entrance into any Honours Art programme, you must make an appointment with the School for a portfolio interview in February/March. The portfolio should contain a variety of original work in different media including work derived from both first-hand observation and the imagination. Aptitude in art and academic ability are both 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. Late applications will be considered subject to space availability and merit after the first allocations have been confirmed in June. Applicants for this course should use the MHA ONAC code.
Corequisite: SCIENCE 1A00

ART 2A06 PAINTING I

A series of painting projects designed to provide a technical and conceptual foundation for individual creative production in the field of painting.

Four hours studio lab; two hours Independent study; two terms
Prerequisite: ART 1F06

ART 2B06 SCULPTURE I

A series of three dimensional investigations designed to inform and expand the student's experience in producing sculptural works of art. Training in technical aspects of bronze casting, welding, fabrication and modelling are provided.

Four hours studio lab; two hours independent study; two terms
Prerequisite: ART 1F06

ART 2C06 DRAWING I

An exploration of a variety of approaches to drawing with an emphasis on the study of the figure and compositional concepts.

Four hours studio lab; two hours independent study; two terms
Prerequisite: ART 1F06

ART 2F06 PRINTMAKING I

An introduction to printmaking techniques including monotypes, collographs and edited prints in intaglio, lithography and relief. Emphasis will be on developing personal images that relate to these techniques.

Four hours studio lab; two hours independent study; two terms
Prerequisite: ART 1F06

ART 2G03 BASIC DRAWING

Students will gain exposure to a broad range of drawing media and approaches by working through a series of foundation studio exercises. Designed for non-art majors, students will acquire an understanding of how ideas can be formed and developed through visual thinking and manipulation of materials.

Three hours studio lab; one term
Not open to students with credit or registration in ART 1F06 or an Honours Art programme.
Enrolment is limited to 25 students.

ART 2H03 VISUAL INQUIRY

This course provides an in-depth investigation into one or more aspects of art. Students will be given opportunity for writing, discussing and responding creatively to assignments. No previous training in art required.

Three hours; one term

ART 3A03 ADVANCED PAINTING I

A series of prescribed assignments and independent projects focused on improving skills and fostering personal direction in the field of painting.

Three hours studio lab; two terms
Prerequisite: ART 2A06

ART 3B03 ADVANCED SCULPTURE

A series of advanced workshops and projects designed to develop individual artistic direction in the field of sculpture.

Three hours studio lab; two terms
Prerequisite: ART 2B06

ART 3C03 DRAWING II

An exploration of drawing with an emphasis on refining skills and developing personal direction.

Three hours studio lab; two terms
Prerequisite: 2C06

ART 3D03 PRACTICAL ISSUES IN STUDIO ART I

This course integrates studio workshops and theme-based projects with required readings, discussion sessions, and lectures. It is designed to expose students to a wide range of art practices and issues involved in the field of art. This course is taught by a team of studio faculty.

Three hours; one term
Prerequisite: Registration in Level III Honours Art or Combined Programme with Honours Art

ART 3D03 PRACTICAL ISSUES IN STUDIO ART II

This course integrates studio workshops and theme-based projects with required readings, discussion sessions, and lectures. It is designed to expose students to multimedia and interdisciplinary approaches to art making. This course is taught by a team of studio faculty.

Three hours; one term
Prerequisite: Registration in Level III Honours Art or Combined Programme with Honours Art
This course combines supervised self-directed study in studio art with self-assessment exercises. It provides opportunities for students working in diverse media and approaches to come together for critical discussion sessions with a team of studio faculty, peers from studio art and art history and visiting artists and art historians. 76 hours scheduled activities: 52 hours critiques; 24 hours Visiting Artists' lectures.

Prerequisite: Registration in Level III Honours Art or Combined Programme with Honours Art and a grade of at least B- in a minimum of six units of Level II Art.

ART 3G06
STUDIO PRACTICE AND CRITICISM
A study of the major movements and styles in painting and sculpture from c. 1780 to c. 1960.

Three lectures; one term
Prerequisite: Registration in Level II or above

ART HIST 2D03
19TH- AND 20TH-CENTURY ART AND ARCHITECTURE

An introduction to the history of graphic, two-dimensional design. The course demonstrates the admixture of high and popular culture that informs advertising, poster, book design and illustration, etc.

Three lectures; one term
Prerequisite: Registration in Level II or above. Prior completion of ART HIST 1A06 or 1A03 and 1A3 is recommended.

Cross-list: CMST 2N03, MMEDIA 2F03
This course is administered by the School of the Arts.

ART HIST 2H03
AESTHETICS
An introduction to the nature of art, criticism, and the place of art in life and society.

Three lectures; one term
Prerequisite: Registration in Level II or above

ART HIST 2I03
RENAISSANCE AND BAROQUE ART

An introduction to the history of European art in the period 1400 to 1750.

Three lectures; one term
Prerequisite: Registration in Level II or above

ART HIST 3A03
CONTEMPORARY ART

An examination of major developments in painting, sculpture, and other media from World War II to the present together with a review of related critical theory.

Three lectures; one term
Prerequisite: Registration in Level II or above. Prior completion of ART HIST 2D03 is recommended.

Offered in alternate years.

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

ART HIST 3D03
BAROQUE ART

An examination of European art emerging in the period 1580-1750 with a special emphasis on the continuing evolution of the classical tradition.

Three lectures; one term

Prerequisite: Registration in Level II or above. Prior completion of ART HIST 2I03 is recommended.

ART HIST 3G03
LATE ANTIQUE AND EARLY CHRISTIAN ART

The art and architecture of the later Roman Empire, and the birth of Christian Art (A.D. 200-600).

Three lectures; one term

Prerequisite: ART HIST 2G03
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 2H03
Cross-list: CLASSICS 3H03
Alternates with ART HIST 3G03.
This course is administered by the Department of Classics.

ART HIST 3I03
ITALIAN PAINTING AND SCULPTURE 1400-1580

An advanced level lecture course dealing with selected artists and works from the Early Renaissance to Mannerism.

Three lectures; one term

Prerequisite: Registration in Level II or above. Prior completion of ART HIST 2I03 is recommended.
Alternates with ART HIST 3I03.
ART HIST 3J03  ISSUES IN 19TH-CENTURY ART
An historical and critical investigation of selected issues and artists of the 19th-Century. 
Three lectures; one term
Prerequisite: Registration in Level II or above. Prior completion of ART HIST 2D03 is recommended. 
Antirequisite: ART HIST 3N03.  
Alternates with ART HIST 3B03.

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 pre-set number of Studio Critiques and Visiting Artists’ Talks.  
Seminar (two hours); one term
Prerequisite: Registration in Level III or above. Prior completion of ART HIST 2103 is recommended.  
Alternates with ART HIST 3R03.

ART HIST 3S03  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. Prior completion of ART HIST 2103 is recommended.  
Alternates with ART HIST 3R03.

ART HIST 3503  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 2103 is recommended.  
Alternates with ART HIST 3103.

ART HIST 4A03  SPECIAL STUDIES IN CONTEMPORARY ART
An in-depth examination of one or more significant movements in contemporary art, theory and criticism from 1970 to the present. Topics will include such movements as Minimal Art, Conceptual Art, Earthworks, Body Art, Photo-Realism, Pattern and Decoration, Neo-Expressionism, etc.  
Seminar (two hours); one term
Prerequisite: ART HIST 3A03  
Alternates with ART HIST 4H03.  
Enrolment is limited.

ART HIST 4B03  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 programme in Art History  
Cross-list: CLASSICS 4B03
ART HIST 4B03 may be repeated, if on a different topic, to a total of six units.  
Enrolment is limited.

ART HIST 4C03  THE HIGH RENAISSANCE
A seminar devoted to consideration of selected themes relating to the High Renaissance in Italy.  
Seminar (two hours); one term
Prerequisite: ART HIST 2M03 or 3I03  
Alternates with ART HIST 4E03.  
Enrolment is limited.

ART HIST 4E03  TOPICS IN EUROPEAN ART (1300-1750)
A course of readings and discussions, under the guidance of a faculty member, concerning European art and artists from 1300 to 1750. Consult the School for the topic to be offered.  
Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of an Art, Art History, or Multimedia programme  
Alternates with ART HIST 4C03.  
ART HIST 4E03 may be repeated, if on a different topic, to a total of six units.  
Enrolment is limited.

ART HIST 4H03  TOPICS IN MODERN ART (1750-PRESENT)
A course of readings and discussions, under the guidance of a faculty member, concerning nineteenth- and twentieth-century art and artists. Consult the School for the topic to be offered.  
Seminar (two hours); one term
Prerequisite: ART HIST 2D03, 3A03  
Alternates with ART HIST 4A03.  
ART HIST 4H03 may be repeated, if on a different topic, to a total of six units.  
Enrolment is limited.

ART HIST 4O06  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 programme 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 programme in Art History, Communication Studies or Multimedia  
Cross-list: CMST 4P03  
Alternates with ART HIST 4C03.  
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 programme in 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

Director
Gary A. Warner

Council of Instructors
Sylvia Bowerbank (English and Arts & Science) B.A. (McMaster), B.Ed. (Toronto), M.A. (Simon Fraser), Ph.D. (McMaster)  
Geoffrey Brooks (Materials Science and Engineering) B.Eng. (RMIT), B.A. (Swinburne), Ph.D. (Melbourne)  
John D. Browning (Modern Languages and Linguistics) B.A., M. Phil. (London), Ph.D. (Essex)  
Nialhalo H. Galagolico (Political Science) B.A. (Chile), M.A., Ph.D. (Toronto)  
Phyllis Granoff (Religious Studies) B.A. (Radcliffe College), Ph.D. (Harvard)  
Louis I. Greenspan (Religious Studies) M.A. (Dalhousie), Ph.D. (Brandeis)  
Robert J. Henderson (Kinesiology) B.P.E. (McMaster), M.A. (Alberta)  
Robert C. Hudspith (Mechanical Engineering) B.Eng., M.Eng. (McMaster), M.Eng. (Melbourne)  
Harsh C. Jain (Business) B.Com., (Delhi), M.B.A. (India), Ph.D. (Wisconsin)  
Atil A. Kubursi (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)  
Graeme M. Luke (Physics and Astronomy) B.Sc. (Queen's), Ph.D. (British Columbia)  
Alan Mendelson (Religious Studies) A.B. (Kenyon College), M.A. (Brandeis), Ph.D. (Chicago)  
Sera H. Mendelson (Arts & Science) B.A. (Chicago), D.PhiL (Oxford)  
P.K. Rangachari (Medicine) M.B.B.S. (All India Institute of Medical Sciences, New Delhi), Ph.D. (Alberta)  
Koichi Shinohara (Religious Studies) B.L. M.L. (Tokyo), Ph.D. (Columbia)
Pamela Sugiman(Sociology) B.A., M.A., Ph.D. (Toronto)
Roman Viveros-Aguilar(Mathematics and Statistics) B.A. (Veracruzana, Mexico), M.A. (National Polytechnic Inst, Mexico), Ph.D. (Waterloo)
Mark Vorobel(Peace Studies and Philosophy) B.A. (Carleton), N.A., Ph.D. (Toronto)
Gary Wormald(French) B.A. (London), L. 6s L, D. de 'U. (Caen)
Jean Wilson(Modern Languages and Linguistics and Comparative Literature) B.A. (McMaster), B.Ed., M.A., Ph.D. (Toronto)

Notes:
1. Prerequisites: The prerequisite for all Level I, II, III and IV Arts & Science courses is registration in the Arts and Science Programme.
2. Limited Enrolment: Enrolment in Level I of the Arts and Science Programme is limited to approximately 60 students.

Courses

ARTS&SCI 1A06 WESTERN CIVILIZATION
An examination of significant themes in Western social and intellectual history, including theories of historical change and the influence of class, race and gender on the evolution of social systems.

ARTS&SCI 1B05 WRITING AND INFORMAL LOGIC
The primary aim of this course is to develop the student's critical and analytical skills in dealing with the written word. Students will examine the structure of selected texts, analyze various types of reasoning, and receive individual attention in expository writing.

ARTS&SCI 1C06 INQUIRY
This Inquiry course, designed to develop skills basic to the systematic evidence-based investigation of public issues, focuses on issues relevant to Third World Development.

ARTS&SCI 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 1A04 is a prerequisite.

ARTS&SCI 2A06 MODERN WESTERN CIVILIZATION
Development of political, economic, sociological and psychological thought in the writings of such major figures as Hobbes, Locke, Rousseau, Adam Smith, Burke, Tocqueville, Marx, Mill, Weber, von Hayek, Polanyi, Nietzsche, Schopenhauer, Freud and Skinner.

ARTS&SCI 2D06 PHYSICS
This course explores many of the great concepts of physics in a quantitative way. Beginning with Newtonian mechanics, it moves into Einstein's relativity, wave phenomena, atomic physics, quantum mechanics, and cosmology. Selected laboratory projects will be carried out.

ARTS&SCI 2R06 STATISTICS: MATHEMATICAL MODELS FOR CHANGE, CHANCE AND ERROR
Probability, distributions, measures of association, tests of significance, mathematical models, and other quantitative methods useful in the analysis of variable phenomena, are considered.

ARTS&SCI 3A06 LITERATURE
Literary works drawn from a variety of genres and periods will be examined. The course will focus on the ways in which great writers have treated enduring human ethical concerns. It will attempt to show how literary creativity involves the matching of formal and stylistic mastery, on the one hand, with ethical awareness on the other.

ARTS&SCI 3B03 TECHNOLOGY AND SOCIETY I
The Culture of Technology. Current technological practices and approaches are studied as a cultural activity with its own beliefs, values, social structures and institutions.

Prerequisite: STPP 2A06

ARTS&SCI 3BB3 TECHNOLOGY AND SOCIETY II
The Social Control of Technology. The dominant mechanisms of the social control of technology will be studied. Includes an examination of assessment methods and the role of ethics.

Prerequisite: ARTS&SCI 3B03

ARTS&SCI 3C06 INQUIRY TOPIC: ENVIRONMENTAL EDUCATION
Environmental crisis will be explored as a result 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 3D06 INQUIRY TOPIC: DISCOVERY: THE CONTEXT OF SCIENTIFIC RESEARCH
Using a problem-based approach, the antecedents and consequences of scientific discoveries will be explored. Issues discussed will include: organization of laboratories, funding, publications, priority disputes, rewards, frauds, academic-industry links, patents, experimental ethics.

ARTS&SCI 3E06 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.

ARTS&SCI 3H06 INQUIRY TOPIC: DIVERSITY AND MULTICULTURALISM
The social and economic impact of factors such as gender, race, culture and demographics is examined in such spheres as employment, family, and media in Canada and selected countries.

ARTS&SCI 3L03 THE EAST ASIAN 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 3L03


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 3S03, JAPAN ST 3S03

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 Programme office.

ARTS&SCI 4A12 INDIVIDUAL STUDY
The same as ARTS&SCI 4A06 but based on more extensive study.

ARTS&SCI 4C12 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 Programme office.

ARTS&SCI 4C06 THESIS
The same as ARTS&SCI 4C12 but based on more extensive research.

ASIAN STUDIES

(SEE INTERDISCIPLINARY MINORS AND THEMATIC AREAS)

ASTRONOMY

(SEE PHYSICS AND ASTRONOMY)

BIOCHEMISTRY

WEB ADDRESS: http://www.science.mcmaster.ca/biochem/
Health Sciences Centre, Room 4N59
Ext. 22059

Faculty as of January 15, 2002

Chair
Gerard D. Wright

Professors
Vittal S. Aranthanarayanan/B.Sc., M.Sc., Ph.D. (Madras)
David W. Andrews/B.Sc. (Ottawa), Ph.D. (Toronto), Senior Canada Research Chair
John P. Capone/B.Sc. (Western Ontario), Ph.D. (McMaster)
Richard M. Epand/A.B. (Johns Hopkins), Ph.D. (Columbia)
Gerhard E. Gerber/B.Sc., Ph.D. (Toronto)
Harj P. Ghoost/B.Sc., M.Sc., D.Phil. (Calcutta)
BIOCHEMISTRY

Radhey S. Gupta/B.Sc. (Agra U., India), M.Sc. (New Delhi), Ph.D. (Bombay)
Richard J. Haslam/M.A., D.Phil. (Oxford), Professor of Pathology
John A. Hassell/B.Sc. (Brooklyn College), Ph.D. (Connecticut)
Evert Nieboer/M.Sc. (McMaster), Ph.D. (Waterloo)
Daniel S.C. Yang/B.Sc., M.Sc. (Alberta), Ph.D. (Pittsburgh)
Boris S. Zhorov/M.Sc., Ph.D., B.Sc. (St. Petersburg)

Associate Professors
Douglas W. Bryant/B.Sc. (McGill), M.Sc., Ph.D. (York)/part-time
Gerard D. Wright/B.Sc., Ph.D. (Waterloo), Senior Canada Research Chair

Assistant Professors
Paul J. Bert/B.Sc. (Waterloo), M.Sc. (Ottawa), Ph.D. (McGill)
Eric D. Brown/B.Sc., M.Sc., Ph.D. (Queen's), Canada Research Chair
Cécile Fradin/B.Sc., M.Sc. (Ecole Normale Supérieure, Paris), Ph.D. (Université Pierre et Marie Curie, Paris)
Murray S. Junop/B.Sc., Ph.D. (Western Ontario)
Yingfu Li/B.Sc., M.Sc. (Beijing Agr. U.), M.D. (Simon Fraser), Canada Research Chair
Michelle L. MacDonald/B.Sc., Ph.D. (McMaster)
Justin R. Nodwell/B.Sc., Ph.D. (Toronto)
Ray Truant/B.Sc., Ph.D. (Toronto)
Bernardo L. Trigatti/B.Sc., Ph.D. (McMaster)

Associate Members
Stephanie A. Aitkenson (Pediatrics) B.A. (Western Ontario), Ph.D. (Toronto)
John D. Brennan (Chemistry) B.Sc., Ph.D. (Toronto), Canada Research Chair
Jack Gauldie (Pathology) B.Sc. (McMaster), Ph.D. (University College, London, UK)
Brian F. Leber (Medicine) B.Sc., M.D.C.M. (McGill), F.R.C.P.C.
William J. Muller (Pathology) B.Sc., Ph.D. (McGill)
Gurmit Singh (Pathology) B.Sc., Ph.D. (Dalhousie)
Peter F.M. Whyte (Pathology) B.Sc., M.Sc., (British Columbia), Ph.D. (New York)

Courses

If no prerequisite is listed, the course is open.

BIOCHEM 2B03 NUCLEIC ACID STRUCTURE AND FUNCTION
Fundamental concepts and experimental methods in studying both DNA and RNA. Nature of genetic information and its storage. Molecular basis of replication, transcription, translation and translation.
Three lectures; second term
Prerequisite: BIOCHEM 2BB3; and one of CHEM 20A3, 2B83; and registration in one of CHEM 2BB3, 20B3; and credit or registration in BIOLOGY 2C03
Antirequisite: BIOCHEM 2A08, 3B03, 3BT3, 3G03

BIOCHEM 2B83 PROTEIN STRUCTURE AND ENZYME FUNCTION
Three lectures; first term
Prerequisite: BIOLOGY 1A03, CHEM 1AA3
Corequisite: One of CHEM 2B83, 2A03, and one of CHEM 2PA3, 2R03
Antirequisite: BIOCHEM 2A06, 3BB3, 3BT3, 3G03

BIOCHEM 2EE3 METABOLISM AND PHYSIOLOGICAL CHEMISTRY
A brief introduction to proteins, enzymes and gene expression followed by a more detailed treatment of energy and intermediary metabolism with emphasis on physiological chemistry.
Three lectures; second term
Prerequisite: One of CHEM 2B06, 2B83, 20D3, 2E03, 2006, 20A3
Antirequisite: BIOCHEM 2A06, 2E03, 3D03

BIOCHEM 3BT3 STRUCTURE AND FUNCTION OF MACROMOLECULES
Aspects of protein and nucleic acid structure at an intermediate level. Mechanism of enzyme catalyzed reactions. Processing of genetic information and its mechanism.
Three lectures; first term
Prerequisite: BIOCHEM 2A06
Antirequisite: BIOCHEM 2B03, 2BB3, 3BB3, 3G03
Offered in 2002-2003 only.

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: One of BIOCHEM 2A06, 3D03; and registration in Honours Biochemistry (Molecular Biology Specialization)

BIOCHEM 3D03 METABOLISM AND REGULATION
Three lectures; first term
Prerequisite: BIOCHEM 2B83
Antirequisite: BIOCHEM 2A06, 2EE3

BIOCHEM 3G03 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 20A3 and 2B83; or CHEM 2B03 and 2BB3; or a grade of at least B+ in one of CHEM 2D03, 2E03; or CHEM 3E03 and registration in a Chemical Engineering programme
Antirequisite: BIOCHEM 2A06, 2B03, 2BB3, E203, 3BT3

BIOCHEM 3H03 CLINICAL BIOCHEMISTRY
An outline of clinical chemistry; its relation to disease and relevance to health care.
Three lectures; second term
Prerequisite: One of BIOCHEM 2A06, 3D03; or both BIOCHEM 2EE3 and 3G03; or a grade of at least C+ in BIOCHEM 2EE3

BIOCHEM 3L03 BIOCHEMISTRY LABORATORY I
Illustration of fundamental principles and techniques of experimental biochemistry and molecular biology.
One lab (three hours), one tutorial (three hours); first term
Prerequisite: One of BIOCHEM 2A06, 2B03 and registration in Honours Biochemistry or Honours Molecular Biology; or both BIOCHEM 2EE3 and 3G03 and registration in Honours Biological Chemistry or Honours Chemistry (Biological Specialization).
Antirequisite: BIOCHEM 3E03

BIOCHEM 3L04 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, 3D03; or both BIOCHEM 2EE3 and 3G03; or a grade of at least C+ in BIOCHEM 2EE3

BIOCHEM 3L05 BIOCHEMISTRY LABORATORY II
A preparation for independent experimental work in molecular biology and biochemistry. Multiple techniques are used together to answer complex biochemical questions in both E.coli and Saccharomyces cerevisiae.
One lab (three hours), one tutorial (three hours); second term
Prerequisite: BIOCHEM 3L03; and either registration in an Honours Biochemistry Specialization, or permission of the Department. Application for permission must be received by March 31st of the academic year prior to registration.
Antirequisite: BIOLOGY 3V03
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOCHEM 4B06 SENIOR PROJECT IN BIOCHEMISTRY
An extended research project in biochemistry or molecular biology supervised by a member or associate member of the Department of Biochemistry. It provides a suitable experience for graduate school or industry. Assessment is based on laboratory work, a poster presentation and a final report.
Three labs (three hours); two terms
Prerequisite: BIOCHEM 3P03 and registration in an Honours Biochemistry Specialization. Permission of the Department is required. Application for permission must be received by March 31st of the academic year prior to registration. Students are expected to have a CA of at least 8.0.
Antirequisite: BIOCHEM 4B98, 4P99, 4G03, 4L03, 4L04, 4P03, CHEM ENG 4LL3
Enrolment 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 an Honours Biochemistry programme.
Antirequisite: HTH SCi 3H03, 4A09, 4B08
Not open to students registered in Honours Biochemistry (Specialist) or in an Honours Biochemistry Specialization.

BIOCHEM 4E03  RECOMBINANT DNA TECHNOLOGY
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

BIOCHEM 4E09  ADVANCED TOPICS IN GENE EXPRESSION
Study of the literature on recent developments in gene regulation including structural analysis of RNA polymerase and ribosome. Effects of hormones and the cell cycle on normal gene function and in various disease states. Three lectures; second term
Prerequisite: BIOCHEM 4E03

BIOCHEM 4G03  BIOTECHNOLOGY AND GENETIC ENGINEERING LABORATORY
Recombinant DNA technology, including experiments on cloning, directed mutagenesis, DNA sequencing, expression of cloned genes and fermentation.
Two labs (four hours); second term
Prerequisite: BIOCHEM 3P03 and registration in an Honours Biochemistry Specialization. Permission of the department is required. Application for permission must be received by March 31st of the academic year prior to registration. Students are expected to have a C.A. of at least 9.5
Antirequisite: BIOCHEM 4G06, 4BB6, 4F09, 4G03, 4L3, 4P03, CHEM ENG 4L13

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; second term
Effective 2003-2004: Offered in first term
Prerequisite: One of BIOCHEM 3BB3, 3BT3, 3D03; or BIOCHEM 3G03 and registration in a Chemical Engineering programme
Antirequisite: BIOCHEM 4G03

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: One of BIOLOGY 3X03, 4J03; and one of BIOLOGY 3H03, BIOCHEM 3B03, 3BT3, 3D03, 3G03
Cross-list: HTH SCI 4J03, MOL BIOL 4J03

BIOCHEM 4K03  STRUCTURE AND FUNCTION OF MEMBRANES AND MACROMOLECULES
Three lectures; second term
Prerequisite: One of BIOCHEM 3BB3, 3BT3, 3D03, 3G03
Antirequisite: BIOCHEM 4L03, 4M03

BIOCHEM 4L03  ADVANCED BIOCHEMISTRY LABORATORY
Fundamental principles of experimental biochemistry with emphasis on modern methods in enzymology and molecular biology.
Two labs (four hours); first term
Prerequisite: BIOCHEM 3L03; one of BIOCHEM 2B03, 3B03, BIOLOGY 3H03; and one of BIOCHEM 3BB3, 3BT3, 3D03
Antirequisite: BIOCHEM 4B06, 4BB6, 4F09, 4G03, 4L3, CHEM ENG 4L13, MOL BIOL 4F09

BIOCHEM 4M03  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 bioprocessing operations.
Two labs (four hours); second term
Prerequisite: Credit or registration in BIOCHEM 4H03; and either registration in Level II Honours Biochemistry (Biotechnology and Genetic Engineering Specialization), or BIOCHEM 3G03 and registration in a Chemical Engineering programme
Antirequisite: BIOCHEM 4B06, 4BB6, 4F09, 4G03, 4L3

BIOCHEM 4P03  ADVANCED PROJECT IN BIOCHEMISTRY
A project supervised by a member or associate member of the Department of Biochemistry. Assessment is based on laboratory work and a final report.
Three labs (three hours); may be taken first or second term
Prerequisite: One of BIOCHEM 3P03, BIOLOGY 3V03; and one of BIOCHEM 3BB3, 3BT3, 3D03, BIOLOGY 3H03; and registration in an Honours Biochemistry Specialization or Honours Biochemistry (Specialist), or Honours Molecular Biology programme. Permission of the Department is required. Application for permission must be received by March 31st of the academic year prior to registration. Students are expected to have a C.A. of at least 7.0.
Antirequisite: BIOCHEM 4B06, 4F09, HTH SCI 3H03, 4A09, 4B08, MOL BIOL 4F09

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOCHEM 4Q03  BIOCHEMICAL PHARMACOLOGY
The pharmacological and biochemical basis of drug absorption, distribution, metabolism, biotransformation, toxicity and susceptibility. Chemical carcinogenesis and mechanism of action and cellular resistance to antibacterial and anticancer drugs.
Three lectures; first term
Prerequisite: One of BIOCHEM 3BB3, 3D03; or both BIOCHEM 2EE3 and 3G03

BIOLOGY
WEB ADDRESS:  http://www.science.mcmaster.ca/biology/
Life Sciences Building, Room 118
Ext. 23049

Faculty as of January 15, 2002

Chair
Turlough M. Finan

Associate Chairs
John N.A. Lott
Elizabeth A. Weretilnyk

University Professor
Frank L. Graham (Pathology and Molecular Medicine) B.Sc. (Manitoba), M.A., Ph.D. (Toronto)

Professors
Turlough M. Finan (NSc, M.Sc. (Galway, Ireland), Ph.D. (Guelph)
G. Brian Golding (B.Sc. (Dalhousie), Ph.D. (Alberta/Senior Research Chair)
DeWitt G. Harnish (Pathology and Molecular Medicine) B.Sc., M.Sc., Ph.D. (McMaster)
John A. Hassell (Biochemistry, Pathology and Molecular Medicine) B.Sc. (McMaster), Ph.D. (Connecticut)
J. Roger Jacobs B.Sc. (McMaster), M.Sc., Ph.D. (Calgary)
Jane Kolesa M.Sc., Ph.D. (Poznan)
John N.A. Lotu B.Sc. (British Columbia), M.Sc., Ph.D. (California-Davis)
D. Gordon McDonald B.Sc. (Western Ontario), M.Sc., Ph.D. (Calgary)
Colin A. Nurse B.Sc., Ph.D. (Western Ontario), Ph.D. (Harvard)
Michael J. O'Donnell B.Sc., Ph.D. (Toronto)
Andrew J. Rainbow B.Sc., M.Sc., Ph.D. (McMaster)/Undergraduate Advisor
C. D. K. O'Connor B.Sc., M.Sc. (McMaster), Ph.D. (Biology)
Rama S. Singh B.Sc. (Agric. M.Sc. (Agric.), Ph.D. (California-Davis)
George J. Sorge B.Sc. (McGill), M.S., Ph.D. (Yale)
Christopher M. Wood B.Sc., M.Sc. (British Columbia), Ph.D. (East Anglia)/Senior Canada Research Chair

Associate Professors
Ana Campos B.A., M.A. (Ria de Janeiro), Ph.D. (Brandeis)
Patricia Chow-Fraser B.Sc., M.Sc. (Waterloo), Ph.D. (Toronto)/Undergraduate Advisor
James S. Quinn B.Sc. (Queen's), M.Sc. (Brock), Ph.D. (Oklahoma)
Herbert E. Schellhorn B.Sc., M.Sc. (Guelph), Ph.D. (North Carolina)
Elizabeth A. Weretilnyk B.Sc., Ph.D. (Alberta)

Adjunct Associate Professor
James S. Pringle (Royal Botanical Gardens), A.B. (Dartmouth), M.S. (New Hampshire), Ph.D. (Tennessine)

Assistant Professors
Juliet M. Daniel B.Sc. (Queen's), Ph.D. (British Columbia)
Susan A. Dudley B.Sc., M.Sc., Ph.D. (Chicago)/Undergraduate Advisor
Sueilean A. Igdoura B.Sc. (Victoria), M.Sc. (Western Ontario), Ph.D. (McGill)
Jiangping Xu B.Sc. (Jianxi), M.Sc. (Nanjing and Toronto), Ph.D. (Toronto)

Instructional Assistants
Marvin Gunderman B.Sc., M.Sc. (McMaster)
Thelma Leech B.Sc., M.Sc. (Guelph), M.Sc. (McMaster)
Beny Piccinin B.Sc. (Mount Allison), M.Sc. (McMaster)
Raymond Provat B.Sc. (McMaster), B.Ed. (Toronto)

Note:
No more than six units of Level II, III, IV Biology may be taken in any given Fall/Winter Session by students enrolled in a three year Baccalaureate degree programme.

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: SCIENCE 11A00

BIOLOGY 1AA3 BIODIVERSITY, EVOLUTION AND ECOLOGY
Fundamental evolutionary and ecological concepts with particular reference to the diversity of life.
Three lectures, one lab (three hours); one term
Prerequisite: SCIENCE 11A00

BIOLOGY 1A06 HUMAN PHYSIOLOGY
Principles of homeostasis; physiology of respiration, circulation, kidney function, metabolism and nutrition in the human body.
Three lectures, one tutorial; one term
Prerequisite: BIOLOGY 1A03, HTH SCI 1H03, 1HH3, 2F03, 2FF3, 2L03, 2LL3, KINESIOL 1A06, 1X06

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; or two lectures and one tutorial; one term
Not open to students registered in Science I or any Biology, Biochemistry, Health Sciences or Molecular Biology programme.

BIOLOGY 2A03 INTEGRATIVE PHYSIOLOGY OF ANIMALS
Fundamental principles of animal physiology, including: cellular energetics, diffusion, osmosis, membrane transport, excitability and contractility, gas exchange, fluid dynamics, electrolyte balance.
Three lectures; or two lectures, one lab (three hours); or two lectures, one tutorial; one term
Prerequisite: BIOLOGY 1A03, 1A06 (or 2A06); or registration in a programme in Kinesiology

BIOLOGY 2C03 GENETICS
Structure, function and transmission of genes; chromosomal basis of inheritance; mono- and dihybrid crosses; sequential steps in gene function; linkage maps; sex chromosome inheritance.
Three lectures and one tutorial (three hours); one term
Prerequisite: BIOLOGY 1A03, 1A06 (or 2C03); CHEM 1AA3 (or 2C03)

BIOLOGY 2C03 PLANT BIODIVERSITY
Students in non-science programmes should consider registering in BIOLOGY 1K03 and SCIENCE 2G02, 2H03 and 2K03 which do not require laboratories.

BIOLOGY 1K03 BIODYNAMICS
Evolutionary and ecological concepts with particular reference to the diversity of life.
Three lectures, one lab (three hours); one term
Prerequisite: SCIENCE 11A00

BIOLOGY 2D03 PLANT DEVELOPMENT
An introduction to plant science 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 (or 1AO6); and BIOLOGY 1A03 or ENVR SC 1BO3

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.
Self-directed learning using CD-ROM: one optional lecture, one optional tutorial, mandatory biweekly field trip, small-group discussions (three hours); one term
Prerequisite: BIOLOGY 1A03 (or 1AO6).
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 (two hours), one tutorial; one term
Prerequisite: BIOLOGY 2D03, 2F03; and registration in Level II or III of any programme in the Faculty of Science, Health Sciences or the Arts & Science programme

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: Credit or registration in one of BIOLOGY 3P03, 3U03, 3UJ3; and credit in one of BIOCHEM 2A06, 2BB3, 2EE3, 3A03, 3G03
Not open to students with registration in Honours Biology and Pharmacology.

BIOLOGY 3B03  PLANT PHYSIOLOGY
Principles of physiology and plant cell metabolism. Topics include: photosynthesis, photoregulation, 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 lab (three hours); one term
Prerequisite: BIOLOGY 2B03, 2D03

BIOLOGY 3C03  MICROBIAL PHYSIOLOGY AND REGULATION
Study of prokaryotic cellular functions including regulation of metabolism, basic energy-yielding pathways, morphogenesis and reproduction.
Three lectures; or two lectures, one tutorial; one term
Prerequisite: BIOLOGY 3E03

BIOLOGY 3E03  INTRODUCTORY MICROBIOLOGY
Biology of the prokaryotic cell including structure-function relationships, antimicrobial agents and bacterial taxonomy. Use of microorganisms in biotechnology.
Two lectures, one lab (three hours); one term
Prerequisite: BIOLOGY 2B03, 2C03; and one of BIOCHEM 2A06, 2BB3 or 2EE3; and one of CHEM 2D03, 2EZ3 or 2G03. BIOCHEM 3G03 or equivalent is strongly recommended.

BIOLOGY 3F03  VERTEBRATE ANATOMY
An introduction to the development of structure and function in vertebrates.
Three lectures, one lab (three hours); one term
Prerequisite: BIOLOGY 2E03 or 2B03. BIOLOGY 2A03 is highly recommended.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOLOGY 3F03  EVOLUTION
Introduction to the major concepts and empirical findings in micro- and macroevolution.
Three lectures, one tutorial; one term
Prerequisite: BIOLOGY 2C03. BIOLOGY 3J03 is highly recommended.

BIOLOGY 3G03  INQUIRY II - CURRENT RESEARCH IN BIODIVERSITY
An interactive course highlighting current research programmes in the general area of biodiversity within the Biology Department. Preparation for BIOLOGY 4C09 and 4P06 project on a biodiversity topic.
One lecture (two hours), one tutorial; 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 ofchromatin; organization of DNA sequences; DNA replication, transcription; gene expression; some relevant techniques.
Three lectures, one lab (three hours); one term
Prerequisite: BIOLOGY 2B03.
Antirequisite: BIOCHEM 3B03

BIOLOGY 3H03  ORGANIZATION OF THE CYTOPLASM
A detailed examination of the molecular organization and function of cytoplasmic structures in metazoans, with particular focus on the differentiation and specialization of the cell surface and the cytoskeleton.
Three lectures, one tutorial; one term
Prerequisite: BIOLOGY 2B03

BIOLOGY 3I03  EUKARYOTIC GENETICS
The genetics of eukaryotic organisms. Experimental problems in gene transmission, interaction and polymorphism. Linkage, recombination and chromosome structure; sex determination.
Three lectures, one lab (three hours); one term
Prerequisite: BIOLOGY 2B03, 2C03

BIOLOGY 3J03  POPULATION GENETICS
Conceptual foundations of evolutionary theory and principles of population genetics.
Three lectures or two lectures, one tutorial; one term
Prerequisite: BIOLOGY 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, 2C03
Antirequisite: BIOLOGY 3N03

BIOLOGY 3M03  INVERTEBRATE FORM AND FUNCTION
Analysis of sensory reception, nervous control systems, feeding, skeletal support, locomotion, excretion, respiration, and reproduction in selected invertebrates.
Two lectures, one lab/tutorial (three hours); one term
Prerequisite: BIOLOGY 2A03 or 2E03

BIOLOGY 3N03  MOLECULAR GENETIC MECHANISMS OF DEVELOPMENT
The molecular genetic mechanisms of determination of cell identity and pattern formation are examined with a focus upon primary research literature.
Three lectures, one tutorial; one term
Prerequisite: BIOLOGY 2B03, 2C03. BIOLOGY 3M03 or 3N03 are strongly recommended.

BIOLOGY 3O03  MICROBIAL GENETICS
The genetics of bacteriophages, bacteria and fungi. Special emphasis will be placed on relationships between microbial genetics and general problems in genetics.
Three lectures, one tutorial; one term
Prerequisite: BIOLOGY 2C03. BIOLOGY 3E03 and one course in Biochemistry are 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, 2BB3, or 3G03

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. Available modules are posted in January each year, and schedules vary annually. Students enrolling in this course must pay both the incidental fees, as prescribed by the Department, and the regular tuition fees.
Prerequisite: BIOLOGY 1A03, 1AA3 (or 1A06); or one of ENVIR SC 1A03, 1B03 or 1G03. Some modules have additional prerequisites.
For information on Field Biology, please refer to the Biology website at http://www.science.mcmaster.ca/biology/undergraduate/courses.htm and click on BIOLOGY 3R03, or contact the Course Administrator, LSB-118.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.
BIOLOGY 3SS3 

**POPULATION ECOLOGY**

Population structure and dynamics. Natural selection and regulation of organisms by environmental and biological factors. An evolutionary view of predation, competition, life history schedules. Three lectures; one tutorial; one term. Prerequisite: BIOLOGY 2F03

BIOLOGY 3TT3 

**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 2P03; BIOLOGY 2D03 and STATS 1C03 are recommended.

BIOLOGY 3UU3 

**ANIMAL PHYSIOLOGY - HOMEOSTASIS**

Respiration, circulation, acid-base balance and renal function. Two lectures, one lab/tutorial (three hours); one term. Prerequisite: BIOLOGY 2A03 and permission of the instructor. Application for permission must be received by March 31st of the academic year prior to registration. BIOCHEM 2E03 and 3G03 are recommended. Antirequisite: ENGINEER 4X03, 2FF3, 2L03, 2L3. Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOLOGY 3V03 

**TECHNIQUES IN MOLECULAR GENETICS**

A laboratory course involving basic experiments in Molecular Genetics. One lecture, two labs (three hours each); one term. Prerequisite: Biology 3C03 and registration in Level III or IV of any Honours Biology or Molecular Biology programme; or permission of the instructor. Antirequisite: BIOCHEM 3P03. Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of this Calendar.

BIOLOGY 3X03 

**INTRODUCTORY IMMUNOLOGY**

An introduction to human and cellular immunity. The molecular and cellular basis of immunity, and an introduction to immunological techniques. Two lectures, one tutorial (two hours); one term. Prerequisite: BIOLOGY 2B03 or HTH SCI 2K03. Antirequisite: HTH SCI 3103.

BIOLOGY 3Y03 

**PLANT RESPONSES TO THE ENVIRONMENT**

Plants display many modifications in their development in response to their environment. This course will examine these phenotypic responses from metabolic, ecological and evolutionary perspectives. Three lectures; one term. Prerequisite: BIOLOGY 2B03, 2C03, 2D03. BIOLOGY 3BB3 is recommended. Antirequisite: BIOLOGY 4H03.

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 3J03, 3SS3 or 3TT3. Not offered in 2002-2003.

BIOLOGY 4A3 

**CONSERVATION BIOLOGY**

Examination of how biological principles, mainly from population biology and genetics can be applied to conserving diversity in the natural world. Two lectures, one tutorial (three hours); one term. Prerequisite: BIOLOGY 2C03; and one of BIOLOGY 3J03, 3SS3 or 3TT3.

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 lectures; one term. Prerequisite: One of BIOCHEM 2A06, 2B03 or 3G03. BIOLOGY 3B03 and 3H03 are recommended. Offered in alternate years. Not offered in 2002-2003.

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 Faculty. Prerequisite: Registration in Level IV of any Honours Biology programme. 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 website at http://www.science.mcmaster.ca/biology/undergraduate/courses.htm and click on BIOLOGY 4C09, or contact the Course Coordinator, LSB-118.

Antirequisite: HTH SCI 3H03, 4A09, 4B06, PHARMAC 4F09.

Not open to students with credit or registration in courses in the Science Inqury 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 

**INTEGRATIVE BIOLOGY OF MAMMALS**

Evolutionary interpretation of major mammalian functional features and their integration (e.g., growth, feeding, reproduction, aging, stress) spanning the ecological, physiological and molecular realms. Two lectures, one tutorial; one term. Prerequisite: BIOLOGY 2A03, 2C03, 3SS3. Offered in alternate years. Not offered in 2002-2003.

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. Three lectures, two tutorials; one term. Prerequisite: BIOLOGY 3J03. Offered in alternate years. Not offered in 2002-2003.

BIOLOGY 4E03 

**HUMAN DIVERSITY AND HUMAN NATURE**

The nature of genetic diversity in humans; the nature versus nurture debate in relation to genetic determinism and biological basis of behaviour. Three lectures and one tutorial; one term. Prerequisite: BIOLOGY 2C03 and one of ANTHROP 2E03, BIOLOGY 3FF3, 3J03.

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 Faculty. Prerequisite: Registration in Level IV of any Honours Biology programme. 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 II. For information on Departmental Guidelines, please refer to the Biology website at http://www.science.mcmaster.ca/biology/undergraduate/courses.htm and click on BIOLOGY 4F06, or contact the Course Coordinator, LSB-118.

Not open to students with credit or registration in courses in the Science Inquiry 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 4F03 

**INQUIRY IN BIOLOGY**

This course provides an opportunity to explore a specialized area of Biology in a small group setting. Several different modules are available in Terms I and II. Lectures, seminars and discussions (three hours); one term. Prerequisite: Registration in Level IV Honours Biology (Complementary Science) or approved. BIOLOGY 4F03 may not be repeated. For information regarding module offerings, please refer to the Biology website at http://www.science.mcmaster.ca/biology/undergraduate/courses.htm and click on BIOLOGY 4F03, or contact the Course Coordinator, LSB-118.

Antirequisite: BIOLOGY 4C09, 4F06, HTH SCI 3H03, 4A09, 4B06. Enrolment is limited. Module topics are posted in the Life Sciences Office before the beginning of each term. Permission of the Course Coordinator should be obtained by the end of March in Level III. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.
BIOLOGY 4G06  HUMAN ANATOMY
A study of the human body by dissection, self-teaching modules and videotapes.
Two labs (two and one half hours); two terms
Prerequisite: A grade of at least B+ in BIOLOGY 3F03 or 3K03, or registration in BIOLOGY 3F03 or 3K03; and permission of the instructor.
Application for permission must be received by the Course Administrator, LSB-118, by March 31 of the academic year prior to registration. These are minimum requirements, and final selection will be based on academic merit.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.
Offered in alternate years.
Offered in 2002-2003.

BIOLOGY 4H03  GENETIC ANALYSIS OF BEHAVIOUR
Selected topics in behaviour will be examined at the genetic and molecular level. Topics will include circadian rhythms, courtship behaviour, twin studies, learning and memory.
Two lectures, one tutorial; one term
Prerequisite: BIOLOGY 3I03, or BIOLOGY 2B03 and 2C03, PSYCH 2F03, 3R03, and BIOLOGY 3H03 are recommended.

BIOLOGY 4I03  ADVANCED TOPICS IN IMMUNOLOGY
This course will build on previous knowledge of the immune system and cover selected topics such as allergy, autoimmunity, tumor, reproductive and viral immunity, and AIDS.
Two lectures, one tutorial (three hours); one term
Prerequisite: BIOLOGY 3X03 or HTH SCI 3I03
Prerequisite: HTH SCI 3103 or permission of the instructor.
Offered in alternate years.

BIOLOGY 4J03  FIELD BIOLOGY II
A second field module chosen from those offered by faculty from McMaster and other Ontario Universities' Biology Departments. This module must differ from any completed for credit in BIOLOGY 3R03. Available modules are posted in January 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, or one of ENVIR SC 1A03, 1B03 or 1G03. Some modules have additional prerequisites. For information on Field Biology, please refer to the Biology website at http://www.science.mcmaster.ca/biology/undergraduate/courses.htm and click on BIOLOGY 4J03, or contact the Course Administrator, LSB-118. Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOLOGY 4K03  AN INTRODUCTION TO BIOINFORMATICS
This course introduces the techniques and methods of basic computer analysis of sequence data, including alignment, databases, and phylogenetic reconstruction.
Two lectures, one computer laboratory; one term
Prerequisite: BIOLOGY 2C03 and permission of the instructor. Application for permission must be received by March 31st of the academic year prior to registration. A Level II course in Mathematics or Statistics is recommended.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of this Calendar.

BIOLOGY 4P03  MEDICAL MICROBIOLOGY
Bacterial diseases: identification, epidemiology and treatment.
Three lectures, or two lectures, one tutorial; one term
Prerequisite: BIOLOGY 3E03

BIOLOGY 4PP3  ENVIRONMENTAL MICROBIOLOGY
Study of interaction of microorganisms with their environment with emphasis on topics of ecological significance including plant-microbe interactions, nutrient cycling and waste treatment.
Three lectures; or two lectures, one lab/tutorial (three hours); one term
Prerequisite: BIOLOGY 3E03
Offered in alternate years.

BIOLOGY 4R03  HUMAN GENETICS
The human genome and genetic medicine. Topics include normal and pathological cytology; the human genome project; gene mapping, linkage and therapy.
Two lectures, one tutorial (two hours); one term
Prerequisite: BIOLOGY 2B03, 2C03, 3I03

BIOLOGY 4S03  TOXICOLOGY OF AQUATIC ENVIRONMENTS
Chemistry, mechanisms of toxicity, and ecotoxicology of environmental pollutants in aquatic environments.
Two lectures, one lab (three hours); one term
Prerequisite: Permission of the instructor. Application for permission must be received by March 31 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.
Offered in alternate years.

BIOLOGY 4T03  NEUROBIOLOGY
Selected topics in neurobiology at the molecular and cellular level including growth factors and neuronal development, ion channels, neurotransmitter functions, learning and memory, and neurological disorders.
Two (or one) lecture(s), one (or two) tutorial(s); one term
Prerequisite: BIOLOGY 2B03 or permission of the instructor. One or more of BIOLOGY 3H03, 3HH3, 3U03, PSYCH 2F03, 3F03 are also recommended.
Cross-list: HTH SCI 4F03
Offered in alternate years.

BIOLOGY 4U03  RADIATION BIOLOGY
The effects of radiation on biological material at the molecular, cellular, tissue and whole organism level.
Three lectures; or two lectures and one tutorial; one term
Prerequisite: One of BIOLOGY 2B03 or 2C03, and one of BIOLOGY 3L03, MED PHYS 3T03, PHYSICS 3T03; or registration in Year 4 of Medical and Health Physics Co-op; or permission of the instructor.

BIOLOGY 4V03  VIROLOGY
The viruses of animals, bacteria, and plants, with emphasis on the molecular biology of virus replication and the diversity of virus-cell interactions.
Three lectures, one tutorial (two hours); one term
Prerequisite: One of BIOLOGY 2B03, HTH SCI 2K03 or permission of the instructor.

BIOLOGY 4W03  ENVIRONMENTAL PHYSIOLOGY
The influence of environmental factors on the physiology of animals and the adaptation of animals to diverse environments in the context of biodiversity.
Three lectures; or two lectures, one tutorial; one term
Prerequisite: One of BIOLOGY 3M03, 3P03, 3U03, 3UJ3; and permission of the instructor. Application for permission must be received by March 31st of the academic year prior to registration.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.
Offered in alternate years.

BIOLOGY 4XX3  WORKSHOP IN MOLECULAR GENETICS
An intensive two week laboratory/lecture course. Topics covered will include scientific reasoning, ethics, technology transfer, molecular genetics techniques, techniques used in cell culture and gene expression studies.
Note: Course will consist of two weeks of laboratory instruction, seminars and workshops. To be held the first two weeks of May.
Prerequisite: BIOLOGY 3E03; and registration in an Honours Biology program; and permission of the instructor. Application for permission must be received by March 31st of the academic year prior to registration.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the calendar.

BIOLOGY 4Y03  ECOLOGY OF INLAND WATERS
Physical, chemical and biological interrelationships of inland waters, including aspects of aquatic ecosystems
Two lectures, one lab (three hours); one term
Prerequisite: BIOLOGY 2F03; and BIOLOGY 2D03 or 2E03; and BIOLOGY 3S33 or 3T3

PHARMAC 4B03  DRUGS AND BEHAVIOUR
Behavioural measures to study drug action and the use of drugs to study the organization and physiochemical mechanisms in normal and abnormal behaviour.
One tutorial (three hours); one term
Prerequisite: BIOLOGY 3A03 or PHARMAC 3A06; and permission of the instructor. Application for permission must be received by March 31st of the academic year prior to registration.
Cross-list: HTH SCI 4Q03
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.
Courses

CHEM ENG 2A04  HEAT TRANSFER
Heat transfer in chemical engineering systems. Steady and unsteady state conduction, natural and forced convection, radiant heat transfer, condensation of vapour and boiling.

Three lectures, one tutorial (two hours); second term
Prerequisite: Registration in a Chemical Engineering or Materials Engineering program
Corequisite: One of CHEM ENG 2B03, 2F04, MATLS 2B06, 2D03

CHEM ENG 2B03  INTRODUCTION TO BIOPROCESS ENGINEERING
Unit operations approach; material and energy balances; survey of moment; heat and mass transfer; basics of chemical engineering design. Two lectures (one hour each), one tutorial (two hours); first term
Prerequisite: Successful completion of Level I and registration in Level II of Honours Biochemistry (Biotechnology and Genetic Engineering Specialization); or permission of the Department
Not open to students registered in the Faculty of Engineering.

CHEM ENG 2D04  CHEMICAL ENGINEERING PRINCIPLES I
Steady-state mass balances in chemical processes and the first law of thermodynamics. The behavior of gases and liquids, and their physical equilibria. Recycle in steady state operation.
Three lectures, one tutorial (three hours); first term
Prerequisite: Registration in Level II Chemical Engineering, Chemical Engineering and Management, Chemical Engineering and Society or Honours Applied Chemistry

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 2D04

CHEM ENG 2G04  PROBLEM SOLVING AND TECHNICAL COMMUNICATION
Developing awareness of strategies, creativity, analysis and interpersonal skills in the context of solving homework problems and preparing technical communications. Interpretation, retrieval manipulation and communication of information. Use of video taping to improve oral communication skills.
One lecture (two hours), one tutorial; 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)

CHEM ENG 3B05  BIO-REACTION ENGINEERING
Prerequisite: Registration in Level IV of a Chemical Engineering programme; or CHEM ENG 2D03; or permission of the Department

CHEM ENG 3B06  BIOSEPARATIONS ENGINEERING
Cell disruption, filtration, centrifugation, ultrafiltration, precipitation, solvent extraction, crystallization, adsorption and affinity chromatography. Application to bioprocessing.
Prerequisite: Registration in Level IV or a Chemical Engineering Programme; or CHEM ENG 2D03; 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, MATH 2M06
CHEM ENG 3G03 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.

One lecture, two tutorials (two hours); second term
Prerequisite: CHEM ENG 2G02 or 2G03; and registration or credit in CHEM ENG 2A04, 3D03, 3E04, 3K04, 3M04

CHEM ENG 3K04 INTRODUCTION TO REACTOR DESIGN

Stochiometry 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: Registration or credit in CHEM ENG 3D03; or registration in Level IV Honours Applied Chemistry, 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, 3M04, 3004 and registration or credit in CHEM ENG 2A04

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 3Q04 FLUID MECHANICS

The laws of statics and dynamics in both compressible and incompressible fluids. Equations of conservation and modern turbulence and boundary layer theory applied to submerged and conduit flow. Similarity, unsteady flow, measuring devices and fluid machinery.

Three lectures, one tutorial (three hours); first term
Prerequisite: MATH 2M06 or both MATH 2P04 and 2004, (any of which may be taken concurrently); and registration in a Chemical Engineering or Materials Engineering programme

CHEM ENG 3P03 PROCESS CONTROL

Transient behaviour of chemical processes. Theory and practice of automatic control. Introduction to computer process control.

Two lectures, one tutorial (two hours); second term
Prerequisite: MATH 2M06 and registration or credit in CHEM ENG 2A04, 3E04, 3G03, 3K04, 3M04

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 2B06, 2D03, 2E03, 3D06, 2W21, 2W22, 2W24

CHEM ENG 4B03 POLYMER REACTION ENGINEERING


Three lectures; first term
Prerequisite: CHEM ENG 3K04, 3Q03

CHEM ENG 4C03 STATISTICS FOR ENGINEERS

Linear regression analysis in matrix form, non-linear regression, multi-response estimation, design of experiments including factorial and optimal designs. Special emphasis on methods appropriate to engineering problems.

Three lectures; one term
Prerequisite: One of COMMERCE 2A38, STATS 3N03 or 3Y03

CHEM ENG 4E03 MODELLING AND CONTROL OF CHEMICAL PROCESSES

Modelling, simulation and control of complex process structures (series, parallel, recycle, staged and multi-variable) with consideration to applying control, including model-based algorithms, via digital computation.

Three lectures; first term
Prerequisite: CHEM ENG 3E04, 3G03, 3K04, 3M04, 3P03

CHEM ENG 4G03 OPTIMIZATION IN CHEMICAL ENGINEERING

The application of 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, 3G03, 3M04, 3004, 3P03
Corequisite: CHEM ENG 4N04

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 Chemical Engineering or Chemical Engineering and Management or Chemical Engineering and Society

CHEM ENG 4LL3 BIO LABORATORIES

Introduction to recombinant DNA technology including cloning, directed mutagenesis, DNA sequencing and expression of cloned genes. Reaction kinetics and reactor design for enzyme and fermentation reactions. Advanced separation methods for bioprocessing operations.

Prerequisite: BIOCHEM 4D03; and either BIOCHEM 3P03 and registration in Honours Biochemistry (Biotechnology and Genetic Engineering Specialization), or registration in a Chemical Engineering programme.

Antirequisite: BIOCHEM 4B08, 4BB6, 4F09, 4L03

CHEM ENG 4P03 SEPARATIONS


Three lectures; first term
Prerequisite: CHEM ENG 2A04, 3P03, 3M04

CHEM ENG 4P04 ENGINEERING ECONOMICS AND PROBLEM SOLVING

Making decisions about the design and operation of engineering systems, with the analysis emphasizing safety, economics, equipment performance, uncertainty, flexibility and monitoring, including trouble shooting. Students will work individually and in groups on problem-based projects.

Three lectures, one tutorial (two hours); first term
Prerequisite: CHEM ENG 3D03, 3G03, 3K04, 3M04, 3004, 3P03

Antirequisite: ENGINEER 2B03 or 4B03

CHEM ENG 4703 APPLICATIONS OF CHEMICAL ENGINEERING IN MEDICINE

Applications of chemical engineering principles to biological systems and medical problems including examples from hemodynamics, blood oxygenation, artificial kidney systems, controlled drug release, biosensors and biomaterials.

Three lectures; second term
Prerequisite: One of CHEM ENG 3G04, ENG PHYS 3003 or MECH ENG 3004

CHEM ENG 4W04 CHEMICAL PLANT DESIGN AND SIMULATION

Projects, often in cooperation with industry, usually involve steady-state computer simulation of an existing process or design of a new process. Plant equipment may be tested to develop simulation models.

Two lectures and two tutorials (two hours); second term
Prerequisite: Registration in Level IV Chemical Engineering or Level V Chemical Engineering and Management or Level V Chemical Engineering and Society

CHEM ENG 4X03 POLYMER PROCESSING

An introduction to the basic principles of polymer processing, stressing the development of models. Rheology of polymers, extrusion, molding, fibers, and mixing. Reactive processing.

Three lectures; one term
Prerequisite: One of CHEM ENG 2A04, MATLS 3E04 or MECH ENG 3R03; and CHEM ENG 3G04 or MECH ENG 3004

CHEMICAL ENGINEERING
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; and a CA of at least 95.

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 an Engineering programme.

CHEMISTRY

Faculty as of January 15, 2002

Chair
W.J. Leigh

Associate Chair
J. Barbier

Professors
Alexander D. Bain/B.Sc. (Toronto), M.Sc. (British Columbia), Ph.D. (Cambridge)
Jacques Barbier/M.Sc. (Toronto), Ph.D. (ANU)
Michael A. Brook/B.Sc. (Toronto), Ph.D. (McGill)
Ronald F. Childs/B.Sc. (Bath University), Ph.D., D.Sc. (Nottingham)
Peter T. Dawson/B.Sc. (Birmingham), Ph.D. (Cambridge)
John E. Greedan/B.A. (Bucknell), Ph.D. (Tulsa), F.C.I.C.
Adam R. Hitchcock/B.Sc. (McMaster), Ph.D. (British Columbia), F.C.I.C.,
Senior Canada Research Chair
Joseph D. Laposa/B.Sc. (St. Louis), M.S. (Chicago), Ph.D. (Loyola)
Undergraduate Advisor
William J. Leigh/B.Sc., M.Sc., Ph.D. (Western Ontario), F.C.I.C.
Brian E. McCurry/B.Sc. (British Columbia), Ph.D. (Stanford), F.C.I.C.,
Stephen A. Janislawsky Chair in Environment and Health
Michael J. McGilley/B.Sc., Ph.D. (Manchester), F.C.I.C.
Gary J. Schrøbøgen/B.Sc. (Loras College, Iowa), M.Sc. (Brook), Ph.D. (McMaster), F.R.S.C.
Harald D.H. Stover/B.Sc. (Darmstadt), Ph.D. (Ottawa), NSERC/ISM Industrial Research Chair in Polymers for Advanced Materials
Johan K. Teflon/B.Sc., M.Sc., Ph.D. (Utrecht)
Nick H. Wersil/B.Sc. (Alberta), M.A., Ph.D. (Johns Hopkins), F.C.I.C.

Adjunct Professor
Christopher R. Page/B.Sc. (London), M.Sc. (Brook), Ph.D. (McMaster)

Associate Professors
John D. Brennan/B.Sc., M.Sc., Ph.D. (Toronto), Canada Research Chair
Randall S. Dumont/B.Sc. (Western Ontario), Ph.D. (Toronto)
Paul H.M. Harrison/B.A. (Oxford), Ph.D. (Alberta)

Assistant Professors
Alex Adronov/B.Sc. (McMaster), Ph.D. (California-Berkeley)
Paul J. Bert/B.Sc. (Waterloo), M.Sc. (Ottawa), Ph.D. (McGil)
James F. Britten/B.Sc. (St. Francis Xavier), Ph.D. (McMaster)
Donald W. Hughes/B.Sc., Ph.D. (McMaster)
Yinglu Li/B.Sc. (Anhui U., China), M.Sc. (Beijing Agr. U.), Ph.D. (Simon Fraser), Canada Research Chair
Philippe Lock/B.Sc., Ph.D. (McMaster)
Barbara Russer/M.Sc. (Jagellonian, Cracow), Ph.D. (Cracow)
John F. Valliant/B.Sc., Ph.D. (McMaster)
Ignacio Vargas-Baca/B.Sc., M.Sc. (UNAM), Ph.D. (Calgary)

Associate Members
Raman Chirika/Radiology)/B.Sc. (Kerala, India), M.Sc. (Brook), Ph.D. (McMaster)
Richard M. Epanl/Biochemistry/AB (Johns Hopkins), Ph.D. (Columbia)

Robert H. Pelton (Chemical Engineering)/M.Sc. (Guelph), Ph.D. (Bristol)
Gerard D. Wright (Biochemistry)/B.Sc., Ph.D. (Waterloo)
Daniel S.C. Yang (Biochemistry)/B.Sc., M.Sc. (Alberta), Ph.D. (Pittsburgh)
Shiping (Stephen) Zhu (Chemical Engineering/Materials Science)/B.Eng. (Zhejiang), Ph.D. (McMaster)

Lecturer
Maggie Austen/B.Sc. (Dalhousie)

Department Notes:
1. Course codes ending with * indicate that the course is not necessarily offered every session.
2. Students not in a Science programme should note that CHEM 1AA3 is a prerequisite for CHEM 2E03 and that CHEM 2E03 is a prerequisite for BIOCHEM 2E03.

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: OAC Chemistry (or Chemistry U) or either registration in one of Science I, Engineering I, Arts & Science I, Health Sciences I, Kinesiology I, Mathematics and Statistics I, any programme above Level I; or a grade of at least 80% in OAC Chemistry (or Chemistry U); or CHEM 1R03.
Corequisite: SCIENCE 1A00
Antirequisite: CHEM 1E03

CHEM 1A03  INTRODUCTORY CHEMISTRY II
An introduction to equilibrium, chemical kinetics and organic chemistry.
Three lectures, one tutorial, one lab (three hours) every other week; second term.
Prerequisite: CHEM 1A03 or 1E03

CHEM 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 an Engineering programme.
Antirequisite: CHEM 1A03

CHEM 1R03  GENERAL CHEMISTRY
A general introduction to chemistry, suitable for students without OAC Chemistry (or Chemistry U).
Three lectures; first term.
Prerequisite: OAC Science Grade 12 Chemistry (Advanced) or OSS Grade 11 Chemistry.
Not open to students with 80% or higher in OAC Chemistry (or 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 programme; or credit or registration in CHEM 2P03 or 2F03.
Antirequisite: CHEM 2N03

CHEM 2B03  ORGANIC CHEMISTRY A
Bonding. Alkanes, alkyl halides, alkenes, alkynes, 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 programme (with a grade of at least B+ in CHEM 1A03), an Honours Chemistry programme, B.Sc. Physical Science or the Honours Science (Stream D) programme.
Antirequisite: CHEM 2E03, 2O3, 2W2

CHEM 2B03  ORGANIC CHEMISTRY B
Three lectures, one lab (three hours) every week; second term.
Prerequisite: CHEM 2B0A3
Antirequisite: CHEM 2O3B3
CHEM 2E03  INTRODUCTORY ORGANIC CHEMISTRY
An introduction to the chemistry of monofunctional aliphatic and aromatic compounds.
Three lectures; first term
Prerequisite: CHEM 1AA3
Antirequisite: CHEM 2B03, 2E03, 2W04
CHEM 2E03 is not a prerequisite for further courses in Organic Chemistry.
CHEM 2F03  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 programme; or permission of the instructor
Antirequisite: CHEM 2A03
CHEM 2G03  ORGANIC CHEMISTRY I
An introduction to organic chemistry with emphasis on the reactions of functional groups and an introduction to spectroscopic techniques for structure determination.
Three lectures, one lab (three hours) every other week; one tutorial (two hours) every other week; first term
Prerequisite: CHEM 1AA3 with a grade of at least C-; or registration in Honours Biochemistry, Honours Biology and Psychology or Honours Molecular Biology
Antirequisite: CHEM 2B03, 2E03, 2W04
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.
CHEM 2I03  ORGANIC CHEMISTRY II
Nucleophilic substitutions at carbonyl centres, aromatic chemistry, carbohydrates, applications of spectroscopic techniques in organic chemistry.
Three lectures, one lab (three hours) every other week; one tutorial (two hours) every other week; second term
Prerequisite: CHEM 2G03
Antirequisite: CHEM 2B03
CHEM 2J03  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) or tutorial; first term
Prerequisite: CHEM 1AA3, MATH 1A03
Antirequisite: CHEM 2F03, PHYSICS 2H04
CHEM 2K03  CHEMICAL THERMODYNAMICS AND KINETICS
Thermodynamics of equilibrium chemical and electrochemical systems, and macroscopic and microscopic aspects of kinetics.
Three lectures, one lab (three hours) or tutorial; second term
Prerequisite: CHEM 2J03
Antirequisite: CHEM 2R03
CHEM 2L03  GENERAL PHYSICAL CHEMISTRY
Physical chemistry as applied to life and environmental sciences. Topics include thermodynamics, chemical equilibria, physical equilibria, transport phenomena, kinetics and enzyme kinetics.
Three lectures; first term
Prerequisite: CHEM 1AA3; and ARTS&SCI 1D06 or MATH 1A03
Antirequisite: CHEM 2P03, 2R03, PHYSICS 2H04
CHEM 2M03  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 1E03 and registration in a Ceramic, Chemical, Materials or Metallurgical Engineering programme
Antirequisite: CHEM 2I03, 2W04, 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 2B03; and CHEM 2P03 or 2R03
Antirequisite: ENVR SC 3A03
CHEM 3B03  QUANTUM MECHANICS AND SPECTROSCOPY I
An introduction to quantum chemistry, group theory and symmetry, and vibrational and rotational spectroscopy.
Three lectures, one lab (three hours) or tutorial; first term
Prerequisite: CHEM 2P03 or a grade of at least B in CHEM 2R03; and MATH 2A03 or 2P04
Prerequisite: (Beginning in 2003-2004): CHEM 2PA3 or a grade of at least B in CHEM 2R03
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); second term
Prerequisite: CHEM 2L03; and CHEM 2B03 or 2R03
Prerequisite: (Beginning 2003-2004): CHEM 2BB3 or 2OB3
Antirequisite: CHEM 3F03
CHEM 3F03  BIO-ORGANIC CHEMISTRY
Topics in bio-organic chemistry; a sequel to CHEM 2B03.
Three lectures, one lab (three hours); second term
Prerequisite: One of CHEM 2B03 or 2OB3, and registration in an Honours Biochemistry programme or Honours Arts & Science and Biochemistry; or permission of the instructor
Antirequisite: CHEM 3D03
CHEM 3G03  INDUSTRIAL CHEMISTRY
A survey of processes in the chemical industry, with examples drawn from inorganic, organic and polymer chemistry.
Three lectures; one term
Prerequisite: CHEM 2I03 and one of CHEM 2B03, 2E03, 2OB3; or registration in Level III or IV of a Chemical Engineering programme
CHEM 3H03  CHEMISTRY LABORATORY INQUIRY
An experimental chemistry laboratory. Experiments will be selected based on the student's Chemistry Specialization.
One lab (three hours); second term
Prerequisite: CHEM 2A03, 2B03, 2L03, 2OB3; and registration in a Level III Honours Chemistry programme
Prerequisite: (Beginning 2003-2004): CHEM 2A03, 2BB3, 2OB3, 2PB3 and registration in a Level III Honours Chemistry programme
Antirequisite: CHEM 4TA3
CHEM 3I03  TRANSITION METAL CHEMISTRY
The chemistry of the heavier transition elements. An introduction to organometallic chemistry and bio-inorganic chemistry.
Two lectures, one lab (three hours); second term
Prerequisite: CHEM 3Q03
CHEM 3J03  INORGANIC CHEMISTRY
The properties, structures and reactions of inorganic compounds with emphasis on transition metal chemistry.
Two lectures, one lab (three hours); first term
Prerequisite: CHEM 2I03, 2L03
Prerequisite: (Beginning in 2003-2004): CHEM 2I03
CHEM 3K03  PROPERTIES OF MATERIALS
Physical 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; one term
Prerequisite: CHEM 2PB3 and registration or credit in CHEM 3B03
Antirequisite: CHEM 3K03
CHEM 4A03* ADVANCED ORGANIC CHEMISTRY
An introduction to the principles of physical chemistry and the elucidation of organic reaction mechanisms and to pericyclic reactions in the ground and electronic excited states of organic molecules.
Two lectures; one term
Prerequisite: CHEM 3D03 or 3F03

CHEM 4B03 CHEMICAL APPLICATIONS OF SPECTROSCOPY
Aspects of molecular spectroscopy and their application to the solution of chemical problems.
Two lectures; one term
Prerequisite: CHEM 3B03

CHEM 4C03* SOLID STATE CHEMISTRY
Structure and properties of crystalline solids. Topics include crystal chemistry and crystal symmetry, introduction to space groups, defects in ionic crystals, non-stoichiometry, electronic structure and properties of semiconductors and metals.
Two lectures; one term
Prerequisite: CHEM 3Q03

CHEM 4D03 ORGANIC STRUCTURE AND SYNTHESIS
Application of spectroscopic methods to structure determination. Synthetic methodology in organic chemistry.
Two lectures; one term
Prerequisite: CHEM 3D03 or 3F03

CHEM 4D03 MECHANISTIC BIOLOGICAL CHEMISTRY
Amino acid, nucleic acid, enzyme and coenzyme chemistry with emphasis on molecular reaction mechanisms.
Two lectures; one term
Prerequisite: CHEM 3D03 or 3F03

CHEM 4F03* SURFACE CHEMISTRY
Current topics in surface science; surface characterization, adsorption and heterogeneous catalysis.
Two lectures; one term
Prerequisite: CHEM 2P03

CHEM 4G06 SENIOR THESIS
A thesis based on a project under the direction of a Chemistry Department faculty member.
Prerequisite: Students registered in Level IV of any Honours Chemistry programs (with the exception of Honours Chemistry (Complementary Studies Option)) with a CA of at least 6.0 do not need to apply for permission. Students who are registered in Level IV of Honours programs in the Faculty of Science who have a CA of at least 6.0 must apply for permission of the Department and will be considered, subject to the availability of suitable projects. 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.

CHEM 4P03* ADVANCED ANALYTICAL CHEMISTRY
A course dealing with modern topics in analytical chemistry.
Two lectures; one term
Prerequisite: CHEM 2N03 or 3A03; and CHEM 2P03 or 2R03

CHEM 4P03 POLYMER CHEMISTRY
Chemistry of monomers, polymers, polymerization mechanisms and processes, with emphasis on organic polymer chemistry.
Two lectures; one term
Corequisite: CHEM 3D03 or 3F03

CHEM 4Q03* ADVANCED QUANTUM MECHANICS
Applications of quantum mechanics to problems of chemical interest.
Two lectures; one term
Prerequisite: CHEM 3B03 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.
Two lectures; one term
Prerequisite: CHEM 3Q03

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.
Two lectures; one term
Prerequisite: CHEM 3Q03

CHEM 4T03 INSTRUMENTATION
Instrumentation and molecular structure determination.
Two lectures, one lab (three hours); one term
Prerequisite: CHEM 3A03
Antirequisite: CHEM 3L13

CHINESE

(SEE MODERN LANGUAGES AND LINGUISTICS, CHINESE)

CIVIL ENGINEERING

WEB ADDRESS: http://www.eng.mcmaster.ca/civil/
John Hoggins Engineering Building, Room 301
Ext. 24287 or 24315

Faculty as of January 15, 2002

Chair
Dieter F.E. Stolle

Professors
Brian Baetz/B.A.Sc., M.A.Sc. (Toronto), Ph.D. (Duke), P.Eng.
Ahmed Ghobarah/B.Sc. (Cairo), M.Eng., Ph.D. (McMaster), P.Eng., Joe Ng/UNE Consulting Chair in Design, Construction and Management in Infrastructure Renewal
Frederick L. Hall/B.A. (Amherst), M.Sc. (M.I.T.), Ph.D. (Chicago)
Stan Pietruszczak/B.Sc., M.Sc. (Warsaw), Ph.D. (Polish Acad. Sci.)

Associate Professors

Assistant Professors
Paulin-Coulhание/B.A.Sc., M.A.Sc. (Nice), Ph.D. (Laval), Ing.
Sarah Dixson/B.A.Sc., Ph.D. (Waterloo)
Yiping Guo/B.Sc. (Zhengjian), M.Sc., Ph.D. (Toronto), P.Eng.

Adjunct Assistant Professor
Syed Moin/B.S. (Camania), M.S. (Nevada), Ph.D. (McMaster), P.Eng.

Department Notes:
1. All civil engineering courses are open to students registered in a civil engineering programme and subject to prerequisite requirements. Prior permission of the Department is necessary for students from other engineering departments and other faculties.

2. Unless otherwise stated, the duration and the frequency of activities are as follows:
   - one lecture consists of one hour each week
   - one tutorial consists of two hours each week
   - one lab consists of three hours each week

Courses

CIV ENG 2A02 SURVEYING AND MEASUREMENT
Introduction to measurement and computational techniques of surveying, the theory of measurement and errors, adjustment of observations. One lecture, one tutorial or one lab; second term

CIV ENG 2C04 STRUCTURAL MECHANICS
Review of stress/strain state and strain-displacement relations; plastic deformations and residual stresses due to axial loading and bending; torsion of noncircular and thin-walled sections; unsymmetric bending and eccentric axial loading, shear stresses and unsymmetric loading of thin-walled members; transformation of stress and strain; stress/strain invariants; yield and fracture criteria; energy methods; stability of columns. Three lectures, one tutorial or one lab; second term
Prerequisite: Credit or registration in ENGINEER 2P04
CIV ENG 2E03 COMPUTER APPLICATIONS IN CIVIL ENGINEERING
Numerical techniques including error analysis, root finding, linear algebraic equations, curve fitting, integration and differentiation, ordinary and partial differential equations; sensitivity analysis; use of several software packages for numerical analysis; civil engineering applications.
Two lectures, one tutorial; first term
Prerequisite: ENGINEER 1D04, PHYSICS 1D03 and credit or registration in ENGINEER 2P04

CIV ENG 2I03 COMMUNICATIONS IN CIVIL ENGINEERING
Oral and written communication in context of civil engineering activity. A professional liaison programme involving site visits.
Two lectures, one tutorial (three hours); first term

CIV ENG 2J04 ECOLOGICAL AND GEOLOGICAL ASPECTS OF CIVIL ENGINEERING
The relationship between humans and their earth environment. Composition of "earth"; processes that operate on or beneath the surface. Global interactions of the atmosphere, hydrosphere, lithosphere and the biosphere. Principles of ecological systems. Man's perturbations on the biosphere. Three lectures, one tutorial or one lab; second term
Prerequisite: Credit or registration in CIV ENG 2I03
Antirequisite: GEO 3J03

CIV ENG 2K04 FLUID MECHANICS
Fluid properties; hydrostatics; continuity, momentum and energy equations; potential flow; laminar and turbulent flow; flow in closed conduits; transients, open channel flow; hydraulic cross-sections. Three lectures, one tutorial or one lab; second term
Prerequisite: Credit or registration in ENGINEER 2P04 and MATH 2M06

CIV ENG 3A03 GEOTECHNICAL ENGINEERING I
Composition of soils, soil identification and classification; compaction; seepage theory; effective stress concept; stresses and displacements using elastic solutions; consolidation theory; numerical solutions. Two lectures, one tutorial or one lab; first term
Prerequisite: CIV ENG 2J04, 2K04

CIV ENG 3B03 GEOTECHNICAL ENGINEERING II
Shear strength characteristics and failure criteria for soils; direct shear, triaxial, plane strain and field tests; earth pressure theory; bearing capacity theory; slope stability and embankment analysis. Two lectures, one tutorial or one lab; second term
Prerequisite: CIV ENG 2J04, 2K04

CIV ENG 3C03 ENGINEERING SYSTEMS
Mathematical models and systems; economic comparison of projects; optimization: linear, nonlinear and dynamic programming; simulation modelling. Two lectures, one tutorial; second term
Prerequisite: CIV ENG 2E03 and credit or registration in MATH 3J04

CIV ENG 3G03 STRUCTURAL ANALYSIS
Structural analysis and modelling of linear elastic truss, beam and frame structures; stress resultants and deformations of statically determinate structures; methods for analysis of indeterminate structures; stiffness matrix method; plane frame computer analysis. Two lectures, one tutorial; first term
Prerequisite: CIV ENG 2C09

CIV ENG 3J04 REINFORCED CONCRETE DESIGN
Introduction to concrete technology; design by limit states methods to ensure adequate capacities for bending moment, shear and diagonal tension, axial force, bond and anchorage; and design to satisfy serviceability requirements for deflection and cracking; practical design requirements; interpretation of building code for behaviour of structures. Three lectures, one lab; second term
Prerequisite: Credit or registration in CIV ENG 3G03

CIV ENG 3K03 INTRODUCTION TO TRANSPORTATION ENGINEERING
A transportation impact study serves as the focus for group projects, and provides the context for application of material on traffic flow characteristics, capacity and control for signalized and unsignalized intersections, and travel demand forecasting. Safety; social impacts. Two lectures, one tutorial; first term

CIV ENG 3M04 MUNICIPAL HYDRAULICS AND INTRODUCTION TO WATER QUALITY
Analysis/design of water distribution networks; analysis and design of wastewater collection systems; pumps; water quality standards; water quality modelling of physical systems. Three lectures, one tutorial or one lab; second term
Prerequisite: CIV ENG 2C04 and credit or registration in MATH 3J04

CIV ENG 3S03 STEEL STRUCTURES
Introduction to design in steel, tension and compression members, plate buckling aspects, beam instability, beam design, beam-columns, bolted and welded connections. Applications employing steel structures building code. Two lectures, one tutorial; second term
Prerequisite: Credit or registration in CIV ENG 3G03

CIV ENG 4A04 ENGINEERING HYDROLOGY
Hydrologic cycle; climate; hydrologic processes, precipitation; unit hydrograph; hydrologic statistic, hydrologic routing; groundwater flow. Three lectures, one tutorial (three hours); first term
Prerequisite: CIV ENG 3M04

CIV ENG 4C03 ENVIRONMENTAL IMPACT ANALYSIS AND SUSTAINABILITY
Natural and urban ecosystems; environmental impact/assessment/legislation; energy and environmental audits; life cycle analysis; solid and hazardous wastes; air quality and control; sustainable infrastructure design. Two lectures, one tutorial; first term

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. Three lectures, one tutorial; first term
Prerequisite: CIV ENG 3G03

CIV ENG 4G03 PAVEMENT MATERIALS AND DESIGN
Components of highway pavements; ground water and drainage for highway facilities; soil compaction and stabilization; aggregates; bituminous and concrete materials, flexible pavement design; concrete pavement design; interlocking pavement structures. Two lectures, one lab; first term
Prerequisite: CIV ENG 3B03

CIV ENG 4H03 LAND USE AND TRANSPORTATION
Methods for the analysis and prediction of transportation and land use patterns in cities, with application to urban planning and pollution problems. Three lectures; second term
Prerequisite: MATH 3J04
Cross-list: GEO 4D03

CIV ENG 4K04 MODERN METHODS OF STRUCTURAL ANALYSIS
Stiffness method; development and applications in structural analysis. Introduction to finite element method. Influence lines, elastic stability analysis of frames with and without sway effects. Application of computer programs. Three lectures, one tutorial; first term
Prerequisite: CIV ENG 3G03, MATH 3J04

CIV ENG 4L04 DESIGN OF WATER RESOURCES SYSTEMS
Investigation, planning, analysis and design of water resources systems. Introduction to GIS tools. Frequency analysis, design storms, urban drainage and analysis, floodplain analysis and flood control. Two lectures, one tutorial (one hour); one lab; second term
Prerequisite: CIV ENG 3M04

CIV ENG 4R04 STRUCTURAL SYNTHESIS
Structural design process, gravity and lateral loading requirements, structural performance criteria, choice of structural systems. Approximate analysis of different structural systems, such as frames, structural walls and slabs. Analysis and design of actual buildings. Introduction to structural dynamics. Three lectures, one lab; first term
Prerequisite: CIV ENG 3G03, 3J04, 3S03

CIV ENG 4S04 FOUNDATION ENGINEERING
Principles of foundation design; bearing capacity, settlement and location, footings, deep foundations, piles, pile groups and drilled piers; retaining walls. 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. Three lectures, one tutorial; second term
Prerequisite: CIV ENG 3G03, 3J04, 3S03
Bridge loads and analysis for load effects. Design of reinforced concrete solid-slab, T-beam type bridges, composite floor system and plate girder. Stresses, ultimate strength, and design of pre-stressed concrete structures. Fatigue design.

Department Note:
The following courses are available as electives to qualified students in any programme:

a) Classical Archaeology and Art History
   - CLASSICS 1A03, 2B03, 2C03, 3G03, 3H03, 3Q03, 3S03
b) Ancient History and Society
   - CLASSICS 2K03, 2L03, 2LL3, 2Z03, 3C03, 3CC3, 3E03, 3EE3, 3LL3, 3T03
c) Ancient Philosophy
   - CLASSICS 2P06, 4K03
d) Classical Literature in Translation
   - CLASSICS 2D03, 2E03, 2H03, 3E03, 3I03, CLASSICS 3I13, 3T03
e) Greek Language and Literature
   - GREEK 1203, 1ZZ3, 2A03, 2AA3, 3A03, 3B03, 4B03, 4BB3, 4C03
f) Latin Language and Literature
   - LATIN 1203, 1ZZ3, 2A03, 2AA3, 3A03, 3B03, 4A03, 4B03, 4BB3

No language other than English is required for courses listed under Classics.

Courses
If no prerequisite is listed, the course is open.

CLASSICS 1A03 INTRODUCTION TO CLASSICAL ARCHAEOLOGY
A study of the history and methodology of Greek and Roman archaeology illustrated with materials from excavated sites.
Three lectures; one term
Antirequisite: CLASSICS 2A03
CLASSICS 1B03 MYTHOLOGY AND LITERATURE OF GREECE AND ROME I
A study of Greek and Roman mythology and literature with emphasis on the heroines and heroes of the Trojan War. Homer’s Odyssey and Vergil’s Aeneid will be read in translation.
Two lectures, one tutorial; one term
Antirequisite: CLASSICS 1B06
CLASSICS 1BB3 MYTHOLOGY AND LITERATURE OF GREECE AND ROME II
A study of the main themes of Classical mythology through the reading of Greek and Roman authors. Attention will also be given to mythological themes in post-classical writers and artists.
Two lectures, one tutorial; one term
Antirequisite: CLASSICS 1B06

CLASSICS 1L03 HISTORY AND ARCHAEOLOGY OF THE ANCIENT WORLD I
The history of the Ancient Near East and Greece down to the end of the 5th century B.C. based on documentary sources and archaeological evidence.
Two lectures, one tutorial; one term
Cross-list: HISTORY 1L03
Antirequisite: CLASSICS 1L06, HISTORY 1L06
CLASSICS 1L13 HISTORY AND ARCHAEOLOGY OF THE ANCIENT WORLD II
The history of Greece and Rome from the 4th century B.C. to the fall of Rome based on documentary sources and archaeological evidence.
Two lectures, one tutorial; one term
Cross-list: HISTORY 1L13
Antirequisite: CLASSICS 1L06, HISTORY 1L06
CLASSICS 2B03 GREEK ART
The architecture, sculpture and painting of the Greek and Hellenistic world.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: ART HIST 2B03
CLASSICS 2C03 ROMAN ART
The architecture, sculpture, and painting of the Roman world.
Three lectures; one term
Prerequisite: CLASSICS 2B03
Cross-list: ART HIST 2C03
CLASSICS 2D03 GREEK AND ROMAN MYTHOLOGY
A study of the myths of Greek and Roman gods and heroes, their explanation according to theories on the nature of myths, and their use by Greek and Roman authors, particularly Homer and Vergil.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: COMP LIT 2D03
CLASSICS 2E03 THE ANCIENT WORLD IN FILM
The emphasis is on myth (Amazonas, Hercules and history (slave revolts, banquets, decadent emperors), studied via Greek and Latin acquaintance (in translation) and cinematic versions (e.g. Electra, Medea, Mighty Aphrodite, Apocalypse Now, Spartacus, I Claudius).
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: CMST 2Y03, THTFRFLM 2G03
CLASSICS 2H03 GREEK AND ROMAN DRAMA
Selected Greek and Roman Tragedies and Comedies will be read in translation. The course will concentrate on characterization and the philosophical and religious aspects of ancient drama.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: COMP LIT 2H03
Antirequisite: CLASSICS 2H06

Faculty as of January 15, 2002

Chair
Howard Jones

Professors
- Katherine M. D. Dunbabin/M.A., D. Phil. (Oxford)
- Howard Jones/B.A., M.A., Ph.D. (Indiana)
- William J. Slater/M.A., Ph.D. (St. Andrews)

Associate Professors
- Claude Ellers/B.A. (Saskatchewan), M.A., (McMaster), D.Phil. (Oxford)
- Michele G. George/George (Toronto), M.A., Ph.D. (McMaster)
- Evan Halley/A.B. (Dartmouth), Ph.D. (Columbia)
- Peter Kingston/B.A., Ph.D. (London)

Assistant Professors
- Gretchen Umhoetz/A.B. (Bryn Mawr), M.A. (Buffalo), Ph.D. (California-Berkeley)

Associate Member
D. Geagan/(History) A.B. (Boston), Ph.D. (Johns Hopkins)

Department Note:
The following courses are available as electives to qualified students in any programme:

a) Classical Archaeology and Art History
   - CLASSICS 1A03, 2B03, 2C03, 3G03, 3H03, 3Q03, 3S03
b) Ancient History and Society
   - CLASSICS 2K03, 2L03, 2LL3, 2Z03, 3C03, 3CC3, 3E03, 3EE3, 3LL3, 3T03
c) Ancient Philosophy
   - CLASSICS 2P06, 4K03
d) Classical Literature in Translation
   - CLASSICS 2D03, 2E03, 2H03, 3E03, 3I03, CLASSICS 3I13, 3T03
e) Greek Language and Literature
   - GREEK 1203, 1ZZ3, 2A03, 2AA3, 3A03, 3B03, 4B03, 4BB3, 4C03
f) Latin Language and Literature
   - LATIN 1203, 1ZZ3, 2A03, 2AA3, 3A03, 3B03, 4A03, 4B03, 4BB3
CLASSICS 2B03 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: HISTORY 2B03

CLASSICS 2L03 HISTORY OF CLASSICAL GREECE
Greek from the rise of the city-states to Alexander, with particular attention to 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: HISTORY 2L03

CLASSICS 2LL3 HISTORY OF CLASSICAL ROME
Rome from the middle Republic through the Empire, with particular attention to the political, military and social developments in the light of literary and archeological evidence. (No Greek or Latin required.)
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 2LL3

CLASSICS 2P06 ANCIENT GREEK PHILOSOPHY
A study of Western philosophical thought from its earliest beginnings to late Roman times, with emphasis on Plato and Aristotle.
Three lectures; two terms
Prerequisite: Registration in Level II or above
Cross-list: PHILOS 2A06
This course is administered by the Department of Philosophy.

CLASSICS 2Z03 GREEK AND ROMAN RELIGION
A study of the role of religion in Greek and Roman public and private life.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: RELIG 2Z03

CLASSICS 3C03 THE LATE 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 CLASSICS 1L06, 1LL3, 2K03, 2LL3, 3CC3, 3EC03, and registration in Level III or above
Cross-list: HISTORY 3C03
Not open to students with credit in CLASSICS 3MM3 if the topic was The Late Republic.
Alternates with CLASSICS 3CC3.

CLASSICS 3E03 THE ROMAN FAMILY
The ancient Roman family, including social, economic and legal aspects.
Three lectures; one term
Prerequisite: One of CLASSICS 1L06, 1LL3, 2K03, 2LL3, 3CC3, 3EC03, and registration in Level III or above
Cross-list: HISTORY 3E03
Alternates with CLASSICS 3EE3.

CLASSICS 3EE3 THE GREEK HISTORIANS
The study of translation of Herodotus, Thucydides, and other Greek historical writers, with consideration of the evolution of their genre and their contributions to the development of historiography.
Three lectures; one term
Prerequisite: Registration in Level III or above
Cross-list: HISTORY 3EE3
Alternates with CLASSICS 3EE3.

CLASSICS 3G03 LATE ANTIQUE AND EARLY CHRISTIAN ART
The art and architecture of the later Roman Empire, and the birth of Christian art. (A.D. 200-600).
Three lectures; one term
Prerequisite: CLASSICS 2G03 or ART HIST 2G03
Cross-list: ART HIST 3G03
Alternates with CLASSICS 3H03.

CLASSICS 3H03 THE ARCHITECTURE OF THE CITY OF ROME AND ROMAN ITALY
The growth of the city of Rome, from its origins to the triumph of Christianity, and an examination of the archaeological remains of Pompeii, Ostia and other cities of Roman Italy.
Three lectures; one term
Prerequisite: One of CLASSICS 1A03, 2A03, 3G03
Alternates with CLASSICS 3G03.

CLASSICS 3G03 ANCIENT GREEK ART
The formative period of Greek Art, from its rebirth after the Dark Ages to the Persian Wars (c. 1000-480 B.C.), and its relationship to the art of the Near East.
Three lectures; one term
Prerequisite: CLASSICS 2G03
Cross-list: ART HIST 3G03
Alternates with: CLASSICS 3G03.

CLASSICS 3H03 THE RELIGION OF GREEK AND ROMAN LITERATURE
This course includes Greek and Roman Epic, Greek and Roman Elia- gia and Lyric Poetry, The Legend of the Trojan War, Crime and Punishment, Satire, The Poet and Society. Consult the Department concerning the topic to be offered.
Three lectures; one term
Prerequisite: Six units of Classics
Cross-list: COMP LIT 3H03
CLASSICS 3H03 may be repeated, if on a different topic, to a total of six units.

CLASSICS 3L03 THE HELLENISTIC AGE
The successors of Alexander, the world of the monarchies and their absorption into the Roman Empire. Political, cultural and social achievements in the light of modern historical research will be emphasized.
Three hours (lectures and discussion groups); one term
Prerequisite: One of CLASSICS 2L03 or six units of Classics
Cross-list: HISTORY 3L03
CLASSICS 3L03 may be repeated, if on a different topic, to a total of six units.

CLASSICS 3Q03 GREEK SANCTUARIES
Ancient Greek sanctuaries and their social and political context. Topics will include architecture and art, as well as activities such as sacrifice, athletic games, healing, and oracular consultation.
Three lectures; one term
Prerequisite: One of CLASSICS 1Q03, 2A03, 2B03
Alternates with: CLASSICS 3Q03.

CLASSICS 3S03 THE LATE ROYAL AGE
The history of theatres and theatrical production in Greece and Rome, with consideration of the cultural significance of drama in antiquity. The course will also include archaeological material.
Three lectures; one term
Prerequisite: One of CLASSICS 2H03 or six units of Classics
Cross-list: COMP LIT 3S03
Antirequisite: CLASSICS 2H06

CLASSICS 4B03 SEMINAR IN CLASSICAL ARCHAEOLOGY
Consult the Department concerning the topic to be offered.
Seminar (two hours); one term
Prerequisite: Six units from CLASSICS 1A03, 2A03, 3Q03, 3S03 and registration in Level III or IV of an Honours Programme 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 4BB3 SEMINAR IN ANCIENT ART
Consult the Department concerning the topic to be offered.
Seminar (two hours); one term
Prerequisite: CLASSICS 2B03, 2C03 and registration in Level III or IV of an Honours Programme in Classics (A)
Cross-list: ART HIST 4BB3
CLASSICS 4BB3 may be repeated, if on a different topic, to a total of six units. Enrolment is limited.

CLASSICS 4K03 ANCIENT PHILOSOPHY
A critical study of one or more ancient Greek philosophers such as Parmenides, Plato, Aristotle.
Seminar (two hours); one term
Prerequisite: CLASSICS 2P06 and registration in Level III or above
Cross-list: PHILO 4K03
Antirequisite: CLASS/GS 4C03, 4J03
Offered in alternate years.
This course is administered by the Department of Philosophy.

CLASSICS 4T03  INDEPENDENT STUDY
Reading and research in Classics, supervised by a department member and culminating in a major paper to be evaluated by the supervisor, with confirmation by a second reader. See Department for more detailed guidelines.
Tutorials; two terms
Prerequisite: Registration in Level IV of any Honours programme 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, 1ZZ3

   Intermediate Level Language Courses
   GREEK 2A03, 2AA3

2. Students with OAC Ancient Greek (or Greek U) should normally register in GREEK 2A03, but with special permission, may register in either GREEK 1Z03 or 1ZZ3.

Courses  If no prerequisite is listed, the course is open.

GREEK 1Z03  BEGINNER'S INTENSIVE GREEK I
A rapid introduction to the basic grammar of Ancient Greek.
Five hours (lectures and tutorials); one term
Not open to graduates of OAC Ancient Greek (or Greek U), who must have special permission to register in the course
Antirequisite: GREEK 1Z06

GREEK 1ZZ3  BEGINNER'S INTENSIVE GREEK II
This course continues the study of the grammar of Ancient Greek begun in GREEK 1Z03 and introduces students to the reading of passages from Greek authors.
Five hours (lectures and tutorials); one term
Prerequisite: GREEK 1Z03. Students with OAC Ancient Greek (or Greek U) must obtain special permission to register in the course
Antirequisite: GREEK 1Z06

This course, with a grade of at least B-, is accepted as a prerequisite for admission to any Honours programme in Classics, or, with a grade of at least C-, for admission to the B.A. programme in Classics.

GREEK 2A03  INTERMEDIATE GREEK I
A study of selected passages from Greek authors designed to develop a student's proficiency in reading Greek. The course will also include grammatical exercises.
Three lectures; one term
Prerequisite: One of OAC Ancient Greek (or Greek U), GREEK 1Z06 or 1ZZ3. Students using this course as a Humanities I requirement will register for GREEK 2A03 and 2AA3

GREEK 2AA3  INTERMEDIATE GREEK II
A study of selected passages from Greek authors designed to develop further the student's proficiency in reading Greek.
Three lectures; one term
Prerequisite: GREEK 2A03

GREEK 3A03  GREEK HISTORIANS
Selected readings from Greek historical authors, such as Herodotus and Thucydides. The course will also include grammatical exercises.
Three lectures; one term
Prerequisite: Six units of Level II Greek
Alternates with GREEK 4C03.

GREEK 3B03  HOMER
Selected readings from Homer's Iliad or Odyssey.
Three lectures; one term
Prerequisite: Six units of Level II Greek
Alternates with GREEK 4B03.

GREEK 4B03  GREEK TRAGEDY
Selected readings from Sophocles, Euripides, or Aeschylus.
Three lectures; one term
Prerequisite: Six units of Level II Greek.
Alternates with GREEK 3B03.

GREEK 4BB3  TOPICS IN GREEK LITERATURE II
Consult the Department for the topic to be offered.
Three lectures; one term
Prerequisite: Six units of Level II Greek
GREEK 4BB3 may be repeated, if on a different topic, to a total of six units.
Alternates with LATIN 4BB3.

GREEK 4C03  PLATO
Selected readings from the dialogues of Plato. The course will also include grammatical exercises.
Three lectures; one term
Prerequisite: Six units of Level II Greek
Alternates with GREEK 3A03.

GREEK 4K03  GUIDED READING IN GREEK AUTHORS
Selected readings from Greek authors supervised by a member of the Department.
Tutorials; one term
Prerequisite: Six units of Level II Greek and registration in Level III or IV of any Honours programme 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 Level Language Course
   LATIN 1Z03, 1ZZ3

   Intermediate Level Language Courses
   LATIN 2A03, 2AA3

2. Students with OAC Latin (or Latin U) should normally register in LATIN 2A03, but with special permission, may register in either LATIN 1Z03, 1ZZ3.

Courses  If no prerequisite is listed, the course is open.

LATIN 1Z03  BEGINNER'S INTENSIVE LATIN I
A rapid introduction to the basic grammar of Classical Latin.
Five hours (lectures and tutorials); one term
Not open to graduates of OAC Latin (or Latin U) who must obtain special permission to register in the course
Antirequisite: LATIN 1Z06

LATIN 1ZZ3  BEGINNER'S INTENSIVE LATIN II
This course continues the study of Latin grammar begun in LATIN 1Z03 and introduces students to the reading of simple passages from Latin authors.
Five hours (lectures and tutorials); one term
Prerequisite: LATIN 1Z03. Students with OAC Latin (or Latin U) must obtain special permission to register in the course
Antirequisite: LATIN 1Z06

This course, with a grade of at least B-, is accepted as a prerequisite for admission to any Honours programme in Classics, or, with a grade of at least C-, for admission to the B.A. programme in Classics.

LATIN 2A03  INTERMEDIATE LATIN I
A study of selected passages designed to develop the student's proficiency in reading Latin.
This course will also include grammatical study.
Three lectures; one term
Prerequisite: One of OAC Latin (or Latin U), LATIN 1Z06, 1ZZ3. Students using this course as a Humanities I 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.
Three lectures; one term
Prerequisite: LATIN 2A03 and 2AA3

LATIN 2A03  LATIN HISTORIANS
Readings in selected Latin historians such as Sallust, Livy, and Tacitus.
The course will also include grammatical exercises.
Three lectures; one term
Prerequisite: LATIN 2A03, 2AA3
Alternates with LATIN 4A03.

LATIN 2A03  VERGIL
Readings from Vergil's Aeneid, Georgics or Eclogues.
Three lectures; one term
Prerequisite: LATIN 2A03, 2AA3
Alternates with LATIN 4B03.
LATIN 4A03  
CICERO
Readings from the works of Cicero. The course will also include grammatical exercises.
Three lectures; one term
Prerequisite: LATIN 2A03, 2A3
Alternates with LATIN 2A03.

LATIN 4B03  
LATIN LOVE POETRY
Readings in Latin Love Poetry.
Three lectures; one term
Prerequisite: LATIN 2A03, 2A3
Alternates with LATIN 3B03.

LATIN 4K03  
GUIDED READING IN LATIN AUTHORS
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 programme in Classics; and permission of the Department. LATIN 4K03 may be repeated, if on a different topic, to a total of six units.

COMMERCER
WEB ADDRESS: http://www.degroote.mcmaster.ca
M.G. DeGroote Building, Room 104
Ext. 23914

Faculty as of January 15, 2002

Chair, Marketing, International Business and Business Policy Area
Kenneth R. Deal

Chair, Finance and Business Economics Area
Dean Mountain

Chair, Accounting Area
Khalid Nair

Chair, Human Resources and Management Area
Will Wiesner

Chair, Management Science and Information Systems Area
Prakash L. Abad

Professors
Prakash L. Abad/B.Tech. (Indian Institute of Technology), M.S., M.B.A., Ph.D. (Cincinnati)/(Management Science)/Chair, Management Science and Information Systems Area
Naresh C. Agarwal/B.A., M.A. (Delhi), Ph.D. (Minnesota)/(Human Resources)/Coordinator, Ph.D. Programme (Human Resources)
Norman P. Archer/B.Sc. (Alberta), Ph.D. (McMaster), M.S. (New York)/(Management Science and Information Systems)/Wayne C. Fox Chair in Business Innovation
Vishwanath Baba/B. Eng. (Madras), M.B.A. (Western Illinois), Ph.D. (British Columbia)/(Organizational Behaviour)/Dean
Christopher K. Bari/B.A., M.B.A. (York), Ph.D. (Western Ontario), C.A./Business Policy)/Director of the Management of Innovation and Technology Programmes
Min S. Basadur/B.Sc. (Toronto), M.B.A. (Xavier), Ph.D. (Cincinnati), P.Eng./(Organizational Behaviour)
Trevor W. Chamberlain/B.Sc. (California-Berkeley), M.B.A. (McGill), Ph.D. (Toronto), C.A./Finance)/Director, Undergraduate Programmes
M.W. Luke Chan/B.Sc. (Prince Edward Island), M.A., Ph.D. (McMaster) (Finance and Business Economics)/Executive Director, Office of International Affairs
C. Sherman Cheung/B.S. (Louisiana State), M.S., Ph.D. (Illinois)/(Finance and Business Economics)
Robert G. Cooper/B.Eng., M.Eng. (McGill), M.B.A., Ph.D. (Western Ontario)/(Marketing)
Rick D. Hackett/B.Sc. (Toronto), M.A. (Windsor), Ph.D. (Bowling Green State)/(Human Resources)
Harish C. Jain/B.Com. (Delhi), M.B.A. (Indiana), Ph.D. (Wisconsin)/(Human Resources and Labour Relations)
Elko J. Kleinich/Dip. Ing. (Staatliche ingenieurshule, Hannover), M.B.A., Ph.D. (McGill)/(Marketing and International Business)
Clarence C.Y. Kwok/Ph.D. (Ottawa), M.B.A. (McMaster), Ph.D. (Toronto), P Eng./Finance
John W. Medcroft/B.A. (New Brunswick), M.A., Ph.D. (Toronto)/(Organizational Behaviour)/Associate Dean
G. John Miltenburg/B.Eng., M.B.A. (McMaster), M.Eng. (Toronto), Ph.D. (Waterloo)/(Production and Management Science)/Director, Engineering and Management Programmes
Dean C. Mountain/B.A. (McMaster), M.A., Ph.D. (Western Ontario)/(Finance and Business Economics)/Chair, Finance and Business Economics Area
Mahmut Parlar/B.Sc., M.Sc. (Middle Eastern Technical University), Ph.D. (Waterloo)/(Management Science)
Joseph B. Rose/B.B.A., M.B.A. (California), Ph.D. (SUNY-Buffalo)/(Industrial Relations)
Mohamed M. Shehata/B.Com., (Tanta), M.S. (Ain-Shams), M.B.A. (North Texas State), Ph.D. (Florida)/(Accounting)/Director, M.B.A. Programmes
George Steinor/M.Sc. (Budapest), Ph.D. (Waterloo)/(Production and Management Science)/Coordinator, Ph.D. Programme (Management Science)/(Systems)
George O. Wesolowsky/B.Sc. (Toronto), M.B.A. (Western Ontario), Ph.D. (Wisconsin)/(Management Science)
Yufei Yuan/B.Sc. (Pusan), Ph.D. (Michigan)/(Information Systems)
F. Išik Zeytinoglu/B.A., M.A. (Bogazici), M.S., Ph.D. (Pensylvania)/(Management and Industrial Relations)

Associate Professors
Y.C. Lilian Chan/B.B.A. (Chinese Univ. of Hong Kong), Ph.D. (Virginia Polytechnic Institute and State University)/(Accounting)
Richard W. Deaves/B.A., M.A., Ph.D. (Toronto)/(Finance and Business Economics)
Scott J. Edgey/B.B.A. (Prince Edward Island), M.B.A. (McMaster), Ph.D. (Bradford)/(Marketing)
Khaled Hassanein/B.Sc. (Kuwait), M.A.Sc., (Toronto), Ph.D. (Waterloo), M.B.A. (Wilfrid Laurier)/(Information Systems)
Rosemary Luoh/B.Eng., Graduated Diploma (Business) (Beijing), M.A. (McMaster), Ph.D. (Western Ontario)/(Finance)
Bernadette E. Lynn/B.A. (Carlow College), M.A. (Bristol), Ph.D., M.B.A. (McMaster), C.A./Accounting
All R. Montazeri/B.N.D. (Teesside Polytechnic), M.Sc. (Southampton), Ph.D. (Waterloo)/(Information Systems)
S.M. Khalid Nair, B.A., M.A. (Delhi), Ph.D. (Florida)/(Accounting)/Chair, Accounting Area
Sudipto Sarkar/B.Tech. (Indian Institute of Technology), Ph.D. (Columbia)/(Finance)
D. Wayne Taylor/B.A. (Toronto), M.P.A., Ph.D. (York)/(Business and Public Policy)/Director, Health Services Management Programme
Will Wiesner/B.A. (Wilfrid Laurier), M.A., Ph.D. (Waterloo)/(Human Resources)/Chair, Human Resources and Management Area

Assistant Professors
Peter Boey/B.E., M.Eng., Ph.D. (Carneige-Mellon), M.Ed. (Pennsylvania State), C.A./Accounting
Nick Bontis/B.A., Ph.D. (Western Ontario)/(Marketing, International Business and Policy)
Narat Charupat/B.A. (Thammasat), M.B.A. (Drexel), Ph.D. (York)/(Finance)
Tim DeGroot/B.S., M.B.A., Ph.D. (Florida State)/(Human Resource and Labour Relations)
Brian Dellar/B.Sc. (Western Ontario), M.I.S., Ph.D. (Toronto)/(Information Systems)
Milena Head/B.Math. (Waterloo), M.B.A., Ph.D. (McMaster)/(Management Science)/(Information Systems)
Devashish Pujari/B.Com., M.Com. (Kurukshetra), M.Phil, Ph.D. (Bradford)/(Human Resource Management)
Alfred Sealman/B.B.A Admin. (New Brunswick), Ph.D. (Queen's) C.M.A. (Accounting)
James H. Tiessen/B.Sc. (Alberta), M.Sc. (Guelph), Ph.D. (York)/(International Business)

Lecturers
Marilyn Adams/B.Sc. (Carnegie-Mellon), M.Ed. (Pennsylvania State), C.A./Accounting
Rita Cossa/H.B.A. (Wilfrid Laurier), M.B.A. (McMaster)/(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 programme. For these students, enrolment will be limited to 40 spaces per course on a first-come, first-served basis in the following courses: COMMERCE 2AA3, 2B03, 2FA3, 2MA3, 2QA3, 2QB3, 3BC3, 3FA3, 3MC3. Please note that all prerequisites for these courses must also be satisfied. Students registered in a McMaster Commerce, Engineering Management or Labour Studies programme (where applicable) will be guaranteed enrolment in these courses. See Minor in Business in the Faculty of Business section of this Calendar. Effective September 1999, students taking COMMERCE 2AA3, 2FA3, 2MA3 as Business Minor courses will also be required to have obtained a minimum grade of B-in ECON 1A06 or 1B03 as a prerequisite.
3. Graduates of McMaster's Commerce programmes or one of the Engineering and Management programmes may take, as part-time students, Level III and IV Commerce courses (not previously taken; to a maximum of 18 units), excluding COMMERCE 4AG3*, 4AH3*, with the permission of the Faculty of Business. Enrolment is limited. Registrations will be approved after classes start. (See the Admissions Requirements section of this Calendar under the heading Continuing Students.)

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 2A03 FINANCIAL ACCOUNTING I
This is an introduction to the basic principles and practices of financial accounting, which includes an examination of income measurement and asset and liability valuation, to provide an understanding of financial accounting information and the ethics of financial reporting. Prerequisite: ECON 1A06 or 1B03 and registration in any Commerce or Engineering and Management programme; or a grade of at least B-in ECON 1A06 or 1B03 and registration in any four or five-level non-Commerce programme. Enrollment is limited. (See Note 2 above.)
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 programme. (B.Com. students - see Note 5 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, leases, 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 programme. (B.Com. students - see Note 5 above.)
Antirequisite: COMMERCE 4AB3

COMMERCE 3BC3  HUMAN RESOURCE MANAGEMENT AND LABOUR RELATIONS
This course builds on COMMERCE 2AB3, focusing on human resource management and labour relations issues and practices from a general management education perspective.
Prerequisite: COMMERCE 2AB3 or KINESIOL 3L03; and registration in any Commerce, Labour Studies, Engineering and Management or four or five-level non-Commerce programme.
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 and registration in any Commerce, Engineering and Management or four or five-level non-Commerce programme. 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 and registration in any Commerce or Engineering and Management programme. (B.Com. students - see Note 5 above.)
Not open to students with credit or registration in ECON 2103.

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 programme. (B.Com. students - see Note 5 above.)

COMMERCE 3NO  COMMERCE INTERNSHIP PROGRAMME
Career development; job strategies; skills assessment; resume/application form preparation; interview/presentation skills; orientation to the workplace. Successful completion of an eight, twelve or sixteen month internship, employer evaluation and work term report. Lecture/workshop (six sessions); first term or second term
Prerequisite: Successful completion of Level II Commerce. Transcript notation granted upon successful completion of an 8, 12 or 16 month approved internship.

COMMERCE 3MA3  COMPETITIVE AND MARKET INTELLIGENCE
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; and COMMERCE 2A03 or STATS 3Y03; and registration in any Commerce or Engineering and Management programme. (B.Com. students - see Note 5 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 2A3 and registration in any Commerce or Engineering and Management programme. (B.Com. students - see Note 5 above.)

COMMERCE 3MC3  APPLIED MARKETING MANAGEMENT
This course builds upon material in COMMERCE 2MA3 but is more applied in nature and covers the 4 Ps in greater depth. It also has a heavier industrial and service sector component, and relies more on practical, real world cases. A major field project (student teams working with companies) is a critical part of the course.
Prerequisite: COMMERCE 2MA3 and registration in any Commerce, Engineering and Management or four or five-level non-Commerce programme. 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 2OA3 and registration in any Commerce or Engineering and Management programme.

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 a Commerce programme; or registration in any Engineering and Management, Mechanical Engineering or Manufacturing Engineering programme.
Antirequisite: COMMERCE 4OA3, 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: COMMERCE 2AB3 or 3AA3; and registration in any Commerce or Engineering and Management programme. (B.Com. students - see Note 5 above.)

COMMERCE 4AC3  FINANCIAL ACCOUNTING IV
An advanced accounting course considering specific problems of accounting for the corporate entity, such as, business combinations, intercorporate investments, consolidated financial statements, accounting for foreign operations and foreign currency transactions, segment reporting.
Prerequisite: Credit or registration in COMMERCE 3AC3 or 4AB3; and registration in any Commerce or Engineering and Management Programme. (B.Com. students - see Note 5 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 3AB3 and registration in any Commerce or Engineering and Management programme. (B.Com. students - see Note 5 above.)

COMMERCE 4AE3  ACCOUNTING INFORMATION SYSTEMS
This course emphasizes the understanding of the roles of accounting information and information technology in managerial decision-making, operational support, stewardship, and organizational competitiveness. Applications of concepts will be emphasized.
Prerequisite: COMMERCE 3AB3 and registration in any Commerce or Engineering and Management programme. (B.Com. students - see Note 5 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 programme. (B.Com. students - see Note 5 above.)
COMMERC 4AG3  ADVANCED ACCOUNTING TOPICS
This course extends the knowledge base of earlier accounting courses and deals with specific advanced accounting topics, as the conceptual framework, standard setting, not-for-profit accounting and fiduciary accounting.
Prerequisite: COMMERC 4AC3, 4AF3; and registration in any Commerce or Engineering and Management programme or graduation from a Commerce programme. (B.Com. students - see Note 5 above.)
Available Summers subject to sufficient enrolments and availability of qualified instructors.
(Continuing Students - see Note 3 above.)

COMMERC 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 derived in earlier courses as well as on the technical skills and breadth of knowledge obtained in earlier accounting courses.
Prerequisite: COMMERC 4AC3, 4AD3; and registration in any Commerce or Engineering and Management programme or graduation from a Commerce programme. (B.Com. students - see Note 5 above.)
Available Summers subject to sufficient enrolments and availability of qualified instructors.
(Continuing Students - see Note 3 above.)

COMMERC 4AI3  COMPUTER CONTROL AND AUDITING
This course introduces the student to the field of EDP auditing through lectures, readings and hands-on experience with EDP audit software.
Prerequisite: COMMERC 4AC3, 4AD3; and registration in any Commerce or Engineering and Management programme or graduation from a Commerce programme. (B.Com. students - see Note 5 above.)
Available Summers subject to sufficient enrolments and availability of qualified instructors.
(Continuing Students - see Note 3 above.)

COMMERC 4AX3  SPECIAL TOPICS IN ACCOUNTING
Various topics in Accounting are considered. They will vary depending upon recent developments in the field and upon the research interests of the instructor. The topics to be included are announced at the time of the course offering.
Prerequisite: Announced at the time of offering
For information on course offerings, please refer to the School of Business website at http://www.degrote.mcmaster.ca/programs/commerce/ courses.html or contact the Academic Programmes Office, MG 104.
COMMERC 4AX3 may be repeated, if on a different topic, to a total of six units

COMMERC 4BA3  BEHAVIOURAL ISSUES IN MANAGEMENT
Detailed analysis of employee motivation and reward systems; organizational structure; leadership and decision-making; group processes; and motivation and job design.
Prerequisite: Registration in any Commerce or Engineering and Management programme. (B.Com. students - see Note 5 above.)

COMMERC 4BB3  PERSONNEL SELECTION
This course exposes students to staffing issues in the Canadian context. Topics include job analysis, methods of recruitment and selection, human resources legislation, and decision-making.
Prerequisite: COMMERC 3BB3 or 3BC3; and registration in any Commerce or Engineering and Management programme. (B.Com. students - see Note 5 above.)

COMMERC 4BC3  COLLECTIVE BARGAINING
A survey of the nature, determinants, and impact of collective bargaining in Canada. Both the procedural and substantive aspects of collective bargaining will be studied.
Prerequisite: One of COMMERC 3BA3, 3BC3, LABR ST 2A03 or 2A06; and registration in any Commerce, Engineering and Management or Labour Studies programme. (B.Com. students - see Note 5 above.)

COMMERC 4BD3  SETTLEMENT OF INDUSTRIAL DISPUTES
The nature and role of industrial conflict as well as the techniques which have been developed to control the incidence of conflict in union-management situations.
Prerequisite: One of COMMERC 3BA3, 3BC3, LABR ST 2A03 or 2A06; and registration in any Commerce, Engineering and Management or Labour Studies programme. COMMERC 4BC3 is recommended. (B.Com. students - see Note 5 above.)

COMMERC 4BE3  COMPENSATION/REWARD SYSTEMS
Key issues in designing effective pay systems are discussed. Topics include: job evaluation, market pay surveys, pay structures, performance incentives, knowledge pay and employee benefits.
Prerequisite: COMMERC 3BB3 or 3BC3; and registration in any Commerce or Engineering and Management programme. (B.Com. students - see Note 5 above.)

COMMERC 4BF3  LABOUR LAW AND POLICY
An analysis of the concepts and fundamentals of Canadian labour law and analysis of Canadian labour policy.
Prerequisite: COMMERC 3BA3 or 3BC3; and registration in any Commerce or Engineering and Management programme. Subject to space availability. (B.Com. students - see Note 5 above.)
Cross-list: LABR ST 3C03

COMMERC 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: COMMERC 4BC3 and registration in any Commerce or Engineering and Management programme. Subject to space availability. (B.Com. students - see Note 5 above.)
Cross-list: LABR ST 4C03

COMMERC 4BH3  COMPARATIVE INDUSTRIAL RELATIONS
A discussion of industrial relations policies and practices in several selected countries. Topics will include: the development, structure, objectives and strategies of labour and management organizations.
Prerequisite: COMMERC 3BA3 or 3BC3; and registration in any Commerce or Engineering and Management programme. Subject to space availability. (B.Com. students - see Note 5 above.)
Cross-list: LABR ST 4D03

COMMERC 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: COMMERC 3BB3 or 3BC3; and registration in any Commerce or Engineering and Management programme. (B.Com. students - see Note 5 above.)

COMMERC 4BJ3  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 programme. (B.Com. students - see Note 5 above.)
Cross-list: WOMEN ST 4BJ3
Not open to students with credit in COMMERC 4SAX3. SPECIAL TOPICS IN BUSINESS, if taken in January 1998.

COMMERC 4BK3  THE MANAGEMENT OF TECHNOLOGY
An introduction to the innovative management of technology including the integration of the firm and technology strategy, external sourcing of technology, and the internationalization of technology management.
Prerequisite: COMMERC 2BA3; registration in any Commerce or Engineering and Management programme. (B.Com. students - see Note 5 above.)
Not open to students with credit in COMMERC 4BX3, if taken in January 1998 or 1999.

COMMERC 4BX3  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 website at http://www.degrote.mcmaster.ca/programs/commerce/ courses.html or contact the Academic Programmes Office, MG 104.
COMMERC 4BX3 may be repeated, if on a different topic, to a total of six units

COMMERC 4FA3  CASES IN MANAGERIAL FINANCE
This course covers the application of basic financial theory and analysis, from a managerial point of view, to specific cases. Consideration is given to the strategic, marketing, operational and personal factors which interact with financial factors.
Prerequisite: COMMERC 3FA3 and registration in any Commerce or Engineering and Management programme. (B.Com. students - see Note 5 above.)

COMMERC 4FD3  FINANCIAL INSTITUTIONS
This course examines, from a managerial perspective, the major types of financial institutions in Canada: chartered banks, trust companies, insurance companies, Investment banks and other institutional investors.
Prerequisite: COMMERC 3FA3 and registration in any Commerce or Engineering and Management programme. (B.Com. students - see Note 5 above.)
COMMERCE 4FE3 OPTIONS AND FUTURES
This course provides an integrated approach to understanding the relations between options, futures, and their underlying assets. The theory of pricing of options and futures and the application of the theory to instruments currently traded in financial markets are considered.
Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 5 above.)

COMMERCE 4FF3 PORTFOLIO THEORY AND MANAGEMENT
This course offers an advanced treatment of investment decision-making and the role of financial markets in pricing securities. Topics include: portfolio selection models, the institutional environment of investment decisions, and investment and asset pricing theory.
Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 5 above.)

COMMERCE 4FG3 FINANCIAL THEORY
This course explores the theoretical foundations of finance and their applications to corporate finance policy. Topics covered include rational investment decisions, asset pricing, efficient markets, financial decisions and the role of information in financial decision-making.
Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 5 above.)

COMMERCE 4FH3 MERGERS, ACQUISITIONS AND CORPORATE CONTROL
This course examines the processes by which mergers and other types of corporate control transactions take place, and the role of restructuring shifts in resource allocation by corporations.
Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 5 above.)

COMMERCE 4FJ3 TRADING IN FINANCIAL MARKETS
This course attempts to develop practical skills in trading financial securities - fixed income, equities, futures and options - focusing on trading strategies based on market analysis and risk measurement.
Prerequisite: COMMERCE 4FJ3 and registration in Honours Commerce or any Engineering and Management program; or permission of the instructor.
Enrollment is limited. Selection is by application only. Applications available in November in MGD/104.

COMMERCE 4FK3 FIXED INCOME ANALYSIS
This course provides an advanced treatment of investments in the field of fixed income analysis and focuses on fixed income securities, fixed income portfolio management and fixed income derivatives.
Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 5 above.)

COMMERCE 4FL3 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

COMMERCE 4FM3 SALES MANAGEMENT
Cases, presentations, field work, library research, role playing and group exercises help to understand customers, the selling process, sales presentations, negotiation, legal and ethical responsibilities, self and team management.
Prerequisite: COMMERCE 3MC3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 5 above.)

COMMERCE 4FX3 SPECIAL TOPICS IN MARKETING, POLICY AND INTERNATIONAL BUSINESS
Various topics in Marketing, Policy and International Business are considered. They will vary depending upon recent developments in the field and upon the research interests of the instructor.
Prerequisite: Announced at time of offering

For information on course offerings, please refer to the School of Business website at http://www.degrote.mcmaster.ca/programs/commerce/courses.html or contact the Academic Programmes Office, MGD 104. COMMERCE 4MX3 may be repeated, if on a different topic, to a total of six units.

COMMERCE 4PA3 BUSINESS POLICY: STRATEGIC MANAGEMENT
As the capstone to the programme, 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 programme or Level V of an Engineering and Management programme.

COMMERCE 4QB3 ANALYSIS OF PRODUCTION/OPERATIONS PROBLEMS
An examination of analytical approaches to problems in production/operations. The course will provide in-depth coverage of a limited number of topics. These topics may be selected from among: layout and location of facilities, scheduling, inventory control and materials handling.
Prerequisite: One of COMMERCE 3GC3, 4QG3 or MECH ENG 4QG3; and registration in any Commerce or Engineering and Management programme.
(B.Com. students - see Note 5 above.)

COMMERCE 4QC3 OPTIMIZATION APPLICATIONS IN BUSINESS
An examination of the techniques of management science and their application to business problems. Topics include: linear programming, integer programming, and optimization problems on networks.
Prerequisite: COMMERCE 3QG3 and registration in any Commerce or Engineering and Management programme.
(B.Com. students - see Note 5 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 programme.
(B.Com. students - see Note 5 above.)

COMMERCE 4QE3 TELECOMMUNICATION AND ELECTRONIC COMMERCE
The new trends and issues in telecommunication networks and their business applications including wireless telecommunication, Web technology, Electronic commerce, 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 programme.
(B.Com. students - see Note 5 above.)

COMMERCE 4QX3 SPECIAL TOPICS IN BUSINESS DATA COMMUNICATION (if taken in September 1997). Not open to students with credit in COMMERCE 4MX3, if the topic was Specific Topical in Business Data Communication.

COMMERCE 4QY3 PROJECT MANAGEMENT
Topics include: project selection, project organization structures, life cycle planning, estimation, budgeting, resource allocation, contracting, project management software, reporting and controlling issues and conflict management.
Prerequisite: COMMERCE 2B43, 3Q43 and registration in a Commerce programme; or registration in an Engineering and Management programme.
(B.Com. students - see Note 5 above.)
COMMERC 4QG3 TOTAL QUALITY MANAGEMENT
TQM topics include: strategic quality planning, quality in design and processes, tools for quality improvement and control, and standards such as ISO 9000.
Prerequisite: COMMERC 3QG3 and registration in a Commerce programme; or registration in an Engineering and Management programme.
(B.Com. students - see Note 5 above.)

COMMERC 4QH3 MANAGEMENT ISSUES IN ELECTRONIC COMMERCE
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 commerce solutions.
Prerequisite: COMMERC 2QH3 and registration in any Commerce or Engineering and Management programme.
(B.Com. students - see Note 5 above.)

COMMERC 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 website at http://www.degroote.mcmaster.ca/programs/commerce/courses.html or contact the Academic Programmes Office, MGD 104.
COMMERC 4QX5 may be repeated, if on a different topic, to a total of six units.

COMMERC 4SB3 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: COMMERC 3MC3; and registration in Level IV of a Commerce programme or Level V of any Engineering and Management programme. Antirequisite: COMMERC 4PE3.

COMMERC 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: COMMERC 3A3B3, 3FA3 and registration in any Commerce or Engineering and Management programme.
(B.Com. students - see Note 5 above.)
Antirequisite: COMMERC 4PB3.

COMMERC 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: COMMERC 4SB3 or 4PB3; and registration in any Commerce or Engineering and Management programme.
(B.Com. students - see Note 5 above.)
Antirequisite: COMMERC 4PC3.

COMMERC 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 programme.
(B.Com. students - see Note 5 above.)
Antirequisite: COMMERC 4PD3.

COMMERC 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: COMMERC 3FA3; and COMMERC 3MA3 or 3MC3; and registration in any Commerce or Engineering and Management programme.
(B.Com. students - see Note 5 above.)

COMMERC 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 programme.
(B.Com. students - see Note 5 above.)
Cross-list: JAPAN ST 4S03

COMMERC 4SY3 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 programme.
Project forms are available from MGD 245. (B.Com. students - see Note 5 above.)

COMMUNICATION STUDIES
WEB ADDRESS: http://www.humanities.mcmaster.ca/cmst
Togo Salmon Hall, Room 512
Ext. 23488

Acting Director
Graham Knight (Sociology)

Committee of instruction
Catherine Graham (School of the Arts)
Susie O'Brien (English)
Alexandre Sévigny (French)
Magda Stroinska (Modern Languages and Linguistics)

Courses
If no prerequisite is listed, the course is open.

CMST 1A03 INTRODUCTION TO COMMUNICATION
Students will examine both practical and fundamental concepts in communication studies and the effects of language, mass communications, performative acts and the Internet on social, cultural and cognitive processes in the context of the four streams of the Communication Studies Programme.
Three hours (lectures and tutorials); one term

CMST 1B03 DEVELOPMENTS IN HUMAN COMMUNICATION: PAST AND PRESENT
A survey of human communication throughout history and across cultures. This course will include discussion of orality and literacy, manuscript, print and electronic media, and human communication through visual and pictorial arts.
Three hours (lectures and tutorials); one term

CMST 2A03 QUANTITATIVE METHODS IN COMMUNICATION RESEARCH
An introduction to the basic approaches and principles for gathering and analyzing quantitative data in communication studies. Topics include sampling techniques, interviewing, questionnaire construction, focus groups, content analysis, and the fundamentals of statistical analysis and inference.
Three hours (lectures and tutorials); one term
Prerequisite: Registration in a programme in Communication Studies
Antirequisite: ANTHROP 2Z03, GEO 2HR3, GERONTOL 2C03, HEALTHST 2B03, SOCIAL 2Z03

CMST 2A03 JAPANESE COMMUNICATION
The Japanese language is examined from sociolinguistic and pragmatic viewpoints identifying the unique characteristics of the target culture that lie behind its use. Such knowledge is invaluable in solving problems of intercultural communication.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: JAPAN ST 2A03
This course is administered by the Department of Modern Languages and Linguistics.

CMST 2B03 QUALITATIVE METHODS IN COMMUNICATIONS RESEARCH
An introduction to the qualitative research in communication studies. Topics may include research ethics, discourse analysis, textual analysis, ethnography, structuralist and poststructuralist approaches to the study of communication.
Three hours (lectures and tutorials); one term
Prerequisite: Registration in a programme in Communication Studies

CMST 2C03 COMMUNICATION THEORY: FUNDAMENTAL PERSPECTIVES
An introduction to various theories on the organization, use and manipulation of language, such as semiotics, sociolinguistics, interpersonal communication, group communication and performance.
Three lectures; one term
Prerequisite: Three units of Communication Studies and registration in Level II or above
CMST 2D03 COMMUNICATION THEORY II: THE INFORMATION SOCIETY AND ITS IMPLICATIONS
An introduction to various theories on the organization, use and manipulation of information in a global context, and its impact on the corporate economy and the development of the individual and society. Three lectures; one term
Prerequisite: CMST 2C03

CMST 2E03 THE NATURE OF TEXTS: FROM SLANG TO FORMAL DISCOURSE
The course will investigate a variety of styles and registers from the conversational to the literary and academic. Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: LINGUIST 2E03
This course is administered by the Department of Modern Languages and Linguistics.

CMST 2F03 ADVANCED COMPOSITION IN THE ELECTRONIC AGE
This course involves readings of model essays demonstrating various rhetorical patterns of exposition and writing assignments based on these patterns. Students will produce a comparison/contrast essay, a classification essay, and a persuasive essay. Students in this course will participate in a writing clinic. Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: LIT 2F03
This course is administered by the Department of Modern Languages and Linguistics.

CMST 2G03 PERFORMANCE AND PERFORMATIVITY
An introduction to the study of performative modes of communication such as storytelling, gesture, movement, dress. Students will learn to analyze the relationship between cultural performances, such as games, garage bands, group facilitation, or live theatre and social structures. Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: SOTA 2G03
This course is administered by the School of the Arts.

CMST 2H03 GENDER AND PERFORMANCE
An examination of gender 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

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
Cross-list: ART HIST 2A03
This course is administered by the School of the Arts.

CMST 2J03 CONTEMPORARY POPULAR CULTURE
Drawing on models of analysis from the field of cultural studies, this course will introduce students to methods of critically analyzing selected forms of popular culture. Areas of investigation may include: television, magazines, advertising, computer culture, film, popular fiction. Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: ENGLISH 2J03
This course is administered by the Department of English.

CMST 2K03 POLITICAL ECONOMY OF THE MEDIA
A comparative examination of changing patterns of ownership and control of the mass media in light of globalization, technological change, government policy, market re-structuring, and corporate consolidation. Three lectures; one term
Prerequisite: Registration in Level II or above

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 programme production and the relationship between media production and management. Three lectures; one term
Prerequisite: CMST 1A03 and 1B03; or SOCIOLO 1A06
Cross-list: SOCIOLO 2L03
This course is administered by the Department of Sociology.

CMST 2M03 THE CONCEPT 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 programme in Communication Studies, Comparative Literature or English; or permission of the English Department Counsellor.
Cross-list: COMP LIT 2E03, ENGLISH 2M03
This course is administered by the Department of English.

CMST 2M03 MODERN COUNTERCULTURES
An exploration of a variety of cultural forms (e.g., literature, art, photography, film, music) produced by avant-gardes 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 programme in Communication Studies, Comparative Literature or English; or permission of the English Department Counsellor.
Cross-list: COMP LIT 2E03, ENGLISH 2M03
This course is administered by the Department of English.

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
Cross-list: ART HIST 2N03, PHILOS 2N03
This course is administered by the School of the Arts.

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
Cross-list: ART HIST 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 or above.
Cross-list: DRAMA 2P03, ENGLISH 2P03
This course is administered by the School of the Arts.

CMST 2Q03 MUSIC OF THE WORLD'S CULTURES
A survey of music traditions of non-European cultures, e.g., far Eastern, Indian, African.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: MUSIC 2Q03
Antirequisite: MUSIC 4Q03

Offered in alternate years.
This course is administered by the School of the Arts.

CMST 2R03 POPULAR MUSIC
A study of 20th-century popular music from the late 1940's to the present. Topics include: rhythm and blues (Chuck Berry), hard rock (Led Zeppelin), and punk (Sex Pistols). 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 2S03 NEW MEDIA AND PERFORMANCE
This course will explore ways in which the proliferation of new media has affected the ways we create and interpret both live and recorded performances, the ways performance reaches audiences and our methods of analyzing and archiving performance.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Antirequisite: DRAMA 2S03
Cross-list: THTR&FLM 2S03
This course is administered by the School of the Arts.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
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<tbody>
<tr>
<td>CMST 2T03</td>
<td>MUSIC FOR FILM AND TELEVISION</td>
<td>An examination of how music functions to help create meanings in film and television programmes. 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 2F03. This course is administered by the School of the Arts.</td>
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<tr>
<td>CMST 2V03</td>
<td>THE MAKING OF THE EUROPEAN LINGUISTIC LANDSCAPE</td>
<td>The history of language use in Europe from antiquity to the present day. This course will illustrate the different functions of language in social life and the growth of national, standardized tongues. 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 Modern Languages and Linguistics.</td>
</tr>
<tr>
<td>CMST 2W03</td>
<td>CONFLICT TRANSFORMATION: THEORY AND PRACTICE</td>
<td>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.</td>
</tr>
<tr>
<td>CMST 2X03</td>
<td>FILM HISTORY TO THE SECOND WORLD WAR</td>
<td>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: Six units from the Faculty of Humanities and Registration in Level II or above. Antirequisite: CMST 2X06. Cross-list: THTR&amp;FLM 2F03. This course is administered by the School of the Arts.</td>
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<tr>
<td>CMST 2Y03</td>
<td>THE ANCIENT WORLD IN FILM</td>
<td>The emphasis is on myth (Amazon, Hercules) and history (slave revolts, banquets, decadent emperors) studied via Greek and Latin accounts (in translation) and cinematic versions (e.g. Electra, Medea, Mighty Aphrodite, Apocalypse Now, Spartacus, I Claudius). Three lectures; one term. Prerequisite: Registration in Level II or above. Cross-list: CLASSICS 2E03, THTR&amp;FLM 2G03. This course is administered by the Department of Classics.</td>
</tr>
<tr>
<td>CMST 2Z03</td>
<td>POLITICS AND THE MEDIA</td>
<td>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.</td>
</tr>
<tr>
<td>CMST 3A03</td>
<td>TOPICS IN COMMUNICATION</td>
<td>The study of specific issues in communication such as sport and the media, racism and anti-racism, family, business, the law, schools and large-scale political conflicts. Three hours (lectures and discussion groups); one term. Prerequisite: One of CMST 1A03, 1B03 or 2C03.</td>
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<tr>
<td>CMST 3B03</td>
<td>COMMUNICATION PRACTICUM</td>
<td>The application of communication skills and theories to the production of an original, creative project. Undertaken following successful completion of relevant courses in the appropriate stream. Entry is by application to the Committee of Instruction during the term prior to the practicum. Seminar (three hours); one term. Prerequisite: Registration in Level III or IV of a programme in Communication Studies.</td>
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<tr>
<td>CMST 3B33</td>
<td>WOMEN AND VISUAL CULTURE</td>
<td>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 and television, advertising, and new media. Two hours lecture and discussion, plus one weekly film screening; one term. Prerequisites: One of ART HIS 2A03, CMST 2X03, 2X06; or registration in Level IV above of the Women’s Studies Programme. Cross-list: THTR&amp;FLM 3F03, WOMEN ST 3B33. Not open to students with credit or registration in WOMEN ST 3B03 if taken in 2001-2002. This course is administered by Women’s Studies.</td>
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<tr>
<td>CMST 3C03</td>
<td>MEDIA AND SOCIAL ISSUES</td>
<td>Media representations of social problems such as homelessness and violence are examined comparatively in light of journalistic ethics and ideology, the relations between media and sources, and the constraints on objectivity. Three lectures; one term. Prerequisite: Registration in a Communication Studies or Sociology programme. Cross-list: SOCIOLOG 3C03.</td>
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<tr>
<td>CMST 3C33</td>
<td>LITERATURE AND FILM</td>
<td>An examination of the particular characteristics of both literature and film and the relationships between them through a detailed study of selected novels, short stories and plays, and the films that have been based on them. Three hours, plus one weekly film screening; one term. Prerequisite: Registration in Level II above of a programme in Art History, Communication Studies, Comparative Literature or Theatre and Film Studies. It is recommended that students should have already taken CMST 2X03 or 2X06. Cross-list: COMP LIT 3L03, ENGLISH 3C33, THTR&amp;FLM 3R03 (formerly DRAMA 3H03). This course is administered by the Department of English.</td>
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<tr>
<td>CMST 3D03</td>
<td>POLITICAL COMMUNICATION</td>
<td>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 programme. Cross-list: POL SCI 3B03.</td>
</tr>
<tr>
<td>CMST 3E03</td>
<td>ARGUMENTATION THEORY</td>
<td>The theory of argumentation is central to any sort of social or dialectical approach to the theory of knowledge. The theoretical issues discussed in this course would include the concept of an argument, the analysis of arguments and the evaluation of arguments. Three lectures and discussion; one term. Prerequisite: CMST 2W03 and registration in Level II above.</td>
</tr>
<tr>
<td>CMST 3F03</td>
<td>TOPICS IN VISUAL CULTURE</td>
<td>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 above. Cross-list: SOTA 3C03. This course is administered by the School of the Arts.</td>
</tr>
<tr>
<td>CMST 3G03</td>
<td>INTRODUCTION TO SOCIOLINGUISTICS</td>
<td>An introduction to sociolinguistics with particular emphasis on the social situation of the major European languages. Topics covered include linguistic change (regional, social, situational), language and gender, language and disadvantage/power, language choice, language change, pidgin and creole languages. Three lectures; one term. Prerequisite: LINGUIST 1A03 and 1A06; or permission of the Department of Modern Languages and Linguistics. Cross-list: LINGUIST 3K03. Antirequisite: ANTHROP 2X03. This course is administered by the Department of Modern Languages and Linguistics.</td>
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CMST 3H03 CREATING CEREMONIES
An examination of the performative aspects of ceremonies and rituals such as weddings, funerals, political inaugurations, parades, mass, festivals around such religious celebrations as Christmas and Hanukkah, and the rituals associated with theatre and concert going.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level III or above.

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: Three units of Communication Studies and registration in Level II or above

CMST 3K03 MEDIA AUDIENCES AND EFFECTS
An examination of the media/audience relationship in light of different theories of media effects including social learning, agenda-setting, uses and gratifications, active audiences and cultivation analysis.
Three lectures; one term
Prerequisite: Three units of Communication Studies and registration in Level II or above

CMST 3M03 THEATRE AND COMMUNITY DEVELOPMENT
Students will explore the 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 (formerly DRAMA 3M03)
Offered in alternate years.
This course is administered by the School of the Arts.

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 3S53 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 include: the social and cultural meaning of popular imagery, viewing practices, star-making and star-gazing, commercialization.
Two hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: CMST 2X03 or CMST 3H03
Cross-list: THTR&FLM 3M03
Offered in alternate years.
This course is administered by the School of the Arts.

CMST 3T03 TOPICS IN NATIONAL CINEMAS
This course examines cinematic forms in relation to national contexts and to perspectives about nation. Areas of investigation may include: filmic production of a particular country, national belonging, global/local characteristics, transnational identities.
Two hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: One of CMST 2S03, 2X03 or CMST 3H03
Cross-list: COMP LIT 3V03, THTR&FLM 3Q03 (formerly DRAMA 3T03)
CMST 3T03 may be repeated, if on a different topic, to a total of six units.
Offered in alternate years.
This course is administered by the School of the Arts.

CMST 3U03 INDEPENDENT FILM AND VIDEO
An introduction to artists’ film and video produced outside of dominant institutions. Works and practices analyzed may include: forms of documentary, community-based projects, experimental films, short films, video art, low-budget features.
Two hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: One of CMST 2S03, 2X03 or CMST 3H03
Cross-list: THTR&FLM 3N03
Offered in alternate years.
This course is administered by the School of the Arts.

CMST 3V03 PRAGMATICS AND DISCOURSE
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.
Prerequisite: LINGUIST 1A03 and 1A03 (or 1A06); or FRENCH 2H03; or permission of the Department of Modern Languages and Linguistics
Cross-list: LINGUIST 3P03
Antirequisite: ANTHROP 3P03
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

CMST 3W03 WOMEN IN CROSS-CULTURAL PERSPECTIVE
An interdisciplinary exploration of the experiences of women in different cultures through examination of social and historical conditions, and symbolic systems. Topics may include women and development, women’s rights, reproductive freedom, women and religion.
Three hours (seminar and discussion); one term
Prerequisite: Registration in Level II or above. WOMEN ST 1A06 is recommended.
Cross-list: WOMEN ST 3D03
Antirequisite: WOMEN ST 3D06
This course is administered by Women’s Studies.

CMST 3WX3 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 include immigration, voice, mobility, identity, hybridity.
Three hours (seminar and discussion); one term
Prerequisite: Registration in Level II or above. WOMEN ST 1A06 is recommended.
Cross-list: WOMEN ST 3D03
Antirequisite: WOMEN ST 3D06
This course is administered by Women’s Studies.

CMST 3X3X 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 2X03
Cross-list: THTR&FLM 3L03
Antirequisite: CMST 2X06
Offered in alternate years.
This course is administered by the School of the Arts.

CMST 3Y03 PHILOSOPHY OF LANGUAGE
A survey of philosophical problems concerning language. Topics to be considered include reference, synonymy, truth, and linguistic knowledge.
Three lectures; one term
Prerequisite: At least six units of Philosophy, and registration in Level III or IV of any programme
Cross-list: PHILCS 3E03
Offered in alternate years.
This course is administered by the Department of Philosophy.

CMST 4A02 THESIS PROJECT
Students will develop and execute their own research project, in consultation with a faculty advisor. Involves regular meetings with the advisor and a final public presentation of research endeavours.
Prerequisite: Registration in Level IV of a programme in Communication Studies
Enrolment is limited.
CMST 4F03 ADVANCED COMMUNICATION PRACTICUM
Students will apply communication skills and theories to the production of an advanced, original, creative project. The practicum 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 practicum is to be done.
Prerequisite: Registration in Level IV of a programme in Communication Studies
Enrolment is limited.

CMST 4G03 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 (lecture and discussion); one term
Prerequisite: Registration in Level III or IV of a programme in Communication Studies
Enrolment is limited.

CMST 4H03 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.
Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of a programme in Communication Studies
Enrolment is limited.

CMST 4I03 MEDIA AND PROMOTIONALISM
An examination of the media's role in the promotion of different interests, values, and patterns of behaviour. Topics include advertising, public relations, social activism, and public information campaigns.
Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of a programme in Communication Studies
Enrolment is limited.

CMST 4J03 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 programme in Communication Studies
Cross-list: ART HIST 4V03
Alternates with ART HIST 4C03.
Enrolment is limited.

CMST 4K03 STORIES IN FILM
Senior seminar: An examination of selected films. Seminar (two hours); one term
Prerequisite: CMST 2K03 and registration in Level III or IV of a programme in Communication Studies. CMST 2K03 or 2K06 is recommended.
Cross-list: THT&FLM 4E03 (formerly DRAMA 4FF3)
Enrolment is limited. Priority will be given first to students registered in Level IV of any Theatre & Film Studies programme, and then to students registered in Level IV of the Communication Studies programme.
This course is administered by the School of the Arts.

CMST 4L03 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: Registration in Level III or IV of a programme in Communication Studies (Language and Discourse Stream); and permission of the Departmental Counsellor in the Department of Modern Languages and Linguistics
Cross-list: LINGUIST 4B03
Antirequisite: ANTHROP 4BL3
Alternates with CMST 4H03.
This course is administered by the Department of Modern Languages and Linguistics.

CMST 4M03 TOPICS IN THE APPLICATION OF LINGUISTICS
This seminar course looks at how linguistics is applied in fields other than language learning. Topics include: translation theory; forensic linguistics; ecolinguistics. Consult the Department of Modern Languages and Linguistics for the topic to be offered.
Seminar (two hours), one practicum per week; one term
Prerequisite: Registration in Level III or IV of a programme in Communication Studies (Language and Discourse Stream) and permission of the Departmental Counsellor in the Department of Modern Languages and Linguistics
Cross-list: LINGUIST 4B03
Alternates with CMST 4G03.
CMST 4H03 may be repeated, if on a different topic, to a total of six units.
This course is administered by the Department of Modern Languages and Linguistics.

CMST 4N03 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: Registration in Level III or IV of a programme in Communication Studies (Language and Discourse Stream) and permission of the Departmental Counsellor in the Department of Modern Languages and Linguistics
Cross-list: LINGUIST 4D03
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

CMST 4O03 TOPICS IN SOCIOLINGUISTICS
Topics include: Languages in Contact, Standard Languages, Gender and Language. Consult the Department of Modern Languages and Linguistics for the topic to be offered.
Seminar (two hours); one term
Prerequisite: CMST 3O03 or LINGUIST 3X03
Cross-list: LINGUIST 4X03
CMST 4J03 may be repeated, if on a different topic, to a total of six units.
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

COMPARATIVE LITERATURE

WEB ADDRESS: http://www.humanities.mcmaster.ca/~compllit
Togo Salmon Hall, Room 726
Ext. 24265

Courses and programmes 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. 24061).

Director
John Stoul (French) B.A. (British Columbia), Ph.D. (Princeton)

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

COMP LIT 1A03 THE EUROPEAN LITERARY TRADITION I
An introduction to the Western literary tradition from texts of antiquity to the beginnings of modern literature, through the study of representative texts. Considerable attention is given to the development of critical skills in reading and writing.
Two lectures, one tutorial; one term
Antirequisite: COMP LIT 1A06

COMP LIT 1A03 THE EUROPEAN LITERARY TRADITION II
An introduction to the Western literary tradition from the beginnings of modern literature to more recent works, through the study of representative texts. Considerable attention is given to the development of critical skills in reading and writing.
Two lectures, one tutorial; one term
Antirequisite: COMP LIT 1A06
COM LIT 2A03  MODERN EUROPEAN LITERATURE I
A study of the central themes and ideas shaping the Enlightenment and
Romanticism through the reading of representative works.
Three lectures; one term
Prerequisite: One of COMP LIT 1A03, 1A06 or 1A03
COM LIT 2A03  MODERN EUROPEAN LITERATURE II
A study of the central themes and forms of major literary movements
from Romanticism to Postmodernism through the reading of representa­
tive works.
Three lectures; one term
Prerequisite: One of COMP LIT 1A03, 1A06 or 1A03
COM LIT 2C03  INTRODUCTION TO LITERARY STUDIES
An examination of the fundamental questions about the nature of litera­
ture and the purpose and methodology of literary studies, focusing on
the inter-disciplinary and cultural aspects of literature.
Three lectures; one term
Prerequisite: Registration in Level II or above
COM LIT 2D03  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 ele­
ments of dramatic texts written for live performance, film television
and music theatre.
Lectures and group presentations (three hours); one term
Prerequisite: Three units of Level 1 Theatre & Film or Drama and registra­
tion in Level II or above of a Comparative Literature programme
Cross-list: DRAMA 2D03, THTR&FLM 2C03
Antirequisite: DRAMA 2D03, 2D05
This course is administered by the School of the Arts.
COM LIT 2E03  THE CONCEPT OF CULTURE
An analysis of the development of the concept of culture from the En­
litenment 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 programme in Communication Studies, Com­
parative Literature, English or permission of the Departmental Counsellor
for English
Cross-list: CMST 2M03, ENGLISH 2M03
This course is administered by the Department of English.
COM LIT 2E03  MODERN COUNTERCULTURES
An exploration of a variety of cultural forms (e.g. literature, art, photog­
raphy, 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 programme in Communication Studies, Com­
parative Literature, English or permission of the Departmental Counsellor
for English
Cross-list: CMST 2M03, ENGLISH 2M03
This course is administered by the Department of English.
COM LIT 2F03  BIBLE AS STORY
An examination of narratives from the Hebrew Bible, Intertestamental
literature, and New Testament, from a literary perspective. Attention is
paid to narrative features such as character, plot, irony and symbolism,
as well as to the dynamics of the reading experience.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above
Cross-list: RELIG ST 2V03
This course is administered by the Department of Religious Studies.
COM 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 philo­
sophical and religious aspects of ancient drama.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: CLASSICS 2H03
Antirequisite: COMP LIT 2H06
This course is administered by the Department of Classics.
COM LIT 2H03  MASTERWORKS OF GERMAN LITERATURE
A survey of major works from a variety of genres, by Goethe, Kleist,
Heine, Büchner, Mann, Rilke, Brecht and others.
Three lectures; one term
Prerequisite: Registration in Level II or above
COM LIT 2M03  GREEK AND ROMAN MYTHOLOGY
A study of the myths of Greek and Roman gods and heroes, their expla­
nation 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.
COM LIT 3A03  LITERATURE AND POLITICS
IN GERMANY 1914-1945
A study of the literary responses to the social, political and cultural
upheaval from the beginning of the First World War to the end of the
Second. The course will involve a close scrutiny of the forms and
functions of political rhetoric, manifestoes and literature engaged.
Three lectures; one term
Prerequisite: Registration in Level II or above
COM 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 feminism, queer
and masculinity studies.
Three hours; one term
Prerequisite: Registration in a programme in Comparative Literature, English,
Women's Studies or permission of the Departmental Counsellor in
the Department of English.
Cross-list: ENGLISH 3A03, WOMEN ST 3H03
This course is administered by the Department of English.
COM LIT 3B03  RUSSIAN DRAMA SINCE 1800
An introduction to the major works of Russian theatre.
Three lectures; one term
Prerequisite: Registration in Level II or above
COM 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 programme
Cross-list: THTR&FLM 3C03
Offered in alternate years.
This course is administered by the School of the Arts.
COM LIT 3D03  TOPICS IN LITERARY GENRES I
Previous topics include: Lyric Poetry, The Novel. Consult the Department
concerning topic to be offered.
Seminar (two hours); one term
Prerequisite: Registration in Level II or above of a Comparative Literature
programme
COM LIT 3D03 may be repeated, if on a different topic, to a total of six units.
COM LIT 3D03  TOPICS IN LITERARY GENRES II
Previous topics include: Short Fiction, Comedy, Tragedy. Consult the
Department concerning topic to be offered.
Seminar (two hours); one term
Prerequisite: Registration in Level II or above of a Comparative Literature
programme
COM LIT 3D03 may be repeated, if on a different topic, to a total of six units.
COM LIT 3F03  THE METAMORPHOSSES OF DON JUAN
The development of the myth of Don Juan from its origins to the present.
Three lectures; one term
Prerequisite: Registration in Level II or above
COM LIT 3F03  THE LITERATURE OF THE DELINQUENT
A study of the picaresque mode in European literature from 1550 to 1800
Three lectures; one term
Prerequisite: Registration in Level II or above
COM LIT 3G03  GERMAN DRAMA
A study of representative plays by major dramatists of the German­
speaking world, from the 18th century to the present.
Three lectures; one term
Prerequisite: Registration in Level II or above
COM LIT 3G03  COMPARATIVE THEATRE
A comparison of two or more theatrical traditions.
Three lectures; one term
Prerequisite: Three units of Theatre & Film or Drama and registration in
Level III or IV of a Comparative, Literature programme
Cross-list: THTR&FLM 3H03
Offered in alternate years.
This course is administered by the School of the Arts.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP LIT 3H03</td>
<td>BIBLICAL TRADITIONS IN LITERATURE</td>
<td>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</td>
</tr>
<tr>
<td>COMP LIT 3I03</td>
<td>TOPICS IN GREEK AND ROMAN LITERATURE I</td>
<td>Previous topics include: The Poet and Society, Greek and Roman Eleagac and Lyric Poetry, The Legend of the Trojan War, Satire. Consult the Department concerning topic to be offered. Three lectures; one term</td>
</tr>
<tr>
<td>COMP LIT 3J06</td>
<td>STUDIES IN SIXTEENTH-CENTURY LITERATURE</td>
<td>A critical study of the literature of the 1500s in England, particularly the second half of the century. The influence of continental writers will also be examined, and special attention will be paid to Spenser. Three hours; two terms</td>
</tr>
<tr>
<td>COMP LIT 3K03</td>
<td>20TH-CENTURY RUSSIAN LITERATURE</td>
<td>A study of Russian literature of the 1920s and 1930s with special attention to A. B. Tolstoy, Bulgakov and Sholokhov. Three lectures; one term</td>
</tr>
<tr>
<td>COMP LIT 3K3</td>
<td>CONTEMPORARY RUSSIAN LITERATURE</td>
<td>A study of contemporary Russian literature since 1955, with special attention to Pasternak, Solzhenitsyn and Yevtushenko. Three lectures; one term</td>
</tr>
<tr>
<td>COMP LIT 3L03</td>
<td>LITERATURE AND FILM</td>
<td>An examination of the particular characteristics of both literature and film and the relationships between them through a detailed study of selected novels, short stories and plays and the films which have been based on them. Three hours, plus one weekly film screening; one term</td>
</tr>
<tr>
<td>COMP LIT 3M06</td>
<td>POSTCOLONIAL LITERATURES: THEORY AND PRACTICE</td>
<td>A study of postcolonial literary theory and practice. Texts written in English from a variety of formerly colonized regions will be studied, including Africa, the Caribbean, South and Southeast Asia, Australia and New Zealand. The focus will be on such topics as imperialism, race, gender, ethnicity, nation, language, and representation. Three hours; two terms</td>
</tr>
<tr>
<td>COMP LIT 3N03</td>
<td>MODERN CRITICAL THEORY</td>
<td>The theory and practice of literary criticism from Eliot to the present. Three hours; one term</td>
</tr>
<tr>
<td>COMP LIT 3P03</td>
<td>LITERATURE AND POLITICS IN SPANISH AMERICA</td>
<td>An exploration of the ways in which politics and aesthetics combine in Spanish American literature. Emphasis will be on the 20th-century works, but writings from previous centuries will also be included. Three lectures; one term</td>
</tr>
<tr>
<td>COMP LIT 3Q03</td>
<td>THE HISTORY AND THEORY OF CRITICISM</td>
<td>A survey of the main developments in the theory and practice of literary criticism from Plato to the late 20th century. Three hours; one term</td>
</tr>
<tr>
<td>COMP LIT 3R06</td>
<td>THEATRE OF GREECE AND ROME</td>
<td>The history of theatre and theatrical production in Greece and Rome with consideration of the social significance of drama in antiquity. The course will also include archaeological material. Three lectures; one term</td>
</tr>
<tr>
<td>COMP LIT 3S03</td>
<td>19TH-CENTURY RUSSIAN LITERATURE</td>
<td>A study of the major novels by Gogol and Turgenev. Three lectures; one term</td>
</tr>
<tr>
<td>COMP LIT 3T03</td>
<td>MODERN JAPANESE LITERATURE IN TRANSLATION</td>
<td>This is a survey course of major works in 20th-century Japanese literature with an emphasis on fiction published since the Second World War. Readings include Soseki, Tanizaki, Murakami. Three lectures; one term</td>
</tr>
<tr>
<td>COMP LIT 3U03</td>
<td>TOPICS IN NATIONAL CINEMAS</td>
<td>A study of selected works by German women writers from the eighteenth century to the present. Three lectures; one term</td>
</tr>
<tr>
<td>COMP LIT 3V03</td>
<td>TOPICS IN LITERARY MOVEMENTS</td>
<td>Previous topics include: European Romanticism. Consult the Department concerning topic to be offered. Two hour lecture and discussion, plus one weekly film screening; one term</td>
</tr>
<tr>
<td>COMP LIT 3W03</td>
<td>GERMAN WOMEN WRITERS</td>
<td>A study of selected works by German women writers from the eighteenth century to the present. Three lectures; one term</td>
</tr>
<tr>
<td>COMP LIT 3X03</td>
<td>TOPICS IN LITERARY MOVEMENTS</td>
<td>Previous topics include: European Romanticism. Consult the Department concerning topic to be offered. Two hour lecture and discussion, plus one weekly film screening; one term</td>
</tr>
<tr>
<td>COMP LIT 3Y03</td>
<td>TOPICS IN LITERARY MOVEMENTS</td>
<td>Previous topics include: European Romanticism. Consult the Department concerning topic to be offered. Two hour lecture and discussion, plus one weekly film screening; one term</td>
</tr>
</tbody>
</table>
COMP LIT 4B03  TOPICS IN LITERARY METHODOLOGY
Previous topics include: Narrative and Psychoanalysis, Feminist Theory, Formalism and Structuralism, Semiotics. Consult the Department concerning topic to be offered.
Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of a Comparative Literature programme
COMP LIT 4B03 may be repeated, if on a different topic, to a total of six units.

COMP LIT 4C03  LITERATURE AND OTHER DISCIPLINES
Previous topics include: Literature and Philosophy, Literature and Politics. Consult the Department concerning topic to be offered.
Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of a Comparative Literature programme
COMP LIT 4C03 may be repeated, if on a different topic, to a total of six units.

COMP LIT 4E03  TOPICS IN COMPARATIVE LITERATURE
Previous topics include: Twentieth-Century Women Writers, Literature and Ideology. Consult the Department concerning topic to be offered.
Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of a Comparative Literature programme
COMP LIT 4E03 may be repeated, if on a different topic, to a total of six units.

COMP LIT 4I3  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 programme and permission of the Director of Comparative Literature
COMP LIT 4I3 may be repeated, if on a different topic, to a total of six units.

COMP LIT 4T03  SPECIAL TOPICS
Consult the Department concerning the topic to be offered.
Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of a Comparative Literature programme
COMP LIT 4T03 may be repeated, if on a different topic, to a total of six units.

COMPUTER ENGINEERING

COMPUTER SCIENCE

(COMPUTING AND SOFTWARE)

WEB ADDRESS:  http://www.ccs.mcmaster.ca
Information Technology Building, Room 202
Ext. 24614

Faculty as of January 15, 2002

Chair
Paul A. Taylor

Professors
Frantsisk Frankel/M.Sc., RNDr (Charles, Prague), Ph.D. (Toronto)
Ryszard Janicki/M.Sc. (Warsaw), Ph.D., D.Hab. (Polish Acad. Sci.)
Konstantin Kreyman/M.Eng., Ph.D. (Leningrad Hydro Meteorological Institute), Doctor of Science (Russian Academy of Sciences, Institute for Lake Research - St. Petersburg)
David L. Farnas/B.Sc., M.S., Ph.D. (Carnegie), Dr.h.c. (ETH Zürich), Dr.h.c. (Louvain), F.R.S.C., F.A.C.M., P.Eng.
Sanzheng Cao/B.Sc., M.S. (Shanghai Teacher's College) M.S., Ph.D. (Cornell)
Patricia J. Ryan/B.Sc. (Toronto), Ph.D. (Brown)
Paul A. Taylor/B.Sc., Ph.D. (Univ. of Wales), P.Eng.
Tamás Terék/M.Sc., Ph.D. (Londond Edvds)

Associate Professors
Ivan Bruder/Dipl. Ing. (CVUT, Prague), RNDr (Charles, Prague), Ph.D. (CVUT, Prague)
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)
W.F. Skipper Poehlman/B.S. (Niagara), B.Sc. (Brock), M.Sc., Ph.D. (McMaster), P.Eng.
Martin von Mohrenschlitt/Dipl.Math., Dr.Sc.Math. (ETH-Zürich)
Jeffrey I. Zucker/B.Sc. (Witwatersrand), Ph.D. (Stanford)

Computing and Software

Computer Science

Department Notes:
1. While the Faculty of Engineering is responsible for all Computer Science courses, Computer Science Programmes are administered by the Faculty of Science.
2. Students wishing to pursue a Computer Science Minor are referred to the Department of Computing and Software in the Faculty of Science section of this Calendar.
3. MATH 1N03 and 1N13 or ARTS&SCI 1D06 or ARTS&SCI 1D08 can serve as an equivalent prerequisite for upper level Computer Science courses in which MATH 1A03, 1A93 or 1C03 is a prerequisite.
4. It is possible to take COMP SCI 1M03 if COMP SCI 1SA3 was completed with a grade of B+ or better. In that case COMP SCI 1SA3 can be used as a substitute for COMP SCI 1MC3. Nevertheless, students interested in enrolling in a Computer Science programme are recommended to take COMP SCI 1MC3.

Courses

If no prerequisite is listed, the course is open.

COMP SCI 1BA3  INTRODUCTION TO COMPUTING AND COMPUTER 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 OAC (or Grade 12 U or U/C) Mathematics credit; or one of MATH 1K03, 1K04, STAT 1L03
Antirequisite: MMEDIA 1A03

COMP SCI 1MC3  COMPUTER SCIENCE I
Essentials of Computer Science: machine architecture, data structures, operating systems, problem solving and programming paradigms; programming language features; software design; artificial intelligence.
Three lectures, one tutorial; one term
Prerequisite: MATH 1K03 or OAC Calculus (or Advanced Functions and Introduction Calculus U)
Antirequisite: ENGINEER 1D04

COMP SCI 1MD3  COMPUTER SCIENCE II
A second course in Computer Science; abstract data models and data structures; virtual memory and memory allocation; advanced programming paradigms: recursion, functional programming, communication protocols; logic; finite-state machines and complexity.
Three lectures, one tutorial; one term
Prerequisite: Credit or registration in one of MATH 1A03, 1B03, 1H03, 1H04, 1H05, 1M03, 1N03, ARTS&SCI 1D06 and either COMP SCI 1MC3 or ENGINEER 1D04; or a grade of at least B+ in COMP SCI 1SA3
COMP SCI 1SA3   COMPUTER SCIENCE FOR BUSINESS AND MANAGEMENT
Overview of the computer as a tool for problem solving: organization of microcomputers (hardware and operating systems); Introduction to problem solving in business and management; applications in finance, accounting, and economics. Three lectures; one term. Prerequisites: MATH 1K03 or OAC Calculus (or Advanced Functions and Introductory Calculus U)

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/desktop, the Internet and Web pages; problem solving using elementary database concepts. Three lectures, one tutorial; one term. Antirequisite: MMedia 1A03

Not open to students with credit or registration in COMP SCI 1BA3, 1MC3, 1SA3, 1TA3 or 1AD2. 1AD3

COMP SCI 2MD3   ADVANCED DATA STRUCTURES AND ALGORITHMS
Commonly used abstract data types such as lists, stacks, queues, sets, trees and their applications and efficient implementations; fast sorting, matching, and graph algorithms and complexity; emphasis on theoretical analysis. Three lectures, one term. Prerequisite: COMP SCI 1MD3

Three lectures; one tutorial; one term. Antirequisite: COMP ENG 2S04, ELEC ENG 2S14, SFWR ENG 2C04

COMP SCI 2ME3   SOFTWARE DESIGN I
Verification of sequential programs, abstraction in program development, modularization, implementation according to specifications, testing, software development and maintenance, requirements analysis, software documentation. Three lectures; one term. Prerequisite: COMP SCI 2MD3, 2M3J

Antirequisite: SFWR ENG 2A04

COMP SCI 2MF3   INTRODUCTION TO COMPUTER ARCHITECTURE
A first course in computing-systems architecture: the functional organization of the CPU; memory and input/output subsystems; an introduction to programming in assembler language and debugging; elements of digital circuits. Two lectures, one lab (two hours); one term. Prerequisite: COMP SCI 1MD3, PHYSICS 1P03 (or at least 60% in OAC Physics (or Physics U))

Antirequisite: COMP ENG 2D04, ELEC ENG 2D14, SFWR ENG 2D04

Not open to students with credit or registration in SFWR ENG 3F03.

COMP SCI 2M3J   DISCRETE STRUCTURES
Basic concepts of discrete mathematics needed in computer science, Propositional and predicate logic, sets and functions. Mathematical induction, recursive definitions. Counting: permutations, combinations, discrete probability. Equivalence relations. Basic graph theory. Three lectures; one term. Prerequisite: One of MATH 1B03, 1B13, 1H03, 1H13, 1H65, STATS 1CC3

Antirequisite: SFWR ENG 2E03, 2E04

COMP SCI 2SC3   DESIGN AND IMPLEMENTATION OF PC PROGRAMS
Data types, arithmetic/logical expressions, iterative constructs, pointers and pointer arithmetic. Modularization. Linked data structures and their applications. Program development and testing, programming style. Three lectures, one tutorial; one term. Prerequisite: One of COMP SCI 1MC3, 1SA3, ENGINEER 1D04; and credit in one of MATH 1A03, 1B03, 1H03, 1H13, 1H65, 1MC3, 1N03 or ARTS & SCI 1D06

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., Fort, 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 programme or in Level III of B.Sc. Mathematical Science
COMP SCI 4CC3  ADVANCED OPERATING SYSTEMS
Modern operating systems: large-scale distributed to small real-time operating systems; microcomputer/mainframe interconnections; message passing techniques; networks; distributed deadlock and shared memory models; extended file systems and shared resources.
Two lectures; one lab; one term
Prerequisite: COMP SCI 3M13
Offered in alternate years.

COMP SCI 4CD3  DISTRIBUTED SYSTEM ARCHITECTURES
Distributed systems: real-time, agent-oriented, heterogeneous, multi-computer, multi-processor; coupling schemes: loose, tight, networking, ATM, frame relay, clustering, software protocols; communication strategies, client/server approaches.
Two lectures; one lab; one term
Prerequisite: COMP SCI 3MG3 or SFWR ENG 3G03; or credit or registration in either PHYSICS 4D08 or both PHYSICS 4DA3 and 4DB3

COMP SCI 4EB3  DATABASE MANAGEMENT SYSTEM DESIGN
Concepts and structures for the design of database management systems. Topics include: data models, data normalization, data-description languages, query facilities, file organization and security.
Three lectures; one term
Prerequisite: COMP SCI 2MD3

COMP SCI 4EF3  SOFTWARE REQUIREMENTS ACTIVITIES
Software requirements gathering and verification techniques. Using requirements for software testing. Software requirements management. Three lectures; one term
Prerequisite: COMP SCI 3EA3 or SFWR ENG 3B04
Cross-list: SFWR ENG 4EF3

COMP SCI 4GB3  COMPUTATIONAL GEOMETRY
Discrete geometry from an algorithmic point of view. Searching, subdivision, proximity and intersection. Applications to problems in object modeling, computer graphics, and computer vision.
Three lectures; one term
Prerequisite: One of COMP SCI 2MD3, SFWR ENG 2C04 or permission of the Instructor

COMP SCI 4IB3  ARTIFICIAL INTELLIGENCE AND KNOWLEDGE-BASED SYSTEMS
Artificial intelligence 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: COMP SCI 2MD3 or SFWR ENG 2C04

COMP SCI 4K03  PROVING PROPERTIES OF SPECIFICATIONS
Discrete mathematical structures, the Z specification language, identification of proof obligations, proofs, resolution theorem proving, the Otter theorem prover, usable list, set-of-support, paramodulation.
Three lectures, one lab; one term
Prerequisite: Registration in Level III or IV of an Honours Computer Science programme
Cross-list: SFWR ENG 4K03

COMP SCI 4L03  MATHEMATICALLY RIGOROUS SOFTWARE DESIGN
Mathematical model of a programme and its execution, preconditions, postconditions, partial, semi-total and total correctness, proof rules and their practical application both to verifying and to designing programmes.
Three lectures; one term
Prerequisite: Registration in Level IV of an Honours Computer Science programme
Cross-list: SFWR ENG 4L03

COMP SCI 4M3  INTRODUCTION TO SCIENTIFIC COMPUTING
Principles of floating point computing; Computer number systems, floating-point arithmetic, and computational errors. Computer methods and software for solving file 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 4TB3  COMPILER CONSTRUCTION
Lexical analysis; syntax analysis; type checking; syntax-directed translation; implications of computer architecture; mapping of programing language concepts; intermediate code generation; code generation and optimization.
Three lectures; one term
Prerequisite: COMP SCI 3TA3 and credit or registration in COMP SCI 3MG3; or SFWR ENG 3F03 and credit or registration in SFWR ENG 4103; or for those students registered in a Computer Science programme prior to September 2000, registration in Level IV of an Honours Computer Science programme

COMP SCI 4TD3  DESIGN AND ANALYSIS OF ALGORITHMS
Techniques for the design and analysis of algorithms, especially divide and conquer, greedy, and dynamic programming algorithms. An introduction to computational complexity. Analysis of particular algorithms of practical or theoretical importance in computer science.
Three lectures; one term
Prerequisite: COMP SCI 2MD3, 2MJ3; and MATH 2C04 or 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 4ZP6  PROJECT
Under the supervision of a faculty member, teams of two to four students implement, write up and defend a substantial project in an area of computer science.
Occasional tutorials, no lectures; two terms
Prerequisite: Registration in Level IV of Honours Computer Science. Completion of COMP SCI 3EA3 is strongly recommended.

SOFTWARE ENGINEERING ...

Note:
All software engineering courses are open to students registered in a software engineering programme, subject to prerequisite requirements. Prior permission of the Department is necessary for other students.

Courses

SFWR ENG 2A04  SOFTWARE DESIGN I
Software development with precise specifications. Implementation, inspection, integration, and testing of programs specified sequential modules and programs. Assembly of software from independent modules; incremental design.
Three lectures, one lab (three hours); first term
Prerequisite: Registration in Level II of a Software Engineering programme
Corequisites: SFWR ENG 2E03 or 2E04; and SFWR ENG 2F03 or 2F04
Antirequisite: COMP SCI 2ME3

SFWR ENG 2B03  SOFTWARE DESIGN II
Software system design, documentation, implementation, inspection and testing. Requirements documentation. Designing large sequential programs including precise documentation. Modularisation, module interface design. Hierarchical structures; project organization.
Three lectures, one lab (three hours); second term
Prerequisite: SFWR ENG 2A04; and SFWR ENG 2E03 or 2E04; and SFWR ENG 2F03 or 2F04
Corequisite: SFWR ENG 2C04
Antirequisite: COMP SCI 3EA3, SFWR ENG 2B04
SFWR ENG 2C04 DESIGN AND SELECTION OF COMPUTER ALGORITHMS AND DATA STRUCTURES

Data structures: queues, stacks, lists, heaps, trees, graphs; data abstraction; graph algorithms. Sorting, searching, parsing, pattern matching, resource utilization, finding and choosing algorithms.

Three lectures, one tutorial (two hours); second term
Prerequisite: SFWR ENG 2A04 and SFWR ENG 2E03 or 2E04
Corequisite: SFWR ENG 2B03 or 2B04
Antirequisite: COMP ENG 2S14, COMP SCI 2M03, ELEC ENG 2S14

SFWR ENG 2D04 DIGITAL SYSTEM PRINCIPLES AND LOGIC DESIGN FOR SOFTWARE ENGINEERS

Systematic design procedures; combinational circuit design, design of sequential machines, error detection, correction; redundancy, number representations, organization of large logic circuits. Use of logic simulation.

Three lectures, one lab (three hours); second term
Prerequisite: SFWR ENG 2A04 and SFWR ENG 2F03 or 2F04
Antirequisite: COMP ENG 2D04, COMP SCI 2M03, ELEC ENG 2D04

SFWR ENG 2E03 APPLICATIONS OF DISCRETE MATHEMATICS IN SOFTWARE ENGINEERING


Three lectures, one lab (three hours); first term
Prerequisite: ENGINEER 1D04
Corequisite: SFWR ENG 2A04 and SFWR ENG 2F03 or 2F04
Antirequisite: COMP SCI 2M03, ENG 2E04

SFWR ENG 2F04 APPLICATIONS OF MATHEMATICAL LOGIC FOR SOFTWARE ENGINEERING

Foundations of propositional, predicate, higher-order, multiple-value logic; normal forms; deduction systems, models. Describing software states; verifying program properties; automated theorem proving systems.

Three lectures, one lab (three hours); first term
Prerequisite: Registration in Level II of a Software Engineering programme
Corequisite: SFWR ENG 2A04; and SFWR ENG 2E03 or 2E04
Antirequisite: SFWR ENG 2F03

SFWR ENG 3B04 SOFTWARE DESIGN III

Design, specification, documentation, implementation, inspection and testing of multi-programming, multi-processing systems. Resource management, process coordination, evaluation of operating systems.

Three lectures, one lab (three hours); second term
Prerequisite: SFWR ENG 3F03, 3G03

SFWR ENG 3C03 DISCRETE OPTIMIZATION METHODS AND GRAPH THEORETIC MODELS

Linear and non-linear programming, integer programming, search techniques. Use of directed graphs in engineering problems, scheduling techniques, network optimization, route planning.

Three lectures, one tutorial (two hours) every other week; second term
Prerequisite: SFWR ENG 2C04; and SFWR ENG 2E03 or 2E04; and SFWR ENG 2F03 or 2F04; and SFWR ENG 3X03

SFWR ENG 3E03 DESIGN AND SELECTION OFSEQUENTIAL PROGRAMMING LANGUAGES

Program construction tools, especially programming languages. Primitive programs and program constructors. Special purpose program generators. Selection criteria. Historical developments. Survey of current tools.

Two lectures, one lab (three hours); first term
Prerequisite: SFWR ENG 2B03 or 2B04; and SFWR ENG 2C04
Corequisite: SFWR ENG 3F03

SFWR ENG 3F03 MACHINE-LEVEL COMPUTER PROGRAMMING


Two lectures, one lab (three hours); first term
Prerequisite: SFWR ENG 2B03 or 2B04; and SFWR ENG 2C04, 2D04
Corequisite: SFWR ENG 3G03
Antirequisite: COMP ENG 3D04

SFWR ENG 3G03 ARCHITECTURE OF COMPUTERS AND MULTI-PROCESSORS


Three lectures; first term
Prerequisite: SFWR ENG 2C04, 2D04
Corequisite: SFWR ENG 3E03
Antirequisite: COMP ENG 4D04, COMP SCI 3M03

SFWR ENG 3H03 DATA MANAGEMENT TECHNIQUES


Three lectures, one lab (three hours) every other week; second term
Prerequisite: SFWR ENG 3F03, 3G03
Corequisite: SFWR ENG 3J03

SFWR ENG 3I03 COMMUNICATION SKILLS - EXPLAINING SOFTWARE

Writing technical (reference) documentation and user (introductory) software documentation. Explaining software to expert and user audiences. Document structure. Writing precise software contracts. Oral presentations.

Two lectures; one seminar (two hours); first term
Prerequisite: Registration in Level III of a Software Engineering programme

SFWR ENG 3J03 SOFTWARE AND SOCIAL RESPONSIBILITY


Two lectures, one seminar (two hours); second term
Prerequisite: SFWR ENG 3F03; and either SFWR ENG 2C04; and SFWR ENG 3G03
Corequisite: SFWR ENG 3R04

SFWR ENG 3K04 SOFTWARE DEVELOPMENT FOR COMPUTER ENGINEERING


Three lectures, one lab (four hours every other week); first term
Prerequisite: COMP ENG 2S14
Antirequisite: COMP SCI 3E03

SFWR ENG 3M04 SOFTWARE DEVELOPMENT FOR ELECTRICAL ENGINEERING


Three lectures, one lab; first term
Prerequisite: COMP ENG 2S14 or ELEC ENG 2S14
Antirequisite: COMP ENG 3S14

SFWR ENG 3X03 SCIENTIFIC COMPUTATION AND CONTINUOUS OPTIMIZATION


Three lectures; one tutorial (one hour) every other week; first term
Prerequisite: SFWR ENG 2C04; and SFWR ENG 2F03 or 2F04; and either MATH 2M06 or both MATH 2P04 and 2P05
Antirequisite: COMP ENG 3S04, COMP SCI 4M03

SFWR ENG 4A03 DESIGN OF REAL-TIME SYSTEMS AND COMPUTERIZED CONTROL SYSTEMS


Three lectures, one lab (three hours); first term
Prerequisite: ENGINEER 3L03, SFWR ENG 3B04, 3X03

SFWR ENG 4C03 COMPUTER NETWORKS AND COMPUTER SECURITY

Design of Computer Networks. Types of networks, protocols, network structures. Control of access rights. Protection against unauthorised use, data theft, data destruction and denial of service. Use of encryption.

Three lectures, one lab (three hours); second term
Prerequisite: SFWR ENG 4A03, 4E03, 4I03

SFWR ENG 4D03 DESIGN OF HUMAN COMPUTER INTERFACES


Three lectures; first term
Prerequisite: SFWR ENG 3B04, 3J03
SFWR ENG 4E03 PERFORMANCE ANALYSIS OF COMPUTER SYSTEMS
Use of queuing models and simulation to predict computer system performance and find bottlenecks in a system. Types of models, distributions. Markov models. Modelling storage and network behaviour, locks, critical sections, concurrency.
Three lectures, one tutorial (two hours) every other week; first term
Prerequisite: SFWR ENG 3B04, 3C03, 4H03, STATS 2Y03

SFWR ENG 4EF3 SOFTWARE REQUIREMENTS ACTIVITIES
Software requirements gathering and verification techniques. Using requirements for software testing. Software requirements management.
Three lectures; second term
Prerequisite: SFWR ENG 3B04
Cross-list: COMP SCI 4EF3

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, simulations, optimization problems.
Three lectures; second term
Prerequisite: SFWR ENG 3X03, 4A03, 4E03

SFWR ENG 4G03 SENIOR THESIS I
Capstone Course: Design and Documentation of Software Systems. A supervised team software design experience. Students design a product, taking economic health, safety and marketing factors into account. Prepare complete set of design documents and test plans.
One tutorial (three hours); first term
Prerequisite: Registration in final level of a Software Engineering programme

SFWR ENG 4H03 SENIOR THESIS II
A supervised team software design experience. Students implement the design completed in SFWR ENG 4G03 and update the documentation produced in that course. Students must demonstrate a working system and provide convincing test results.
One tutorial (three hours); second term
Prerequisite: SFWR ENG 4G03

SFWR ENG 4I03 THEORETICAL FOUNDATIONS OF COMPUTATION
Models of computers and their implications. Theoretical capabilities of computers. Compatibility, complexity. Language classifications and relations to automata. Limitations of schemes such as neural networks or fuzzy logic.
Three lectures; first term
Prerequisite: SFWR ENG 2C04, 2F04; and SFWR ENG 2E03 or 2E04
Antirequisite: COMP SCI 3TA3

SFWR ENG 4J03 SOFTWARE IN COMMUNICATIONS SYSTEMS
Fundamental communications concepts: information, entropy, channel capacity, codes, data compression, adaptive channel equalizers, modulation and demodulation of signals, tracking, Kalman filtering, use of specialized digital signal processing hardware. Software in communication systems.
Three lectures; second term
Prerequisite: SFWR ENG 4A03, 4E03

SFWR ENG 4K03 PROVING PROPERTIES OF SPECIFICATIONS
Introduction to resolution theorem proving, OTTER theorem prover and Z language. Application to problems in the literature to identify and discharge proof obligations.
Three lectures; first term
Prerequisite: Registration in Level IV of a Software Engineering Programme
Cross-list: COMP SCI 4K03

SFWR ENG 4L03 MATHEMATICALLY RIGOROUS SOFTWARE DESIGN
Mathematical model of a program and its execution, preconditions, post-conditions, partial semi-total and total correctness, proof rules and their application to verifying and to designing programs.
Three lectures; first term
Prerequisite: Registration in the final year of a Software Engineering programme
Cross-list: COMP SCI 4L03

SFWR ENG 4TE3 CONTINUOUS OPTIMIZATION ALGORITHMS
Fundamental algorithms and general duality concepts of continuous optimization. Special attention will be paid to the applicability of the algorithms, their information requirements and computational costs. Practical engineering problems will illustrate the power of continuous optimization techniques.
Three lectures; first term
Prerequisite: MATH 2M05 or 2Q04
Cross-list: COMP SCI 4TE3

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 new Theatre & Film designation of a former Drama course, please see below.

Former Course New Course Course Title
DRAMA 1A93 No longer offered Introduction to Drama: Cultural History in Contemporary Performance
DRAMA 1A93 No longer offered Introduction to Drama: Performance as Social Critique
DRAMA 2A93 THTR&FLM 2A93 The Art of Acting
DRAMA 2B03 THTR&FLM 2E03 New Media and Performance
DRAMA 2D03 THTR&FLM 2D03 Dramatic Forms
DRAMA 2L03 THTR&FLM 2D03 History of Western Theatre Performance to the Eighteenth Century
DRAMA 2X03 THTR&FLM 2X03 The Art of the Film
DRAMA 3A03 THTR&FLM 3A03 Topics in Acting
DRAMA 3A03 THTR&FLM 3A03 Acting Shakespeare
DRAMA 3A03 THTR&FLM 3A03 Independent Study in Theatre & Film
DRAMA 3A03 THTR&FLM 3A03 Modern European Drama from Ibsen to Pirandello
DRAMA 3A03 THTR&FLM 3A03 Modern European Drama from Brecht to the Present
DRAMA 3A03 THTR&FLM 3A03 Technical Theatre Production Development of Canadian Theatre
DRAMA 3A03 THTR&FLM 3A03 Comparative Theatre
DRAMA 3A03 THTR&FLM 3A03 Literature and Film
DRAMA 3A03 THTR&FLM 3A03 Topics in Film
DRAMA 3A03 THTR&FLM 3A03 Modern European Theatre History
DRAMA 3A03 THTR&FLM 3A03 Theatre and Community Development
DRAMA 3A03 THTR&FLM 3A03 Plays in Performance
DRAMA 3A03 THTR&FLM 3A03 The American Cinema
DRAMA 3A03 THTR&FLM 3A03 The American Cinema
DRAMA 3A03 THTR&FLM 3A03 Topics in National Cinemas
DRAMA 3A03 THTR&FLM 3A03 Independent Study in Practical Theatre
DRAMA 3A03 THTR&FLM 3A03 Principles of Stage Directing
DRAMA 3A03 THTR&FLM 3A03 Independent Study in Theatre & Film Studies
DRAMA 3A03 THTR&FLM 3A03 Studies in Theatre and Film
DRAMA 3A03 THTR&FLM 3A03 Studies in the Theory and Practice of Drama
DRAMA 3A03 THTR&FLM 3A03 Studies in the Theory of Dramatic Performance
DRAMA 3A03 THTR&FLM 3A03 Studies in Contemporary Drama
DRAMA 3A03 THTR&FLM 3A03 Studies in Film

ECONOMICS

WEB ADDRESS: http://soserv2.sossci.mcmaster.ca/~econ/
Kenneth Taylor Hall, Room 426
Ext. 22765

Faculty as of January 15, 2002

Chair
Stuart Mestelman
Associate Chair
A. Leslie Robb

Professors
John B. Burbidge/B.A., Ph.D. (McGill)
Kenneth S. Chan/B.Sc. (Toronto), M.A., Ph.D. (Brown)
Contin Dooley/B.A. (Indiana), M.S., Ph.D. (Wisconsin-Madison)
Peter J. George/C.M., B.A., Ph.D. (Toronto), D.U. (Hon.) (Ottawa),
D. Hon. C. (Liviu)
ECON 1A06
INTRODUCTORY ECONOMICS
An introduction to the method and theory of economics, and their application to the analysis of contemporary economic problems.
Three lectures; two terms
Antirequisite: ECON 1B03 and 1B04

ECON 1B03
INTRODUCTORY MACROECONOMICS
An introduction to the method and theory of macroeconomics for Engineering, Kinesiology and Science students. The analysis will involve mathematics and will be applied to contemporary problems.
Three lectures; one term
Prerequisite: Registration in a Bachelor of Health Sciences (Honours), Engineering, Kinesiology or Science programme
Antirequisite: ECON 1A06

ECON 2A03
ECONOMICS OF LABOUR-MARKET ISSUES
This course applies economic analysis to issues of importance in the labour market. Topics vary and may include: women in the Canadian labour market; discrimination in hiring and promotion; unemployment; job loss and workplace closing; work sharing.
Three lectures; one term
Prerequisite: ECON 1A06; or ECON 1B03 and 1B04
Cross-list: LABR ST 3A03
Enrollment is limited.

ECON 2B03
ANALYSIS OF ECONOMIC DATA I
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 1B04; and MATH 1K03 or OAC Calculus (or Advanced Functions and Introductory Calculus U); and one of STAT 1L03 or 2D06 (or OAC Finite Math or Mathematics of Data Management U).
Antirequisite: COMMERCE 2Q03, ECON 3C06, GEO 2S03, POL SCI 3N06, PSYCH 3G03, 3R03, 2R03, 2R04, 3CI12, 3CI02, 3Y03,
Not open to students with credit or registration in CHEM ENG 4C03, SOCIOI. 5H05, STAT 1G33, 2M34, 2M35, 2R03, 3N03, 3Y03, or if COMMERCE 2Q03 is a programme requirement.

ECON 2C03
ASIAN-PACIFIC ECONOMIES
Economic conditions and factors influencing economic growth in selected countries in the Asian-Pacific region. Topics include government policies related to exchange rates and trade and development, as well as the Japanese style of management, the bonus system and job tenure.
Three lectures; one term
Prerequisite: ECON 1A06; or ECON 1B03 and 1B04
Cross-list: JAPAN ST 2C03

ECON 2CC3
INTRODUCTION TO HEALTH ECONOMICS
Economic analysis of health and health care, with a special emphasis on policy issues in the Canadian health care system.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: HEALTHST 2C03
Not open to students with credit or registration in ECON 3Z03.
(See Note 6 above.)

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 1B04

ECON 2E03
CANADA'S EXPERIENCE WITH MACROECONOMIC POLICY
Topics may include control of deficits and debt, the role and implementation of monetary policy, structural labour market policies, tax reform, and distribution of income.
Three lectures; one term
Prerequisite: ECON 1A06; or ECON 1B03 and 1B04

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 1B04

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 OAC Calculus (or Advanced Functions and Introductory Calculus U), MATH 1K03 or equivalent; and credit or registration in MATH 1M03 or equivalent
Antirequisite: ECON 2L06 or 2X03

Courses
If no prerequisite is listed, the course is open.

ECON 1A06
INTRODUCTORY ECONOMICS
An introduction to the method and theory of economics, and their application to the analysis of contemporary economic problems.
Three lectures; two terms
Antirequisite: ECON 1B03 and 1B04

ECON 1B03
INTRODUCTORY MICROECONOMICS
An introduction to the method and theory of microeconomics for Engineering, Kinesiology and Science students. The analysis will involve mathematics and will be applied to contemporary problems.
Three lectures; one term
Prerequisite: Registration in a Bachelor of Health Sciences (Honours), Engineering, Kinesiology or Science programme
Antirequisite: ECON 1A06
ECON 2GG3
INTERMEDIATE MICROECONOMICS II
Theory of consumer choice and applications to intertemporal choice and labour supply decisions; theory of exchange, welfare economics and general equilibrium analysis.
Three lectures; one term
Prerequisite: ECON 2G03 or 2X03; and MATH 1M03 or equivalent
Antirequisite: ECON 2L06

ECON 2H03
INTERMEDIATE INCOME AND EMPLOYMENT THEORY I
Determinants of national income, employment, the rate of interest and the price level; introduction to the open economy.
Three lectures; one term
Prerequisite: ECON 1A06 or 1B03; and one of OAC Calculus (or Advanced Functions 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 2H13
INTERMEDIATE INCOME AND EMPLOYMENT THEORY II
Selected topics from macroeconomics policies, issues in unemployment and inflation in open and closed economies, components of aggregate demand and supply and economic growth.
Three lectures; one term
Prerequisite: ECON 2H03
Antirequisite: ECON 2M06

ECON 2I03
FINANCIAL ECONOMICS
Detailed investigation of the financial sector. Topics include the role of capital markets in facilitating investment and growth, bond markets, stock markets, financial statements and taxation.
Three lectures; one term
Prerequisite: ECON 1A06 or 1B03; and one of OAC Calculus (or Advanced Functions and Introductory Calculus U), MATH 2K03 or equivalent.
Antirequisite: ECON 2M06, 2H03

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; or ECON 1B03 and 1B13
Antirequisite: COMMERCE 3F03

ECON 2L03
PUBLIC POLICY TOWARDS BUSINESS
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 6 above.)

ECON 2M03
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: Registration in Level III or Level IV of an Honours Economics programme

ECON 2N03
PEACE, HUMAN SECURITY AND ECONOMIC DEVELOPMENT
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 2O03
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 2P03
ECONOMICS OF TRADE UNIONISM AND LABOUR
Topics include the economics of the labour market, 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 ECON 1B03 and 1B13
Cross-list: LABR ST 3B03

ECON 2Q03
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 A06 or B03; and one of OAC Calculus (or 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 3A03
ADVANCED ECONOMIC THEORY I
Mathematically oriented approaches to the analysis of the behaviour of individual consumers, workers and firms.
Three lectures; one term
Prerequisite: ECON 3G03, 3H03, MATH 1M03 and an average of at least 7.0 in ECON 2G03 (or 2X03), 2G3 (or 2L06), 2H3, 2H13 or 2M06.
Offered in alternate years.
Offered in 2002-2003.

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: ECON 3G03, MATH 1M03 and an average of at least 7.0 in ECON 2G03 (or 2X03), 2G3 (or 2L06), 2H3, 2H13 or 2M06.
Offered in alternate years.

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 3E03
INTRODUCTION TO ADVANCED ECONOMIC THEORY
An introduction to the application of mathematics in economic theory.
Three lectures; one term
Prerequisite: One of OAC Finite Math (or Mathematics of Data Management U), MATH 1B03 or STAT1 1L03; and MATH 1M03 or equivalent; and, an average of at least 7.0 in ECON 2G03 (or 2X03), 2G3 (or 2L06), 2H3, 2H13 or 2M06.

ECON 3F03
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 3H03
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 303 - Economic History of the United States
Economic analysis of the development of the U.S. economy. Topics include the colonial economy, slavery, transportation, income distribution, foreign trade, technical and institutional change, and the Great Depression. Three lectures; one term
Prerequisite: One of ECON 2G03, 2X03, 2L06. ECON 2H03 or 2M06 is recommended.

ECON 3K03 - Topics in Monetary Economics
Analysis of monetary theory and policy. Topics include money demand and supply, money and inflation, rational expectations, monetary policy and asset market analysis. Three lectures; one term
Prerequisite: One of ECON 2G03, 2X03, 2L06; and ECON 2H03 or 2M06.

ECON 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; and ECON 2H03 or 2M06.

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.

ECON 3P03 - Linear Economic Models
Application and interpretation in economics of linear programming, game theory and industrial organization. Three lectures; one term
Prerequisite: One of OAC Finite Math (or Mathematics of Data Management UJ, MATH 1B03 or STATS 1L03; and ECON 2G03 (or 2X03) and 2H03; and one of MATH 1A03, 1N03 or a grade of at least C- in MATH 1M03.

ECON 3Q03 - The Economics of Aging
Topics include the macroeconomics of population aging and its impact on national pension and health plans and the microeconomics of retirement and income security. Three lectures; one term
Prerequisite: One of ECON 2G03, 2X03, 2L06; and ECON 2H03 or 2M06.

ECON 3S03 - Industrial Organization
A study of the structure, conduct and performance of industrial markets. Three lectures; one term
Prerequisite: One of ECON 2G03, 2X03, 2L06.
Antirequisite: ECON 3N06.

ECON 3T03 - Topics in Economic Development
Topics may include the measurement of structural change, dual economies, agriculture and production, technical and institutional change, and health and nutrition. Three lectures; one term
Prerequisite: One of ECON 2G03, 2X03, 2L06; and ECON 2H03 or 2M06.
Antirequisite: ECON 3J06.

ECON 3U03 - Analysis of Economic Data II
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, COMMERCE 2A03, GEOG 2S03, GEOG 2L03, 2N03, POL SCI 2F06, 3N06. PSYCH 2G03, 2R03, 2R06, SOC SCI 2J03, SOC SCI 2L03, 2Y03, 3H06, STATS 1C03, 2M03, 2M06, 2R06 or another course that is approved by a departmental counselor as equivalent to ECON 2B03.
Not open to students with credit in ECON 3S06 or credit or registration in 4G03.

ECON 3W03 - Natural Resources
Competitive and socially optimal management of renewable resources; market failures illustrated by mineral cartels, fisheries and forestry, including analysis of bioeconomic models. Three hours (lectures and seminars); one term
Prerequisite: MATH 1M03 and one of ECON 2G03, 2J03, 2X03, 2L06; or permission of the instructor.

ECON 3X03 - Urban Models and Policy Analysis
A survey of modern literature on urban social structure. Topics include morphology, adjustments to change, and such phenomena as urban growth and the decline of central cities. Two lectures (one hour), one tutorial (two hours); one term
Prerequisite: One of ECON 2G03, 2X03, 2L06 or GEO 2H03.

ECON 3Y03 - Selected Topics
Topics will vary from year to year depending on student interests and faculty availability. Students should consult the Department on topics to be offered. Three hours; one term
Prerequisite: Permission of the Department.

ECON 3Z03 - Health Economics
Analysis of allocation of resources in health care. Topics include markets for health care, insurance, biomedical research, technology assessment, organization and public policy. Three lectures; one term
Prerequisite: One of ECON 2CC3/HEALTHST 2C03, ECON 2G03, 2L06, 2X03, ECON 2B03 or another course in statistics is recommended.

ECON 4A03 - Honours Seminar in Economics
Students prepare, present, and discuss papers under supervision of a faculty member. Several sections will normally be offered. Topics for each section will be announced in January. Three hours (seminars); one term
Prerequisite: ECON 2GG3, 2HH3, 3F03; and ECON 3006 or 3U03.

ECON 4B03 - Selected Topics II
Topics will vary from year to year depending on student interests and faculty availability. Students should consult the Department on topics to be offered. Three hours; one term
Prerequisite: Permission of the Department.

ECON 4G03 - Econometrics I
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 3006 or 3U03 or an average of 4.0 in both STATS 2003 and 2M03 (or 2M30).

ECON 4M06 - Directed Research I
A reading and/or research programme supervised by a Department member. A major paper is required. Interested students should consult the Department concerning admission. Prerequisite: Permission of the Department.

ECON 4N03 - Directed Research II
As per ECON 4M06. Prerequisite: Permission of the Department.

ECON 4X03 - Urban Models and Policy Analysis II
A survey of modern literature on urban issues. Topics include welfare criteria, externalities, public goods and fiscal policies. Two lectures (one hour), one tutorial (two hours); one term
Prerequisite: ECON 3X03 or GEO 3H03.

ELECTRICAL AND COMPUTER ENGINEERING

WEB ADDRESS: http://www.ece.mcmaster.ca
Communications Research Laboratory, Room 101
Ext. 24347

Faculty as of January 15, 2002

Chair
Tom (Z-Q.) Luo

Associate Chair (Undergraduate Programmes)
Ted Szymanski

Associate Chair (Graduate Studies)
M. Jamal Deen

University Professor
Simon Haykin/B.Sc., Ph.D., D.Sc. (Birmingham), F.R.S.C., F.I.E.E.
Electrical and Computer Engineering

Department Note:

Computer Engineering is a multi-disciplinary programme that includes a combination of Electrical Engineering, Computer Engineering, and Software Engineering courses. In their senior year, students have the opportunity to customize their programme by selecting from a wide range of technical electives. All Electrical and Computer Engineering courses are open to students registered in an Electrical or Computer Engineering programme, subject to prerequisite requirements. Prior permission of the Department is necessary for students from other Engineering departments or faculties.

Courses

**COMP ENG 2D14 LOGIC DESIGN**

Binary numbers and codes; Boolean algebra; combinational circuit design; electrical properties of logic circuits; sequential circuit design; computer arithmetic; programmable logic; CPU organization and design. Three lectures, one tutorial, one lab every other week; first term

Prerequisite: Registration in a programme in Computer Engineering

Antirequisite: COMP SCI 2MF3, ELEC ENG 2D14, SFWR ENG 2D04

**COMP ENG 2E94 DATA STRUCTURES, ALGORITHMS AND DISCRETE MATHEMATICS**

Application of logic and finite state machines programming; data types; data abstraction and algorithms for sorting and searching; application of graph algorithms and combinatorics in programming; estimating program resource utilization. Three lectures, one tutorial (two hours); second term

Prerequisite: ENGINEER 1D04

Antirequisite: COMP SCI 2MD3, ELEC ENG 2E93, SFWR ENG 2C04

**COMP ENG 3D14 DIGITAL SYSTEMS DESIGN**

CAD tools for digital circuits; hardware description language; programmable logic and application-specific machine design; microprocessor-based system design including memory and peripheral interfaces; machine-level programming. Three lectures, one tutorial, lab every other week; first term

Prerequisite: COMP ENG 2D14 or ELEC ENG 2D14

Antirequisite: PHYSICS 4D06, 4DA3, SFWR ENG 3F03

**COMP ENG 3K44 COMPUTER-AIDED ENGINEERING**

Numerical analysis; linear and nonlinear systems; least squares and QR factorization; optimization; numerical integration and differentiation; sensitivity analysis; finite differences and finite elements; engineering applications. Three lectures, one tutorial, lab every other week; second term

Prerequisite: COMP ENG 2D14 or ELEC ENG 2D14; and ELEC ENG 2C4, MATH 3K03

Antirequisite: SFWR ENG 3X03

**COMP ENG 4D14 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, lab every other week; first term

Prerequisite: ELEC ENG 3TJ4 or 3TO4

**COMP ENG 4D44 REAL-TIME AND DISTRIBUTED COMPUTING SYSTEMS**

Computing systems designed 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, lab every other week; second term

Prerequisite: COMP ENG 3D44

**COMP ENG 4M44 COMPUTER ARCHITECTURE**

Overview of CISC/RISC microprocessors and their evolution; performance models; instruction fetch and issue; microprogramming and hardwired control; processor and memory acceleration techniques; memory hierarchies; multiple processor systems and their performance. Three lectures, one tutorial, lab every other week; first term

Prerequisite: COMP ENG 3D44

Antirequisite: SFWR ENG 3G03

**COMP ENG 4N44 ADVANCED INTERNET COMMUNICATIONS**

Advanced internet protocols; routing, security, encryption, quality of service; ATM, RSVP, video and voice over IP; terminals, gateways and gatekeepers; wireless networks; WDM systems; optical crossconnects. Three lectures, one tutorial, lab every other week; second term

Prerequisite: COMP ENG 4D44

**Adjunct Professors**

Mohamed A. El-Kady/B.Sc. (Eng.), M.Sc. (Eng.) (Cairo), Ph.D. (McMaster), P.Eng.


**Associate Professor**

Hubert deBruin/ (Medicine), M.Eng., Ph.D. (McMaster), P.Eng.

**Adjunct Associate Professors**

Elie Bosse/B.Sc.A., M.Sc. (Laval), Ph.D. (Carleton, Ottawa, Laval)

Chandra M. Kud sia/B.Sc. (Dehli), M.Eng. (McMaster), Ph.D. (Concordia), P.Eng.

**Assistant Professors**

M. Bakor/B.Sc., M.Sc. (Cairo), Ph.D. (McMaster)

I. Bruce/B.Eng., Ph.D. (Melbourne)

T. Davidson/B.Eng. (Western Australia), D. Phil. (Oxford)

N. Georgiev/B.Sc. (Tech. University of Sofia), Ph.D. (University of Electrocommunications, Tokyo)


X. Li/B.Sc. (Shandong), M.S. (Wuhan Research Inst. of Posts & Telecommunications), Ph.D. (Northern Jiaotong)

Nicola Nicolici/B.Eng. (Technical University Timisoara), Ph.D. (Southampton)

S. Shiri/B.Sc., M. Sc. (Isfahan University of Technology), M.Sc. (Amirkabir University of Technology), Ph.D. (British Columbia)

**Assistant Professors**


Javier F. De la Hidalga/W.B.Sc., M.Sc., Ph.D. (INAOE, Puebla, Mexico)

Qu Jin/B.Eng., M.Eng. (Dalcan Marine), Ph.D. (McMaster)

Uwe Schabitz/B.Eng., M.Sc., Ph.D. (McMaster), P.Eng.

**Associate Members**

G. Bone/(Mechanical Engineering), B.Sc.App.Sc. (Queen's), M.Eng., Ph.D. (McMaster)

D.T. Cassidy/(Engineering Physics), B.Eng. (McMaster), M.Sc. (Queen's), Ph.D. (McMaster)


D. Down/(Computing and Software), B.Sc., M.Sc. (Toronto), Ph.D. (Illinois-Urbana)


Marko V. Karad/(Medicine), M.S., Ph.D. (Indian Inst. of Tech., Madras), Ph.D. (McMaster)

Stavrou G. Kollopoulos/(Computing and Software), Dipl. Eng. (Patras), M.S., Ph.D. (Dartmouth)

David L. Pernas/(Computing and Software) B.S., M.S., Ph.D. (Carnegie, Dr.h.c. (ETH-Zürich), Dr.h.c. (Louvain), F.R.S.C, F.A.C.M., NSERC/Bell Industrial Research Chair in Software Engineering, P.Eng.)

Allan Spence/B.Math., M.A.Sc., (Waterloo), Ph.D. (British Columbia), P.Eng. (McMaster)

Tamás Terlaky/(Computing and Software), M.Sc., Ph.D. (Leórd Eötvös)

Martin von Mohrenschildt/(Computing and Software) Dipl.Math., Dr.s chức. (ETH-Zürich)

Patrick C. Yip/(Mathematics and Statistics), B.Sc. (Memorial), Ph.D. (McMaster)

Y. Yuan/(Business), B.Sc. (Fudan), Ph.D. (Michigan)
ELECTRICAL AND COMPUTER ENGINEERING

COMP ENG 4E34 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 3E34
Antirequisite: ELEC ENG 4E34

COMP ENG 4043 ENGINEERING DESIGN
The design process: establishing objectives; preliminary design; planning; scheduling; decision matrices; Modeling tools; economic impact; optimization methods; reliability; safety; a term project composed of small teams of students.
Lectures, tutorials, one capstone project; first term or second term
Prerequisite: Registration in Level IV or V of Any Electrical or Computer Engineering programme
Antirequisite: ELEC ENG 4O43

COMP ENG 404J3 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 4O4J3

COMP ENG 4T4L 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: One of ELEC ENG 3DB3, 3T4J or 3TQ4
Antirequisite: ELEC ENG 4T4L

COMP ENG 4T3N 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 3T4J or 3TQ4

ELECTRICAL ENGINEERING ...

Department Note:
All students in the Electrical Engineering programme 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 programme by selecting from a wide range of technical electives.
All Electrical and Computer Engineering courses are open to students registered in an Electrical or Computer Engineering programmes, subject to prerequisite requirements. Prior permission of the Department is necessary for students from other Engineering departments or faculties.

Courses

ELEC ENG 2C4I INTRODUCTION TO ELECTRICAL ENGINEERING
Electric and magnetic fields; current, potential difference; Kirchhoff's laws; Ohm's Law; circuit elements; single time constant circuits; complex arithmetic; phasors, impedance and admittance; semiconductor devices; operational amplifiers.
Three lectures, one tutorial, one lab every other week; first term
Prerequisite: Registration in a Computer Engineering or Electrical Engineering programme
ELEC ENG 2C4J CIRCUITS AND SYSTEMS
Mesh/mesh analysis of electrical circuits; Laplace transforms with applications; responses of linear systems; coupled circuits; power relationships; dependent sources; magnetic and nonlinear circuits.
Three lectures, one tutorial (two hours); second term
Prerequisite: ELEC ENG 2C4I
ELEC ENG 2D4I LOGIC DESIGN
Binary numbers and codes; Boolean algebra; combinational circuit design; logical properties of logic circuits; sequential circuit design; computer arithmetic; programmable logic; CPU organization and design.
Three lectures, one tutorial, one lab every other week; second term
Prerequisites: Registration in a programme in Electrical Engineering, Engineering Physics or Physics
Antirequisite: COMP ENG 2D4I, COMP SCI 2MF3, SFWR ENG 2D04
ELEC ENG 2E4I ELECTRONIC DEVICES AND CIRCUITS
Semiconductor devices and electronic circuits; electrical characteristics, principles of operation, circuit models of diodes, field-effect and bipolar transistors, and operational amplifiers; analysis and design of basic application circuits.
Three lectures, one tutorial, one lab every other week; second term
Prerequisites: ELEC ENG 2C4I
Corequisite: ELEC ENG 2E4I
ELEC ENG 2E4J DATA STRUCTURES, ALGORITHMS AND DISCRETE MATHEMATICS
Application of logic and finite state machines programming; data types; data abstraction and algorithms for sorting and searching; application of graph algorithms and combinatorics in programming; estimating program resource utilization.
Three lectures, one tutorial (two hours); first term
Prerequisites: ENGINEER 1D04
Antirequisite: COMP ENG 2E4I, COMP SCI 2MD3, SFWR ENG 2C04
ELEC ENG 3E4I ELECTRONIC DEVICES AND CIRCUITS II
Analog and digital electronics; operational amplifier circuits; multistage amplifiers; oscillators; analog and digital integrated circuits; data converters; amplifier frequency response; feedback and stability; computer aids to analysis and design.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite: ELEC ENG 2C4J or 2E4I
ELEC ENG 3F4I ELECTROMAGNETIC FIELDS
Electrostatics, magnetostatics, ferromagnetics; 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 2C4J
ELEC ENG 3P4 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; second term
Prerequisite: ELEC ENG 2C4J
ELEC ENG 3T4P 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 2C4J
Corequisite: MATH 3K03
Antirequisite: ELEC ENG 3C4K, MECH ENG 4R03
ELEC ENG 3T4Q PROBABILITY AND RANDOM PROCESSES
Probability theory, random variables, expectations, random processes, autocorrelation, power spectral density; filtering of random processes; noise in communication systems.
Three lectures, one tutorial, one lab every other week; first term
Prerequisite: ELEC ENG 2C4J, MATH 2P04, 2004
Antirequisite: ELEC ENG 3T4J
ELEC ENG 3T4R COMMUNICATION SYSTEMS
Review of continuous-time signals and systems; analysis and implementation of amplitude modulation (DSB, SC, SSB), phase and frequency modulation schemes; digital modulation; noise performance.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite: ELEC ENG 2C4J or 2D4A
Corequisite: MATH 3K03
Antirequisite: ELEC ENG 3T4I
ELEC ENG 4C4L CONTROL SYSTEM DESIGN
Design of linear control systems using classical and state-space techniques; performance limitation; sampled-data control; nonlinear systems; multi-input multi-output control systems.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite: ELEC ENG 3T4P or permission of the department
ELEC ENG 4E4L BIOMEDICAL ELECTRONIC INSTRUMENTATION
Generation and nature of bioelectric potentials; electrodes and other transducers; principles of instrumentation; electrical safety; neuromuscular and cardiovascular instrumentation; ultrasound and other medical imaging.
Two lectures, one tutorial, one lab every other week; second term
Prerequisite: One of ELEC ENG 3E4J, ENGINEER 3N03 or PHYSICS 3B06
ELEC ENG 4EM3  PHOTONIC DEVICES AND SYSTEMS
Two lectures, one tutorial, one lab every other week; second term
Prerequisite: ELEC ENG 3EJ4

ELEC ENG 4FJ4  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 3FI4

ELEC ENG 4HI3  COMMUNICATION SKILLS
Organizational behaviour; conflict resolution; barriers to communications;
oral communications; interpersonal, group and team skills; technical writing;
presentations.
Two lectures, one tutorial (three hours) per week; first term
Prerequisite: Registration in Level IV Electrical or Computer Engineering
Not open to students registered in an Engineering and Management
Engineering and Society programme.

ELEC ENG 4HJ1  HEALTH AND SAFETY, LAW AND ETHICS
The Engineering Act; principles of ethics and ethical dilemmas; health
and safety in the workplace; safety hazards in the workplace; electrical
shock hazards; safety in the software industry.
Eight seminars (one hour); first term
Prerequisite: Registration in Level IV or V of any Electrical or Computer
Engineering programme

ELEC ENG 4O1F  ENGINEERING DESIGN
The design process; establishing objectives; preliminary design; planning;
scheduling; decision matrices; modeling tools; economic impact;
opportunity methods; reliability; safety; a term project composed of small
teams of students.
Lectures, tutorials, one capstone project; first and second term
Prerequisite: Registration in Level IV or V of any Electrical or Computer
Engineering programme
Antirequisite: COMP ENG 4O1F

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 and second term
Prerequisite: Prior arrangement with an Electrical or Computer Engineering
faculty member, inclusion on the Dean’s Honour List, registration in Level IV or V or permission of the instructor
Antirequisite: COMP ENG 4OJ3

ELEC ENG 4PJ3  ROTATING MACHINES
Design considerations for electric machines; polyphase stator windings;
harmonics; slotting; saturation; losses; reactance; saliency; equivalent
circuits; synchronous, asynchronous and permanent magnet machines.
Two lectures, one tutorial, one lab every other week; first term
Prerequisite: ELEC ENG 3PJ4

ELEC ENG 4PK4  POWER ELECTRONICS
Power circuits with switches; basic rectifier circuits; commutation; choppers;
inverters; harmonic suppression techniques; generation and control
of rotating fields; variable speed drives; system design.
Three lectures, one tutorial, one lab every other week; first term
Prerequisite: ELEC ENG 3EJ4, 3TP4

ELEC ENG 4PL4  ENERGY SYSTEMS AND MANAGEMENT
Elements of generation, transmission, and distribution systems; system-wide
energy flow and control; modeling 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 4TK4  DIGITAL COMMUNICATIONS SYSTEMS
Digital modulation systems, intersymbol interference, equalization, synchronization;
ASK, FSK, PSK, MSK, optimal receiver, noncoherent detection;
Introduction to information theory; entropy, source coding, mutual
information, channel capacity.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite: ELEC ENG 3TI4 or ELEC ENGINEERING 3TR4

Note:
Enrolment in these courses by students in programmes other than Engineering,
Engineering and Society or Engineering and Management may be limited.

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 an Engineering programme
This course must be successfully completed before registering in Level II
Engineering.

ENGINEER 1C04  ENGINEERING DESIGN AND COMMUNICATION
Graphical, written and oral communication in the context of engineering
design. The engineer and society. Design projects by individuals and
small design workshops.
Two lectures, one graphics lab (three hours), one design lab (two hours);
first or second term
Prerequisite: Registration in an Engineering programme
Antirequisite: COMP SCI 1MA3 or 1MC3 or 1SA3

ENGINEER 2B03  ENGINEERING ECONOMICS
Personal financing. Total project Investment. Production and operations costs.
Economic analysis. Financial attractiveness.
Two lectures, one tutorial; second term
Prerequisite: Registration in an Engineering or Electrical Engineering
programme
Antirequisite: CHEM ENG 4N04, ENGINEER 4B03
Not open to students registered in an Engineering and Management
programme.

ENGINEER 2C03  ELECTRICITY, THERMOPHYSICS AND ENERGY
An exposure of electrical and thermodynamics fundamentals having civil
engineering applications. Topics: electrostatics, electrical currents, circuits
and transients, electrical power engineering, energy efficiency, heat transfer mechanisms.
Two lectures, one tutorial (two hours); second term
Prerequisite: PHYSICS 1E03 and registration in MATH 2M06

ENGINEER 2E03  STRUCTURE AND PROPERTIES OF ENGINEERING MATERIALS
Bonding, crystal structure, defects and diffusion; mechanical and electrical
properties; semiconductor device fabrication; optical magnetic and
superconductor properties.
Three lectures, one tutorial; first term
Prerequisite: Completion of at least 12 units of Level I Chemistry, Mathematics
or Physics
Antirequisites: ENGINEER 2003, 2004, 3P03, MATHS 1A03, 2003

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 programme
except Engineering Physics
Antirequisite: ENGINEER 2V04, ENG PHYS 2H04, MEC 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 term or second term
Prerequisite: PHYSICS 1E03; and registration in either MATH 2M06 or both MATH 2P04 and 2Q04
Antirequisite: ENGINEER 3M03

WEB ADDRESS: http://www.eng.mcmaster.ca/
ENGINEER 2003  STRUCTURE AND PROPERTIES OF ENGINEERING MATERIALS

Structure of materials as the basis of mechanical, thermal, electrical, magnetic and chemical properties. Basic approaches to selection of materials in engineering design.

Two lectures and one tutorial; first term
Prerequisite: Completion of at least 12 units of Level I Chemistry, Mathematics or Physics
Antirequisites: ENGINEER 2E03, 2F04, 3P03, MATLS 1A03, 2C03

ENGINEER 2P04  ENGINEERING MECHANICS 'A'

Principles of statics as applied to deformable solid bodies. Stress and strain, elastic behaviour of simple members under axial force, bending and torsion. Principal stresses; deflection of beams; statical indeterminacy.

Three lectures, plus one unit comprising tutorials or lectures devoted to applications, at the discretion of the instructor; first term
Prerequisite: PHYSICS 1Q03

ENGINEER 2Q04  ENGINEERING MECHANICS 'B'

Kinematics and dynamics of particles and rigid bodies. Motion with respect to a rotating frame of reference. Work, energy and momentum principles. Free, damped and forced vibrations of single degree of freedom systems.

Three lectures, plus one unit comprising tutorials or lectures devoted to applications, at the discretion of the instructor; first term
Prerequisite: Credit or registration in ENGINEER 2P04
Antirequisite: MECH ENG 2Q04

ENGINEER 3D01  LEADERSHIP: PRINCIPLES AND PRACTICE I

Instruction and practice in basic skills of leadership through workshops and practicum in undergraduate engineering courses.

Three to four hours practicum; first or second term
Prerequisite: Registration in Level III or above of an engineering programme

ENGINEER 3M01  CO-OPERATIVE INDUSTRIAL INTERNSHIP

Orientation to the workplace, career planning, job search skills, application and presentation skills. Successful completion of a minimum of 12-months internship, work term report and workplace evaluation.

Instructional/clinical sessions one evening per week for six weeks; first term or second term
Prerequisite: Completion of a 12-16 month internship

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 programme

ENGINEER 3L03  DYNAMICS AND CONTROL OF PHYSICAL SYSTEMS

Mathematical models of physical systems involving the principles of statics, kinematics, vibrational and stability analysis. Fundamentals of control theory.

Three lectures; second term
Prerequisite: Completion of Level II in any Software Engineering programme

ENGINEER 3N03  ELECTRONICS AND INSTRUMENTATION


Two lectures, one tutorial (two hours) or one lab (three hours); second term
Prerequisite: One of ENGE/ENEE 2M04, 2M03 or 3M03

ENGINEER 3P03  MECHANICAL BEHAVIOUR OF MATERIALS


Three lectures, two three-hour lab periods for concrete project; first term
Prerequisite: ENGINEER 2P04; and MATH 2K06 or both MATH 2P04 and 2Q04
Antirequisite: ENGINEER 2E03, 2F04, 2Q04, 3P03, MATLS 3M03, 3P03

ENGINEER 4A03  ENGINEERING AND SOCIAL RESPONSIBILITY

The historical development of the engineering profession's concern for social responsibility. Engineering as a cultural activity. The scope and limitations of engineering ethics. The role of the engineering profession in the social control of technological change.

One lecture, one tutorial, one seminar; second term
Prerequisite: Registration in Level III or above of any Engineering programme except Engineering and Society
Antirequisite: ENGINEER 4H03, ENG PHYS 4C03

ENGINEER 4B03  ENGINEERING ECONOMICS


Two lectures, one tutorial; second term
Prerequisite: Registration in final level of an Engineering programme
Antirequisite: CHEM ENG 4N04, ENGINEER 2B03
Not open to students registered in an Engineering and Management programme

ENGINEER 4N03  ENGINEERING: ITS HISTORY, PHILOSOPHY AND ITS WORKINGS


Three lectures; first term
Prerequisite: Registration in Level III, IV, or V of any Engineering programme except Engineering and Society
Antirequisite: ENGINEER 4A03, ENG PHYS 4C03

ENGINEER 4J03  MATERIALS FABRICATION

Offered jointly by the Departments of Mechanical Engineering and Materials Science and Engineering. Processing methods for a wide range of materials, including metals, ceramics and plastics. The analytical basis for understanding and optimizing materials processes. Exercises in mathematical modelling and the use of software packages to optimize processes.

Three lectures; first term
Prerequisite: One of MATLS 3M03, 3P03 or MECH ENG 3A03

ENGINEER 4U03  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 3M04, 3V04 or MECH ENG 3C04; and registration in Level IV or above of any Engineering programme

ENGINEERING AND MANAGEMENT

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

John Hodgins Engineering Building, Room A214-K
Ext. 27009

The Engineering and Management Programmes are described in the Faculty of Engineering section in this Calendar. These programmes 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.

Programme Director
G. John Mittenburg
Associate Director
K. Paul Rome

Courses: If no prerequisite is listed, the course is open.

ENGN MGT 2AA2  COMMUNICATION SKILLS

Writing and speaking; interpersonal communications and skills, teamwork, brainstorming, writing memoranda and business letters, organizational strategies, visual elements, formal reports, oral communications, technical talks.

One lecture, One tutorial (two hours); first term
Prerequisite: Registration in an Engineering and Management programme
ENGG MGT 3AA1 ISSUES IN TECHNOLOGY MANAGEMENT
Introduction to the field of Technology Management; the skills of writing position papers, presenting to a small group, and facilitating seminars are developed.
One seminar/class; one term
Prerequisite: Registration in an Engineering and Management programme

ENGG MGT 4A01 ENGINEERING AND MANAGEMENT REPORT
A written report and oral presentation based on summer work experience and written assessments of communications are required. Guidelines and procedures must be obtained from the Programme Director before the end of Level III.
One seminar, alternate weeks; both terms
Prerequisite: Registration in Level IV of an Engineering and Management programme

ENGG MGT 5B03 ENGINEERING AND MANAGEMENT PROJECTS
Projects that integrate the engineering and business disciplines, employing case studies provided by the members of the Industrial Advisory Council, or by industry.
One lecture, two tutorials (two hours); first or second term
Prerequisite: Registration in the final year of an Engineering and Management programme

ENGINEERING AND SOCIETY

WEB ADDRESS: http://www.eng.mcmaster.ca/engandsoc/
John Hodgins Engineering Building, Room A214-D
Ext. 27679

The Engineering and Society Programmes are described in the Faculty of Engineering section in this Calendar. These programmes lead to the B.Eng., Society degree.

Programme Director
P.C. Hudspith

Operating Committee, as of July 1, 2001:
M. Elbestawi (Dean of Engineering)
P.E. Wood (Associate Dean of Engineering)
C. Bumbacco (Civil Engineering and Society, Student)
G. Brooks (Materials Science and Engineering)
C. Churchill (Civil Engineering)
J.S. Chang (Engineering Physics)
K. Geray (History/Women's Studies)
X. Li (Electrical and Computer Engineering)
T.E. Matlin (Chemical Engineering)
K. Owen (Engineering Physics and Society, Student)
D.L. Parnas (Computing and Software)
J. Quilt (Engineering Physics and Society, Student)
M. Sklad (Mechanical Engineering)
M. Sykas (Mechanical Engineering and Society, Student)

Courses If no prerequisite is listed, the course is open.

ENGSOCTY 2X03 INQUIRY IN AN ENGINEERING CONTEXT I
Inquiry is a non-disciplinary approach to the study of issues of public concern. In terms of the design process, inquiry focuses on the problem definition stage, in which formulating questions, researching underlying issues, and analyzing opposing arguments are essential. The first course involves teaches 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 2002-2003 is sustainability.
Three hours (lectures, discussion, group work); first term
Prerequisite: Registration in an Engineering and Society programme

ENGSOCTY 2Y03 CASE STUDIES IN THE HISTORY OF TECHNOLOGY
History and philosophy of technology, from antiquity to modern times, with a special emphasis on the cultural aspects of technology, are addressed on a case study basis.
Three hours (lectures, discussion, group work); second term
Prerequisite: Registration in an Engineering and Society programme

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, presentations; seminar); 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 programme or the Honours Environmental Science (B.Sc.) Programme

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 have implications for the practicing engineer.
Prerequisite: ENGSOCTY 3X03

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 V of an Engineering and Society programme

ENGINEERING PHYSICS

WEB ADDRESS: http://engphys.mcmaster.ca/
John Hodgins Engineering Building, Room A315
Ext. 24545

Faculty as of January 15, 2002

Chair
Paul E. Jessop

Professors
Alexander A. Berezin/B.Sc., M.Sc., Ph.D. (Leningrad State),
Daniel T. Casadly/B.Eng. (McMaster), M.Sc. (Queen's), Ph.D. (McMaster), P.Eng.
Jan-Shih Chang/ B.Ed., B.Eng., M.Eng., Ph.D. (Musashi Inst. of Techn.),
Harold K. Haugen/B.Sc. (Acadia), M.Eng. (McMaster), Ph.D. (Aarhus)
Adrian H. Kita/B.Eng. (McMaster), Ph.D. (Cornell), P.Eng.
Peter Mascher/M.Eng., Ph.D. (Technical University of Graz), P.Eng.
David A. Thompson/B.Sc., Ph.D. (Reading) C.Eng.

Associate Professor
Chang Q. Xu/ B.Sc., M.Sc., (University of Science and Technology of China), D.Eng. (Tokyo)

Adjunct Professors
Denis J. Corb/B.Sc., Ph. D (Queen's, Belfast),
Douglas R. Dykaar/Sc.B. (Brown), M.S., Ph.D. (Rochester)
James S. Forster/B.Eng., Ph.D. (Liverpool)
David F. Jackson/S.Sc., M.A., M.Sc., Ph.D. (Toronto)
Krish V.S. Krishnan/B.Tech. (Madras), M.S., Ph.D. (Rochester)
Nikola K. Popov/B.Eng. (Kirtl and Metodij), M.Sc. (Belgrade), Ph.D. (Zagreb)

Adjunct Assistant Professor
Glenn D. Harvel/B.Eng., M.Eng., Ph.D. (McMaster)

Associate Members
M. Jamal Deen (Electrical and Computer Engineering), B.Sc. (Guyana), M.Sc., Ph.D. (Case Western Reserve)
Fred M. Hoppe (Mathematics), B.Sc. (Toronto), M.Sc. (Weizmann Institute of Science), M.A., Ph.D. (Princeton)
Courses

If no prerequisite is listed, the course is open.

**ENG PHYS 2A03**  ELECTRICAL SCIENCE I
An introduction to electricity and magnetism for Engineering Physics students. Two lectures, one tutorial, one lab (three hours), every other week; first term
Prerequisite: PHYSICS 1E03 and credit or registration in MATH 2P04

**ENG PHYS 2E04**  ELECTRICAL SCIENCE II
DC, AC, and transient analysis of electrical circuits. Topics include methods of circuit analysis, circuit theorems, power, controlled sources, frequency response, rectifier and filter, and transformers. Three lectures, one lab (three hours); second term
Prerequisite: ENG PHYS 2A03

**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

**ENG PHYS 3F03**  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, 2E04

**ENG PHYS 3G03**  COMMUNICATIONS AND MEDIA
Communications in organizations. Designing, supporting and delivering messages in written and visual form. Mass communication and public perception of engineering. Dealing with media. Three lectures; first term
Prerequisite: Registration in Level III Engineering Physics

**ENG PHYS 3E03**  FUNDAMENTALS OF SOLID STATE ELECTRONICS
Electrons in solids, with emphasis on semiconductors. Electron band model. Metals, dielectrics and semiconductors. Electron and hole behaviour in electric and magnetic fields. Optical properties of solids. Doped semiconductors. Two lectures, one tutorial, one lab (three hours), every other week; second term
Prerequisite: ENG PHYS 2A03, 2E04 or PHYSICS 1E03 and either MATH 2M06 or both MATH 2P04 and 2Q04 or PHYSICS 2B06

**ENG PHYS 3O03**  INTRODUCTION TO FLUID MECHANICS AND HEAT TRANSFER
Fluid properties and states 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 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 programme

**ENG PHYS 3X03**  HUMAN PHYSIOLOGY
Basic introduction and working knowledge of the human body. Includes study of the cellular level of organization.

**ENG PHYS 4A04**  DESIGN AND SYNTHESIS PROJECT
Design and synthesis projects supervised by a faculty member in the Department of Engineering Physics. Two labs (three hours); both terms
Prerequisite: Registration in final level of an Engineering Physics programme

**ENG PHYS 4C03**  INTEGRATIVE ENGINEERING
Aspects of engineering theory and practice, systems failure and catastrophe avoidance, population/resource dynamics and interactive driven systems. The seminar part of the course will involve case studies of emerging technology issues. A term paper is required. Three lectures; first term
Prerequisite: Registration in Level IV or above in any Engineering programme

**ENG PHYS 4D03**  SOLID STATE DEVICES I
Physical principles underlying operation of selected devices, and their characteristics; optical devices, avalanche devices, Gunn Effect devices, Reed diodes, charge coupled devices, integrated circuits, Josephson junctions. Three lectures; second term
Prerequisite: Credit or registration in ENG PHYS 4E03

**ENG PHYS 4G03**  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: ENG PHYS 3E03 or PHYSICS 3N03

**ENG PHYS 4H04**  SPECIAL STUDIES IN ENGINEERING PHYSICS
A special programme of studies to be arranged by mutual consent of a professor and the student with approval of the department chair, to carry out experiments and/or theoretical investigations. A written report and oral defence are required.

Two tutorials, one lab (three hours); both terms
Prerequisite: Registration in final level of an Engineering Physics programme 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 programme in Engineering or Physics

**ENG PHYS 4L03**  INDUSTRIAL MONITORING AND DETECTION TECHNIQUES
Single and two-phase flow diagnostics and monitoring techniques for industrial and power plant operations; radiation monitoring; pollutant monitoring and analyses; nuclear instrumentation for industrial processes.

Two lectures, one lab; first term
Prerequisite: ENG PHYS 3S03, 3W04

**ENG PHYS 4N03**  PRINCIPLES OF FUSION ENERGY
Fusion phenomena and the plasma state; reaction analysis; Coulomb scattering; field effect trajectories; magnetic field configurations; particle transport; energy viability; burn cycles; inertial confinement; muon catalyzed fusion.

Three lectures; second term
Prerequisite: ENG PHYS 3S03
ENG PHYS 4S04 LASERS AND ELECTRO-OPTICS
Two lectures; both terms
Prerequisite: ENG PHYS 3E03 or PHYSICS 3N03

ENG PHYS 4U04 MODERN AND APPLIED PHYSICS LABORATORY
Selected advanced experiments in two areas of applied physics, chosen from among: lasers and optical communications; microelectronic devices; computer systems; nuclear engineering.
Two labs (three hours); both terms
Prerequisite: ENG PHYS 3W04, PHYSICS 3B06

ENGINEERING TECHNOLOGY

(GENERAL)

Note:
Engineering Technology courses are open only to students registered in the Bachelor of Technology Degree Programme in Manufacturing Engineering Technology and are subject to prerequisite requirements.

Courses

ENG TECH 1MA3 MATHEMATICS I
Ordinary and partial differential equations; Laplace transforms; Fourier series; vector calculus; integral theorems, with engineering applications.
Three lectures, one term

ENG TECH 1ML3 STRENGTH OF MATERIALS
Stresses under combined loads, generalized Hooke’s Law; two and three dimensional stresses, stress transformation, principal stresses, Mohr’s circle; deflections by integration; energy methods, Castigliano’s theorem; columns; yield criteria.
Three lectures, one term
Corequisite: ENG TECH 1MA3

ENG TECH 1PG3 PROGRAMMING
An overview of C, C++ programming; variables, constants and operators; program control statements; arrays and strings; pointers; classes; virtual functions; I/O system, preprocessor.
One lecture, one tutorial; one term

ENG TECH 2CT3 SYSTEM ANALYSIS AND CONTROLS
Mathematical foundation; differential equations, Laplace transforms, transform by partial-fraction expansion; transfer function modeling of physical systems; stability, Routh criterion; time and frequency domain; Root-locus technique; design of control systems.
Three lectures, one term
Prerequisite: ENG TECH 1MA3, 1PG3

ENG TECH 2FE3 FINITE ELEMENT ANALYSIS
Matrix techniques; eigenvalue problem; equations of elasticity: plane stress, plane strain, 3D problems; variational methods; element types, element stiffness, mass matrices and load vector; assemblage of elements, boundary conditions.
Two lectures, one tutorial; one term
Prerequisite: ENG TECH 1MA3, 1ML3

ENG TECH 2MN3 MODELLING AND NUMERICAL SOLUTIONS
Number systems and errors; the solution of nonlinear equations; interpolation by polynomial; matrices and systems of linear equations; differentiation and integration; the solution of differential equations; applications to mechanical systems.
Three lectures, one term
Prerequisite: ENG TECH 1MA3, 1PG3

ENGLISH

WEB ADDRESS: http://www.humanities.mcmaster.ca/-english/
Chester New Hall, Room 321
Ext. 24732

Faculty as of January 15, 2002

Chair
Donald Goelingricht

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 Blewett/B.A., M.A. (Manitoba), Ph.D. (Toronto)
Anthony S. Brannan/B.A. (Oxford), M.A., Ph.D. (McMaster)
David L. Clark/B.A., M.A., Ph.D. (Western Ontario)
John Feins/B.A., M.A. (Oxford), Dipl.Ed. (Nottingham), M.A., Ph.D. (Western Ontario)
Donald C. Goelingricht/B.A. (Queen’s), M.A., Ph.D. (McMaster)
Helen M. Ostovich/B.A., M.A., Ph.D. (Toronto)
Lorraine M. York/B.A., M.A., Ph.D. (McMaster)

Associate Professors
Sylvia Bowerbank/B.A., M.A. (McMaster), B.Ed. (Toronto), M.A. (Simon Fraser), Ph.D. (McMaster)
Daniel Coleman/B.Ed., M.A. (Regina), Ph.D. (Alberta)
Jeffery Donaldson/B.A., M.A., Ph.D. (Toronto)
Ronald Granofsky/B.A. (Trent), M.A. (Canterbury), Ph.D. (Queen’s)
Roger L. Hyman/B.A. (York), M.A., Ph.D. (Toronto)
Mary E. O’Connor/B.A., M.A. (McGill), Ph.D. (Toronto)
Anne Savage/B.A. (Calgary), Ph.D. (London)
Mary Silcox/B.A. (Western Ontario), M.A., Ph.D. (Queen’s)
Peter Walmsey/B.A., M.A. (Toronto), Ph.D. (Cambridge)

Assistant Professors
Daniel Coleman/B.Ed., M.A. (Regina), Ph.D. (Alberta)
Catherine Grisw/B.A. (Trent), M.A., Ph.D. (Western Ontario)
Grace Kehler/B.A. (Queen’s), M.A., Ph.D. (Western Ontario)
Susie O’Brien/B.A. (Queen’s), M.A. (Queensland), Ph.D. (Queen’s)
Irene Szeman/B.A. (Queen’s), M.A. (Western Ontario), Ph.D. (Duke)

Department Notes:
1. The following are courses open as electives to students registered in Level II and above of any university programme.

- ENGLISH 2C03 Contemporary Canadian Fiction
- ENGLISH 2E03 Twentieth-Century British Literature
- ENGLISH 2P03 Studies in American Literature
- ENGLISH 2J03 Contemporary Popular Culture
- ENGLISH 2L03 Shakespeare: Selected Plays
- ENGLISH 2N03 Feminist Utopias
- ENGLISH 2H03 Topics in Poetry
- ENGLISH 3I03 Topics in Prose
- ENGLISH 3W03 Contemporary Native Literature in Canada
- ENGLISH 3X03 Contemporary Native Literature in the United States (note prerequisite for this course)
- ENGLISH 3X13 Topics in Drama

Please note that the Department is able to offer only a selection of elective courses each year.

2. Courses restricted to students registered in programmes in English may be available to qualified students in other programmes if space permits. Students interested in such courses should request permission from the departmental counsellor.

3. Level IV seminars are open only to Honours students registered in Level IV of an English programme. Enrolment will be limited to 15 students per seminar. A list of seminars to be offered will be available prior to registration.

Courses

If no prerequisite is listed, the course is open.

- ENGLISH 1A03 LITERATURE IN ENGLISH: SHORTER GENRES
- ENGLISH 1AA3 LITERATURE IN ENGLISH: LONGER GENRES

A selection of shorter literary texts (short stories, poems, essays) will be studied. Students will be introduced to the elements of various genres and to a variety of interpretive approaches. Considerable emphasis will be placed on the development of critical skills in reading and writing.

Two lectures, one tutorial; one term
Antirequisite: ENGLISH 1D06

- ENGLISH 1A03 LITERATURE IN ENGLISH: SHORTER GENRES

Equipment and subjects of language; language and society; language and culture; language as a system; language as a resource; language as a tool; language as a commodity; language as a commodity.

A selection of longer literary texts - novels and plays - will be studied. Students will be introduced to the elements of the various genres and to a variety of interpretive approaches. Considerable emphasis will be placed on the development of critical skills in reading and writing.

Two lectures, one tutorial; one term
Antirequisite: ENGLISH 1D06
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

ENGLISH 1BB3  CULTURAL STUDIES: HISTORY, THEORY, PRACTICE
An overview of the development of cultural studies as an interdisciplinary field of academic enquiry and an exploration of the proliferation of cultural practices and technologies over the last fifty years. Considerable emphasis will be placed on the development of critical skills in reading and writing.
Two lectures, one tutorial; one term

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 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 programme in English or permission of the Departmental Counsellor

ENGLISH 2C03  CONTEMPORARY CANADIAN FICTION
A study of the themes and structure of the contemporary Canadian novel, usually with emphasis upon the relationship of Canada's cultural patterns and its literature.
Three hours; one term
Prerequisite: Registration in Level II or above

ENGLISH 2E03  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 seminars; one term
Prerequisite: Registration in a programme in English. Students wishing to take this course must complete an application form in the English Department before March 31 to guarantee consideration for the following year. Enrolment is limited. Department permission is required.

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 or registration in ENGLISH 206.

ENGLISH 2G03  MODERN AMERICAN LITERATURE
A study of significant American writers from the 17th century to the present, which emphasizes the interrelationships between the literature and its philosophical and historical background.
Three hours; two terms
Prerequisite: Registration in a programme in English or permission of the Departmental Counsellor

ENGLISH 2H06  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 programme in English or permission of the Departmental Counsellor

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 programme in English or permission of the Departmental Counsellor

ENGLISH 2J03  CONTEMPORARY POPULAR CULTURE
Drawing on models of analysis from the field of cultural studies, this course will introduce students to methods of critically analyzing selected forms of popular culture. Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: CMST 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 programme in English or permission of the Departmental Counsellor
Cross-list: 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

ENGLISH 2M03  THE CONCEPT OF CULTURE
An analysis of the development of the concept of culture from the Enlightenment to the present. Areas of investigation may include: the analysis of specific cultural texts, objects, forms, and practices, and students will be expected to trace critical and contemporary debates concerning culture.
Three hours; one term
Prerequisite: Registration in a programme in Communication Studies, Comparative Literature, English or permission of the Departmental Counsellor.
Cross-list: CMST 2M03, COMP LIT 2E03

ENGLISH 2N03  MODERN COUNTERCULTURES
An exploration of a variety of cultural forms (e.g., literature, art, photography, film, music) produced by avant-garde and counter-cultural groups from the mid-19th century to the present. Areas of investigation may include: Surrealism, Futurism, the Beats, the sixties, Situationism, and punk.
Three hours; one term
Prerequisite: Registration in a programme in Communication Studies, Comparative Literature, English or permission of the Departmental Counsellor.
Cross-list: CMST 2M03, COMP LIT 2E03

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 programme in Comparative Literature, English, Peace Studies, Women's Studies or permission of the Departmental Counsellor.
Cross-list: COMP LIT 3R03, PEACE ST 3A03, WOMEN ST 3H03

ENGLISH 3A09  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 feminism, queer and masculinity studies.
Three hours; one term
Prerequisite: Registration in a programme in Comparative Literature, English, Women's Studies or permission of the Departmental Counsellor.
Cross-list: COMP LIT 3AA3, WOMEN ST 3H03

ENGLISH 3C06  MIDDLE ENGLISH LITERATURE
This course covers a broad range of medieval English literature from the 11th to the 15th centuries. The course will focus on Chaucer, Langland, and the anonymous Gawain-poet. However, other texts - such as lyrcs, saints' lives, devotional works, courtesy books and romances - will also be studied.
Three hours; two terms
Prerequisite: Registration in a programme in English or permission of the Departmental Counsellor
ENGLISH 3CC3 LITERATURE AND FILM
An examination of the particular characteristics of both literature and film and the relationships between them through a detailed study of selected novels, short stories and plays, and the films that have been based on them. Three hours; plus one weekly film screening; one term
Prerequisite: Registration in Level II or above of a programme in Art History, Communication Studies, Comparative Literature, English or Theatre & Film Studies. It is recommended that students should already have completed DRAMA 2X06 or THTR&FLM 2X03.
Cross-list: CMST 3CC3, COMP LIT 3L03, THTR&FLM 3R03 (formerly DRAMA 3H03)

ENGLISH 3G06 ENGLISH LITERATURE (1660-1800)
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 programme in English or permission of the Departmental Counsellor

ENGLISH 3HH3 TOPICS IN POETRY
Previous topics include: Contemporary British Poetry, Woman Poets of the 20th-century, Lesbian Poetry. Consult Department concerning topic to be offered.
Three lectures; one term
Prerequisite: Registration in Level II or above
English 3HH3 may be repeated, if on a different topic, to a total of six units.

ENGLISH 3I06 STUDIES IN SIXTEENTH-CENTURY LITERATURE
A critical study of the literature of the 1500s in England, particularly the second half of the century. The influence of continental writers will also be examined, and special attention will be paid to Spenser.
Three hours; two terms
Prerequisite: Registration in a programme in English or permission of the Departmental Counsellor
Cross-list: COMP LIT 3J06

ENGLISH 3J03 TOPICS IN PROSE
Previous topics include: Jane Austen, African American Fiction, Science Fiction. Consult the Department concerning topic to be offered.
Three hours; one term
Prerequisite: Registration in Level II or above
ENGLISH 3J03 may be repeated, if on a different topic, to a total of six units.

ENGLISH 3J06 THE ENGLISH LANGUAGE
An analysis of the way the English language works, with particular reference to syntactic patterns. The following areas will be considered: English phonology, historical linguistics, morphology, transformational-generative grammar, vocabulary and word formation.
Three hours; two terms
Prerequisite: Registration in a programme in English or permission of the Departmental Counsellor
Antirequisite: LINGUIST 1A06

ENGLISH 3K06 SHAKESPEARE
An extensive critical reading and discussion of selected plays.
Three hours; two terms
Prerequisite: Registration in a programme in English or permission of the Departmental Counsellor

ENGLISH 3L06 OLD ENGLISH LANGUAGE AND LITERATURE
The course will focus on translation from the beginner’s level to a level at which students can read Old English poetry with the help of a glossary only. The introduction to Old English grammar will be by means of paradigms, drills and the translation of simple prose. Grammar sessions will be complemented by classes on Anglo-Saxon cultural history and critical approaches.
Three hours; two terms
Prerequisite: Registration in a programme in English or permission of the Departmental Counsellor

ENGLISH 3M06 STUDIES IN NINETEENTH-CENTURY BRITISH LITERATURE AND CULTURE
A study of selected texts, genres, and issues of Nineteenth-Century British Literature, including reference to relevant social and political contexts.
Three hours; two terms
Prerequisite: Registration in a programme in English or permission of the Departmental Counsellor
Antirequisite: ENGLISH 3M03, 3M05

ENGLISH 3N06 THE BRITISH NOVEL
This course, in assessing and analyzing approximately 12 novels, will trace the history of English fiction to the 20th century. The course focuses 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 programme in English or permission of the Departmental Counsellor

ENGLISH 3Q03 THE HISTORY AND THEORY OF CRITICISM
A survey of the main developments in the theory and practice of literary criticism from Plato to the early 20th century.
Three hours; one term
Prerequisite: Registration in a programme in English or permission of the Departmental Counsellor
Cross-list: COMP LIT 3Q03

ENGLISH 3R06 POSTCOLONIAL LITERATURES: THEORY AND PRACTICE
A study of postcolonial literary theory and practice. Texts written in English from a variety of formerly colonized regions will be studied; including Africa, the Caribbean, South and Southeast Asia, Australia and New Zealand. The focus will be on such topics as imperialism, race, gender, ethnicity, nation, language and representation.
Three hours; two terms
Prerequisite: Registration in a programme in English or permission of the Departmental Counsellor
Cross-list: COMP LIT 3R06, PEACE ST 3E06

ENGLISH 3S03 BIBLICAL TRADITIONS IN LITERATURE
A study of the influence of the Bible on Western literature, especially English. Approaches may include the examination of symbolism, imagery, typology, doctrinal themes and narrative structures.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: COMP LIT 3H03

ENGLISH 3V06 STUDIES IN 17TH-CENTURY LITERATURE
A detailed examination of the poetry 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 programme in English or permission of the Departmental Counsellor

ENGLISH 3W03 CONTEMPORARY NATIVE LITERATURE IN CANADA
A study of significant works by Native writers who give voice to their experience in Canada. Issues examined include appropriation of voice, native identity, women in indigenous societies, and stereotyping.
Three hours (lectures and seminars); one term
Prerequisite: INDIG ST 1A03 and 1A03 (or 1A06); or six units of Level I English; or permission of the instructor
Cross-list: INDIG ST 3D03, PEACE ST 3W03
This course is administered by Indigenous Studies.

ENGLISH 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: INDIG ST 1A03 and 1A03 (or 1A06); or six units of Level I English; or permission of the instructor
Cross-list: INDIG ST 3E03, PEACE ST 3X03
This course is administered by Indigenous Studies.

ENGLISH 3XX3 TOPICS IN DRAMA
Previous topics include: British Drama: 1950 to the Present, Modern Canadian Drama. Consult the Department concerning topic to be offered.
Three lectures; one term
Prerequisite: Registration in Level II or above
ENGLISH 3XX3 may be repeated, if on a different topic, to a total of six units.
ENGLISH 4X03 HONOURS ESSAY
In consultation with members of the Department, students will prepare an essay on an approved topic. This course is normally substituted for the second part of Level IV seminar work in the second term. Students who are interested in taking 4X03 should contact the faculty member chairing the 4X03 committee early in the first term. 
Prerequisite: Registration in Level IV of an Honours programme in English and permission of the Department. Departmental permission slip required. Enrolment is limited.

Note:
Level IV seminars are open only to Honours students registered in Level IV of an English programme. Enrolment will be limited to 15 students per seminar. The Department is able to offer only a selection of the seminars listed below every year. A list of seminars to be offered will be available prior to registration, which takes place through the Department in March.

ENGLISH 4AA3 AFRICAN-AMERICAN WOMEN WRITERS
A study of selected 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 programme in English Enrolment is limited. Departmental permission required.

ENGLISH 4AR3 RHETORIC, CULTURE, CATAPSYCHE: 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 programme 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 programme in English Enrolment is limited. Departmental permission required.

ENGLISH 4AW3 ASIAN AMERICAN WRITING
An examination of selected prose texts by American writers of Asian origin. Issues of immigration, multiculturalism, race, and gender will be given close attention.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours programme in English Enrolment is limited. Departmental permission required.

ENGLISH 4BG3 THE BLOOMSBURY GROUP
An examination of the literary and cultural phenomenon known as Bloomsbury, focusing on the novels of Virginia Woolf and E.M. Forster.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours programme in English 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 programme in English Enrolment is limited. Departmental permission required.

ENGLISH 4BP3 CROSS-CURRENTS IN CONTEMPORARY BRITISH POETRY
Close readings of selected works by three contemporary British poets - Philip Larkin, Ted Hughes and Charles Tomlinson.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours programme 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, 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 an Honours programme in English Enrolment is limited. Departmental permission required.
ENGLISH 4ID3  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 programme in English Enrolment is limited. Departmental permission required.

ENGLISH 4NH3  HAWTHORNE
This seminar will examine the works of Nathaniel Hawthorne, with special attention to structural and psychological aspects of his writings.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours programme in English Enrolment is limited. Departmental permission required.

ENGLISH 4ON3  MICHAEL ONDAATJE
This course explores various approaches to Michael Ondaatje's poetry and prose; gender, postcoloniality, and interdisciplinary (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 programme in English Enrolment is limited. Departmental permission required.

ENGLISH 4PD3  THE PRIMA DONNA IN VICTORIAN FICTION
This course scrutinizes the ideological and practical work of the Victorian prima donna in society and on stage by considering her representation in a variety of media.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours programme in English Enrolment is limited. Departmental permission required.

ENGLISH 4QP3  18TH- AND 20TH-CENTURY POETRY OF QUEBEC IN TRANSLATION
An examination of the work of the major Québécois poets of the last two centuries, beginning with the poetry of the land and ending with "poets of the revolution".
Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours programme in English Enrolment is limited. Departmental permission required.

ENGLISH 4RM3  LITERARY REPRESENTATIONS OF MADNESS
This course will seek a partial answer to the question of how writers represent madness by examining texts from the 17th to the 20th centuries. Particular attention will be paid to the role of social pressures behind the transformation of concepts of madness.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours programme in English 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 programme in English 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 programme in English 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 programme in English 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 programme in English 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 programme in English Enrolment is limited. Departmental permission required.

ENGLISH 4WL3  ISSUES IN CONTEMPORARY WORLD LITERATURE
A study of changing literary conceptions of the world through an exploration of contemporary works of fiction written in English from a variety of cultural and national contexts.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours programme in English Enrolment is limited. Departmental permission required.

ENGLISH 4WP3  WAR AND PEACE IN LITERATURE
A close study of selected literary works in English that focus on the experience of war and the search for peace, especially in relation to the American Civil War, the First and Second World Wars and the Vietnam War.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours programme in English Enrolment is limited. Departmental permission required.

ENGLISH 4WS3  SHAKESPEARE: CHANGING STYLES OF INTERPRETATION OF SELECTED PLAYS
An examination of significant alterations in this century of critical attitudes to several Shakespeare plays and the wide variation in their representation and reception.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours programme in English Enrolment is limited. Departmental permission required.

ENGLISH 4WW3  WOMEN WRITERS OF THE EIGHTEENTH CENTURY
An exploration of poetry and fiction written by women in the 18th century, with particular attention to the social and philosophical concerns of these writers.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours programme in English 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 mandatory. First 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; second term.

ENVIR SC 1G03  EARTH AND THE ENVIRONMENT
An introduction to environmental geology and geomorphology through study of the processes that form the earth and its surface features. A mandatory Saturday field trip will be held. Two lectures, one tutorial, one lab; first term.

CHEM 2A03  ANALYTICAL CHEMISTRY II
An introduction to modern instrumental methods of analysis. Two lectures, one lab (three hours); first term.
Prerequisite: CHEM 2A03 or 2N03, and CHEM 2PA3 or 2R03.
Antirequisite: ENVIR SC 3A03

FRENCH

Faculty as of January 15, 2002
Chair
Owen Morgan
ENTRY INTO LEVEL I COURSES AND FRENCH PROGRAMMES

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* Grade 12 Core French may be substituted for OAC French

Courses

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: OAC French (or Grade 12 Core French) with a grade of at least 60 percent. The Department reserves the right to place students in the course most appropriate to their abilities.
Antirequisite: FRENCH 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: OAC French (or Grade 12 Core French) with a grade of at least 60 percent or FRENCH 1206 with a grade of at least A-
Antirequisite: FRENCH 1A06, 1B06, 2M06, 2Z06
The Department reserves the right to place students in the course most appropriate to their abilities.

FRENCH 1206 - BEGINNER'S INTENSIVE FRENCH I
An intensive course for developing basic skills in both written and spoken French. The normal sequel to this course is FRENCH 2Z06.
Five hours (including three computer labs); two terms
Antirequisite: OAC French (or Grade 12 Core French). Not open to Francophones.
Enrolment is limited.

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

FRENCH 2B03 - FRENCH LANGUAGE PRACTICE II
Continuation of FRENCH 2B03. Review of grammatical structures. Expansion of vocabulary. Conversation practice. Study of texts with critical discussions. The normal sequel to this course is FRENCH 2M06.
This course cannot be applied toward a Minor in French.
Four hours (including one oral French tutorial); one term
Prerequisite: FRENCH 2B03 with a grade of at least C-
Antirequisite: FRENCH 2A03

FRENCH 2E03 - LITERATURE OF QUEBEC
Selected novels, plays, and poems representative of the main currents of Quebec literature.
Three hours; one term
Prerequisite: One of FRENCH 1A06, 1N06 or 2M06

FRENCH 2G03 - FRENCH LANGUAGE PRACTICE: ELEMENTARY TRANSLATION
An introduction to translation techniques (French to English and English to French) and to the use of reference sources.
Three hours; one term
Prerequisite: A grade of at least B- in FRENCH 1A06 or 2M06 or B+ in FRENCH 1N06; and registration in a French programme

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 2J03 - 19TH-CENTURY FRENCH LITERATURE II
Aspects of the development of 19th century French literature after 1848.
Three hours; one term
Prerequisite: One of FRENCH 1A06, 1N06 or 2M06

FRENCH 2M06 - INTRODUCTION TO FRENCH STUDIES: ADVANCED LEVEL
Review of grammar, oral and written practice, and introduction to literary analysis.
Four hours (including one oral French tutorial); two terms
Prerequisite: FRENCH 1N06 or 2Z06
Antirequisite: FRENCH 1A06, 1N06

FRENCH 2N03 - INTRODUCTION TO THE CIVILIZATION OF FRANCE
The study of contemporary France through a selection of texts and audiovisual materials.
Three hours; one term
Prerequisite: One of FRENCH 1A06, 1N06 or 2M06

FRENCH 2W03 - 20TH-CENTURY FRENCH LITERATURE I
Aspects of the development of 20th-century literature to the end of the Second World War.
Three hours; one term
Prerequisite: One of FRENCH 1A06, 1N06 or 2M06

FRENCH 2W03 - 20TH-CENTURY FRENCH LITERATURE II
Aspects of the development of 20th-century literature since the Second World War.
Three hours; one term
Prerequisite: One of FRENCH 1A06, 1N06 or 2M06

FRENCH 2Z08 - BEGINNER'S INTENSIVE FRENCH II
A sequel to FRENCH 1Z06. Review of grammatical structures. Expansion of vocabulary. Conversation practice. Study of texts with critical 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 1B06, 1N06
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 2BB3
Alternates with FRENCH 3SS3.

### FRENCH 3A03 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 3C03 FRENCH LANGUAGE PRACTICE: WRITTEN
Advanced grammar and composition; introduction to stylics.
Three hours; one term
Prerequisite: A grade of at least C- in FRENCH 2BB3. Students may repeat FRENCH 3C03 to improve their grade.

### FRENCH 3C03 FRENCH LANGUAGE PRACTICE: INTERMEDIATE TRANSLATION
A course designed for the systematic translation of texts from English to French, including comparative stylics, 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
Enrolment is limited.

### 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 lie on inferencing strategies and stylistic comparisons between the two languages. Translation materials will be drawn from contemporary magazines such as L’Express, Le Nouvel Observateur and L’Actualité.
Three hours; one term
Prerequisite: FRENCH 2G03
Enrolment is limited.

### 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 2G03, FRENCH 2H03 and/or LINGUIST 1A03 and 1AA3 (or 1A06) are recommended.

### FRENCH 3K03 18TH-CENTURY FRENCH LITERATURE I
The early 18th century with emphasis on Montesquieu, Marivaux and Prévost, 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 3K03 18TH-CENTURY FRENCH LITERATURE II
Texts representing the main aspects of Enlightenment thought and literature from the publication of the preliminary discourse of the Encyclopédie to the Revolution.
Three hours; one term
Prerequisite: Six units of French above Level I, excluding FRENCH 2M06 and 2Z06

### FRENCH 3Q03 17TH-CENTURY FRENCH LITERATURE I
A study of selected plays by Corneille, Molière and Racine.
Three hours; one term
Prerequisite: Six units of French above Level I, excluding FRENCH 2M06 and 2Z06

### FRENCH 3Q03 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 2BB3
Alternates with FRENCH 3A03.

### FRENCH 3Z03 AFRICAN AND CARIBBEAN FRENCH LITERATURES
Three hours; one term
Prerequisite: One of FRENCH 1A06, 2M06 or registration in a French programme

### FRENCH 4A03 FRENCH LANGUAGE PRACTICE
Advanced stylics and composition.
Three hours; one term
Prerequisite: A grade of at least B- in FRENCH 3C03 and registration in an Honours programme in French. Students must complete FRENCH 4A03 to graduate with an Honours or a Combined Honours B.A. in French.

### FRENCH 4B03 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

### FRENCH 4E03 APPLIED LINGUISTICS AND SECOND-LANGUAGE LEARNING
An examination of various aspects of second language acquisition as applied to the teaching of French, with special emphasis on psycholinguistic factors.
Seminar (two hours); one term
Prerequisite: FRENCH 2H03

### 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: Twelve 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.

### FRENCH 4H03 TOPICS IN LINGUISTICS
Previous topics include: Lexicology, Pragmatics, Sociolinguistics. Consult the Department concerning topic to be offered.
Seminar (three hours); one term
Prerequisite: FRENCH 2H03
FRENCH 4H03 may be repeated, if on a different topic, to a total of six units.

### FRENCH 4I03 TOPICS IN FRENCH POETRY
Previous topics include: Twentieth-Century Poetry, Poets and Humour, Object Poetry. Consult the Department concerning topic to be offered.
Seminar (two hours); one term
Prerequisite: Twelve 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.

### FRENCH 4J03 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 3H03
Antirequisite: FRENCH 3I03

### 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: Twelve units of French above Level I, excluding FRENCH 2M06 and 2Z06
FRENCH 4J03 may be repeated, if on a different topic, to a total of six units.

### FRENCH 4L03 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: Twelve units of French above Level I, excluding FRENCH 2M06 and 2Z06
FRENCH 4L03 may be repeated, if on a different topic, to a total of six units.
FRENCH 4MM3  THE 18TH-CENTURY FRENCH 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 2206

FRENCH 4N03  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 2206
FRENCH 4N03 may be repeated, if on a different topic, to a total of six units.

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.
Prerequisite: Registration in Level IV of an Honours programme 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 2206
FRENCH 4U03 may be repeated, if on a different topic, to a total of six units.

FRENCH 4X03  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 2206

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 (three hours); one term
Prerequisite: 12 units of French above Level I, excluding FRENCH 2M06 and 2206
FRENCH 4Y03 may be repeated, if on a different topic, to a total of six units.

GEOGRAPHY AND GEOLOGY

WEB ADDRESS:
http://www.science.mcmaster.ca/geo/geomain.html
Burke Science Building, Room 311
Ext. 23533

Faculty as of January 15, 2002

Director
John J. Drake

Associate Director
Susan J. Elliott

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., 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)

Pavlos S. Kanaroglou/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)
Michael J. Risk/B.Sc. (Toronto), M.Sc. (Western Ontario), Ph.D. (Southern California-LA)
Ming-ko Woo/M.A. (Hong Kong), Ph.D. (British Columbia)

Associate Professors
Susan J. Elliott/M.A., Ph.D. (McMaster)
Bruce Newbold/B.A., Ph.D. (McMaster)
W. Jack Rhin/B.Sc., Ph.D. (Florida State)
J. Michael Waddington/M.Sc., Ph.D. (York)

Assistant Professors
Alfar Arain/B.E. (Pakistan), M.S., Ph.D. (Arizona)
Joe Boyce/B.Sc. (McMaster), M.Sc., Ph.D. (Toronto)
Marth Bunch/B.A. (York), M.A., Ph.D. (Waterloo)
Paulin Coulby/B.A., M.Sc. (Nice), Ph.D. (Leval)
Michael Jemett/B.Sc. (Trent), M.A., Ph.D. (Toronto)
Eduard Reinhardt/B.A., Ph.D. (Carleton)
James Smith/B.Sc., M.Sc. (Guelph), Ph.D. (Waterloo)
Lesley A. Warren/B.Sc., Ph.D. (Toronto)
Robert D. Wilton/B.A. (Hull), M.A., Ph.D. (Southern California)

Associate Members
Patricia Chow-Fraser/Biology), B.Sc., M.Sc. (Waterloo), Ph.D. (Toronto)
Fran Scotti (Clinical Epidemiology and Biostatistics), B.Sc. (Toronto), M.Sc., M.D. (McMaster)
John G. Weaver (History), B.A. (Queen's), M.A., Ph.D. (Duke)

Lecturers
Walter Peace/M.A., Ph.D. (McMaster)
Susan Vajoczki/M.Sc. (McMaster)

School Notes:
1. The Honours Environmental Science (B.Sc.), Honours Environmental Science Co-op (B.Sc.), Honours Geography (B.Sc.) and Honours Geology (B.Sc.) programmes offered by the School of Geography and Geology are being phased out. These programmes have been replaced with the Honours Environmental Sciences (B.Sc.) and the Honours Environmental Sciences Co-op (B.Sc.) programmes. These programmes allow students to select a specialist stream in 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 II to ensure that their course choices are appropriate.
2. Course codes including the letter H indicate a non-science course.
3. Students are advised that not all courses will be offered in every year.

Courses
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; 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; second term

ENVIR SC 1D03  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; first term

GEO 1HS3  GEOGRAPHY OF THE HUMAN ENVIRONMENT
Introduction to human-environment relations and spatial analysis with special emphasis on urban, social, health and cultural environments. Two lectures, one lab (two hours); 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 (two hours); first term and 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.
One lecture (two hours), one lab (two hours); one term
Prerequisite: One of ENVIR SC 1A03, 1B03, 1G03, GEO 1HS3, 1HU3

GEO 2B03  SOILS AND THE ENVIRONMENT
An introduction to the physical, chemical and biological properties of soil. Application to environmental and land use impacts.
Two lectures, one lab (three hours); one term
Prerequisite: One of ENVIR SC 1A03, 1B03, 1G03

GEO 2C03  SURFACE CLIMATE PROCESSES AND ENVIRONMENTAL INTERACTION
The surface heat and water balance of natural and human-modified landscapes. Emphasis on interactions of people and the biosphere with climate.
Two lectures, one lab (two hours); one term
Prerequisite: One of ENVIR SC 1A03, 1B03, 1G03

GEO 2E03  EARTH HISTORY
Geological evolution of the Earth and paleontological evidence for the evolution of marine life, with emphasis on the geological history of North America.
Two lectures, one lab (three hours) one term
Prerequisite: ENVIR 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: ENVIR SC 1A03 or 1G03

GEO 2G33  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

GEO 2H3  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.
Three lectures; one term
Prerequisite: GEO 1HS3 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

GEO 2H03  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

GEO 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 (two hours); one term
Prerequisite: GEO 1HS3 or 1HU3
Antirequisite: CMST 2A03, ANTHROP 2203, GEROHON 2C03, HEALTHST 2B03, SOCIOH 2203

GEO 2H3  THE UNITED STATES OF AMERICA
The physical and economic geography of the United States.
Three lectures; one term

GEO 2H3  CITIES IN A CHANGING WORLD
Key themes, perspectives and concepts in urban geography. Emphasis is placed on the relationship between urban space and processes of economic, political, cultural and environmental change.
Two lectures, one lab (two hours); one term
Prerequisite: GEO 1HS3 or 1HU3

GEO 2I03  GIS AND DIGITAL CARTOGRAPHY
Introduction to fundamental concepts for geographic information science, cartographic theory and digital techniques, spatial data and data structures and analysis of spatial data using GIS
Prerequisite: SOC SCI 2J03 or STATS 1A03

GEO 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 SC 1G03

GEO 2L03  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

GEO 2L03  PHYSICAL HYDROLOGY: SURFACE Hydrological processes including precipitation, snowmelt, slope runoff, streamflow and hydrological data analysis.
Two lectures; one lab (two hours); one term
Prerequisite: SOC SCI 2J03 or STATS 1CC3; and one of ENVIR SC 1A03, 1B03, 1G03

GEO 2M03  WATER AND THE ENVIRONMENT
Selected environmental issues related to water, including floods and droughts, irrigation, effects of water management projects and pollution. Examples from Canada and the world.
Three lectures; one term

GEO 3A03  ENVIRONMENTAL POLICY AND PLANNING
An exploration of the issues of environmental policy and planning as well as the relationship between science and policy.
Two lectures, one lab (two hours); one term
Prerequisite: GEO 2A03; or registration in an Honours Biology, an Engineering and Society programme or an Honours programme in the School of Geography and Geology.

GEO 3B03  THE 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

GEO 3D03  GEOARCHAEOLOGY
Human interaction with the landscape; effect on the earth's surface, modification of environment and biosphere; geocultural record of this interaction.
Three lectures; one term
Prerequisite: Registration in Level III or above

GEO 3E03  SEDIMENTARY ENVIRONMENTS
Sedimentary processes, stratigraphy and depositional environments of clastic and carbonate systems.
Two lectures, one lab (two hours); one term
Prerequisite: GEO 2E03

GEO 3F03  FIELD CAMP
A field camp to introduce students to field equipment and methodologies used by earth and environmental scientists. Most of this course occurs outside the regular academic term, usually the two weeks preceding the start of term in September; details and applications are available in March.
Students enrolling in this course must pay both the incidental fees as prescribed by the School and the regular tuition fees.
Prerequisite: GEO 2E03 and registration in Level III or above of an Honours programme in the School of Geography and Geology.
Antirequisite: GEO 3FG3

GEO 3G03  GLACIAL SEDIMENTS AND ENVIRONMENTS
The development and movement of glacial, 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

GEO 3I03  TRANSPORTATION GEOGRAPHY
Principles underlying the movement of goods and people in space with discussion of its economic, social and environmental impacts.
Two lectures, one lab (two hours); one term
Prerequisite: One of ECON 1A05, GEO 1HS3 or 1HU3
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO 3HE3</td>
<td>RESOURCE MANAGEMENT</td>
<td>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 1H3U</td>
</tr>
<tr>
<td>GEO 3HF3</td>
<td>FIELD STUDY IN HUMAN GEOGRAPHY</td>
<td>Introduction to field research in Human Geography, usually in the Hamilton area. Prerequisite: GEO 2HR3 and registration in Level III or above of an Honours programme in the School of Geography and Geology</td>
</tr>
<tr>
<td>GEO 3HG3</td>
<td>POPULATION GROWTH AND DISTRIBUTION</td>
<td>Facts, theories, and major issues about the growth and distribution of human population. Three lectures; one term Prerequisite: 1H3S or 1H3U</td>
</tr>
<tr>
<td>GEO 3HH3</td>
<td>GEOGRAPHY OF HEALTH AND HEALTH CARE</td>
<td>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. One lecture (three hours); one term Prerequisite: GEO 1H3S or 1H3U</td>
</tr>
<tr>
<td>GEO 3HI3</td>
<td>GEOGRAPHY OF A 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 3HR3 may be repeated, if on a different topic, with permission of the School of Geography and Geology during March Counselling.</td>
</tr>
<tr>
<td>GEO 3HZ3</td>
<td>URBAN SOCIAL GEOGRAPHY</td>
<td>The social geography of North American cities. Topics include commuting, segregation, inner-city gentrification, suburban development. Lectures and seminars; one term Prerequisite: GEO 2H3 or 2HY3</td>
</tr>
<tr>
<td>GEO 3a</td>
<td>APPLIED GIS</td>
<td>Practical and conceptual issues surrounding spacial databases. Advanced use of raster and vector data structures, data automation and visualization, terrain modelling and GIS automation through object-oriented programming. Two lectures; one lab (two hours); one term Prerequisite: One of GEO 2H3, 2B3, 2HY3</td>
</tr>
<tr>
<td>GEO 3b</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 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 3B3</td>
</tr>
<tr>
<td>GEO 3c</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 discussion of petrogenesis. Two lectures; one lab (two hours); one term Prerequisite: GEO 2CO3</td>
</tr>
<tr>
<td>GEO 3d</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 3e</td>
<td>ENVIRONMENTAL PALEONTOLOGY</td>
<td>Paleontology as a palaeoenvironmental indicator; important fossil groups, paleoecology and taphonomy will be emphasized. Two lectures; one lab (three hours); one term Prerequisite: GEO 2E03 or 2P03</td>
</tr>
<tr>
<td>GEO 3f</td>
<td>GEOCHEMISTRY</td>
<td>Chemistry of the earth including formation of the solar system and the earth, water-rock chemical interaction at the earth's surface, chemistry of environmentally-sensitive minerals in sediments and geological age, determination of rocks using radiogenic isotopes. Three lectures; one term Prerequisite: ENVIR SC 1G03; and one of CHEM 2PA3, 2R03, GEO 2P03</td>
</tr>
<tr>
<td>GEO 3g</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 programme in the School of Geography and Geology</td>
</tr>
<tr>
<td>GEO 3h</td>
<td>INTRODUCTION TO SPATIAL STATISTICS</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 3111</td>
</tr>
<tr>
<td>GEO 3i</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, statement of the problem and &quot;what if&quot; scenarios. Prerequisite: MATH 1A03; and registration in B.Sc. Geoscience, or any Level III Honours programme in the Faculties of Science and Engineering Antirequisite: OIE ENG 3G04</td>
</tr>
<tr>
<td>GEO 3j</td>
<td>ENVIRONMENTAL GEOPHYSICS</td>
<td>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 SC 1G03, PHYSICS 1B03</td>
</tr>
<tr>
<td>GEO 3k</td>
<td>PHYSICAL HYDROGEOLOGY</td>
<td>Mechanisms and processes of water movement in the subsurface including the saturated zone (groundwater) and the unsaturated zone (soil water). Two lectures; one lab (three hours); one term Prerequisite: One of GEO 2803, 2G03, 2W03</td>
</tr>
<tr>
<td>GEO 3l</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 2603</td>
</tr>
<tr>
<td>GEO 3m</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 2403</td>
</tr>
<tr>
<td>GEO 3n</td>
<td>ENVIRONMENTAL ASSESSMENT</td>
<td>Technical 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 an Honours Biology, an Engineering and Society Programme or an Honours programme in the School of Geography and Geology</td>
</tr>
<tr>
<td>GEO 3o</td>
<td>WATERSHED ECO SYSTEM BIODEGEOCHEMISTRY</td>
<td>A discussion of biogeochemical processes at the watershed level to examine the impact of natural and human disturbances on water quality in stream and wetland ecosystems. Two lectures; one lab (two hours); one term Prerequisite: One of GEO 2W03, 3B03, 3L03</td>
</tr>
<tr>
<td>GEO 3p</td>
<td>ADVANCED PHYSICAL CLIMATOLOGY</td>
<td>This course develops energy and mass exchange processes in the near surface layer, the lower atmosphere and at the earth-atmosphere interface. Sensitivities of these processes to environmental change and feedback mechanisms are examined. Seminars and individual presentations are emphasized. Two lectures; one lab (two hours); one term Prerequisite: GEO 2C03</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 programme in the School of Geography and Geology
Antirequisite: GEO 4R03

GEO 4D03 LAND USE AND TRANSPORTATION
Methods for the analysis and prediction of transportation and land use patterns in cities, with applications to urban planning and pollution problems.
Three lectures, one lab (two hours); one term
Prerequisite: GEO 2S03 or 3H3D
Cross-list: CIV ENG 4H03

GEO 4E03 COASTAL ENVIRONMENTS
Coastal systems and their response to sea level change with an emphasis on the Quaternary; methods of reconstructing sea level change; environmental concerns in coastal areas.
Three lectures, one lab (three hours); one term
Prerequisite: GEO 3E03

GEO 4F03 FIELD COURSE
Detailed study of a particular aspect of physical geography, geology or environmental science in the field. Held immediately after the end of Level III or prior to Fall registration in Level IV, report to be submitted before the end of first term. Various topics and locations: details announced in March. Students enrolling in this course must pay both the incidental fees, as prescribed by the School, and the regular tuition fees.
Prerequisite: Registration in Level III or above of an Honours B.Sc. programme in the School of Geography and Geology

GEO 4F03 FIELD RESEARCH IN THE HUMAN ENVIRONMENT
Selected topics in field research in the Earth Sciences. Topics may vary from year to year, and the timing of the course will depend on the offerings. Details will be posted in the School. Students enrolling in this course must pay the incidental fees, as prescribed by the School, and the regular tuition fees.
Prerequisite: Registration in Level III or above of an Honours B.Sc. programme and permission of the instructor

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 2H03, 2HY3, 3HIT3

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 4H03 THE LANDSCAPE OF URBAN HOUSING
Historical-geographical patterns in the way housing landscapes are produced, occupied and used. The effects of planning and housing policy on the landscape.
Lectures and seminars; one term
Prerequisite: GEO 3H23. GEO 3HIT3 and 3105 are recommended.

GEO 4I03 ADVANCED GIS
Advanced methods in GIS using ARC/INFO. Topics will include raster based analysis, working with linear features, surface modelling and AML programming.
Two lectures, one lab (two hours); one term
Prerequisite: GEO 3I03

GEO 4K03 MINERALOGY
Advanced topics in crystal chemistry and mineralogy, with emphasis on mineral spectroscopies.
Two lectures, one tutorial; one term
Prerequisite: GEO 2K03 or 2KK3

GEO 4K03 INQUIRY: MINERALS AND SOCIETY
Case studies of mineral structures and properties with implications of practical importance. Gem and other economic minerals; workplace and environmental hazards.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level IV of an Honours programme in the Faculty of Science
Antirequisite: ENVIR SC 4I03
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

GEO 4L03 PHYSICAL AND CHEMICAL PROCESSES IN FRESHWATER ENVIRONMENTS
A multidisciplinary course emphasizing the interactions of chemical, physical, geological and biological factors in controlling the chemical distribution, composition and structure of freshwater systems. A mandatory weekend field trip will be held in September. Students enrolling in this course must pay both the incidental fees as prescribed by the School and regular tuition fees.
Two lectures, one lab (four hours), one term
Prerequisite: One of GEO 3D03, 3G03, 3W03; and permission of the instructor
Enrolment is limited. Application must be received by March 31st. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

GEO 4M03 ENVIRONMENTAL ISOTOPES AND GEOCHRONOLOGY
Geological age determination techniques for the near-surface sedimentary record over the last two million years of earth history. Application of radiogenic and stable isotope tracers to environmental systems.
Three lectures; one term
Prerequisite: GEO 3Q03

GEO 4N06 SENIOR THESIS
Students will select research topics and prepare a thesis either individually or in teams.
One seminar (two hours); two terms
Prerequisite: Registration in Level IV or above of an Honours programme in the School of Geography and Geology and a grade of at least B+ in GEO 3R03; or permission of the instructor
Antirequisite: GEO 4CC3

GEO 4S03 ADVANCED TOPICS IN SPATIAL STATISTICS
This course explores concepts and methods in visualisation, exploration and modelling of point pattern, spatially continuous data and area data. Three hours; one term
Prerequisite: GEO 3S03

GEO 4T03 PLATE TECTONICS AND ORE DEPOSITS
Synthesis of plate tectonics, with application to crustal evolution and genesis of ore deposits.
Three lectures; one term
Prerequisite: GEO 2E203 and credit or registration in GEO 3K03

GEO 4W03 HYDROLOGIC MODELLING
Principles of numerical modelling and examination of selected hydrologic models.
Two lectures, one lab (two hours); one term
Prerequisite: GEO 2W03 or 3W03

GEO 4W03 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: GEO 3W03

GEO 4Z03 GEOPHYSICS I-REMOTE MAPPING METHODS
Advanced methods in regional geophysical resource mapping. Acquisition and interpretation of gravity, magnetic, radiometrics and EM conductivity; map generation, advanced numerical analysis and modelling.
Two lectures, one lab (two hours); one term
Prerequisite: GEO 2E203, 3I03, 3V03
Alternates with GEO 4ZZ3.

GEO 4ZZ3 GEOPHYSICS II-SUBSURFACE IMAGING METHODS
Advanced methods in 2-D and 3-D geophysical subsurface imaging and signal processing. Acquisition and interpretation of seismic, ground-penetrating radar and borehole geophysics.
Two lectures, one lab (two hours); one term
Prerequisite: GEO 2E203, 3I03, 3V03
Alternates with GEO 4Z03.
Offered in 2002-2003.
GERONTOLOGY

WEB ADDRESS: http://www.socsci.mcmaster.ca/~genos/ba/

Kenneth Taylor Hall, Room 226
Ext. 24449

Faculty as of January 15, 2002

Director:
Margaret A. Denton

Professors
Margaret A. Denton (Gerontology/Sociology) B.A., M.A., Ph.D. (McMaster)
Carolyn J. Rosenthal (Gerontology/Sociology) B.A. (Toronto), M.A., Ph.D. (McMaster)
Ellen B. Ryan (Psychiatry/Gerontology) B.A., M.A. (Brown), Ph.D. (Michigan)

Adjunct Associate Professor
John Hirdes (Health Studies and Gerontology) B.Sc., M.A., Ph.D. (Waterloo)

Assistant Professors
Lori Campbell (Gerontology) B.A., M.A. (Western Ontario), Ph.D. (Guelph)
Anju Joshi (Gerontology) B.A., M.A. (Dalhousie)
Christopher Justice (Gerontology) B.A. (Simon Fraser), M.A., Ph.D. (McMaster)

Adjunct Assistant Professor
Sherry Dupuis (Gerontology) B.Mus. (Queen's), M.A. (Waterloo), Ph.D. (Waterloo)

Associate Members
Alan G. Bishop (English) B.A. (Rhodes, S. Africa), M.A., M.Phil. (Oxford)
James W. Gladstone (Social Work) B.A. (McGill), M.S.W. (British Columbia), Ph.D. (Toronto)
Jenny Ploeg (Nursing) B.Sc.N., M.Sc.N. (Western Ontario), Ph.D. (Toronto), R.N.
Byron G. Spencer (Economics) B.A. (Queen's), Ph.D. (Rice)

Notes:
1. Programmes at McMaster University are administered by the Faculty of Social Sciences through the McMaster Centre for Gerontological Studies, and are coordinated and supervised by an interdisciplinary Committee of Instruction.
2. 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.
3. Gerontology students are strongly recommended to complete GERONTOLOGY 2C03 prior to GERONTOLOGY 3B03.
4. GERONTOLOGY 1A06 is available for elective credit for students enrolled in a non-Gerontology programme. GERONTOLOGY 2B03, 3A03, 3F03, 3H03, 3J03, 3K03 and 3M03 are available for elective credit for students enrolled in a non-Gerontology programme. In the case of 3A03, 3F03, 3H03, 3J03, 3K03 and 3M03, enrolment for non-Gerontology students is limited and places are assigned on first come basis.

Committee of Instruction:

Director:
M. Denton (Gerontology/Sociology)
J. Aronson (Social Work)
E. Badone (Religious Studies)
R. Cairn (Health Studies/Social Work)
A. Harrison (Dean) Ex-officio
A. Hicks (Kinesiology)
C. Justice (Gerontology)
J. Ploeg (Nursing)
C. Rosenthal (Gerontology/Sociology)
B. Spencer (Economics)
J. Synga (Sociology)
S. Wilkins (Rehabilitation Science)
(Student Representative)

Courses

GERONTOLOGY 1A06 "AGING AND SOCIETY"
Introduction to gerontology using techniques and insights from a diversity of disciplines to understand issues such as aging of the Canadian population; myths and stereotypes of aging; challenges and rewards in later life; and the changing body, mind and self. Provides a deeper understanding of the meaning, experience and context of aging and later life.
Three hours (lectures, inquiry and experiential components); two terms

GERONTOLOGY 2B03 "BIOLOGICAL DIMENSIONS OF HUMAN AGING"
An examination of age-related changes in biology and physiology of organisms with a special emphasis on human aging. Attention will be given to the gradual deterioration of function and homeostatic controls and the maintenance of optimal operation for various organs.
Three hours (lectures); one term
Prerequisite: GERONTOLOGY 1A06
Not open to students with credit or registration in KINESIOLOGY 4S03.

GERONTOLOGY 2C03 "RESEARCH METHODS IN SOCIAL GERONTOLOGY"
An introduction to quantitative and qualitative 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.
Three hours (lectures and practice); one term
Prerequisite: Registration in any Gerontology programme
Antirequisite: ANTHROPOLOGY 2Z03, CMST 2A03, GST 2H03, GERONTOLOGY 3C03, HEALTHCARE 2B03, SOCIAL 2Z03

GERONTOLOGY 2D03 "SOCIAL ASPECTS OF AGING"
Explores social aspects of aging at both the individual and societal levels using a variety of approaches such as life course perspective, political economy, social constructionism, self identity, and a feminist perspective of aging.
Three hours (lectures and discussions); one term
Prerequisite: Registration in any Gerontology programme
Antirequisite: GERONTOLOGY 2A03, 2A04

GERONTOLOGY 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 programme
Antirequisite: GERONTOLOGY 4B03
(See Note 3 above.)

GERONTOLOGY 3A03 "INTERNATIONAL ASPECTS OF GERONTOLOGY"
Issues in gerontology in selected developed and developing countries. The course focuses on demographic changes, social, political and economic implications of population change, attitudes toward the aged, health care and social policies.
Three hours (lectures and discussions); one term
Prerequisite: GERONTOLOGY 1A06
This course may be taken as elective credit by undergraduate students registered in a non-Gerontology programme. However, enrolment for such students is limited.

GERONTOLOGY 3B03 "GERONTOLOGY FIELD OBSERVATION"
Directed observation of 40 hours in an approved field setting and a weekly seminar focusing on integration of theoretical knowledge and observation.
Approximately four hours field observation per week, and two hours weekly seminar; one term
Prerequisite: Registration in any Gerontology Second Degree programme; or Level III or IV of any Gerontology programme
(See Note 3 above.)

GERONTOLOGY 3B83 "ADVANCED GERONTOLOGY PLACEMENT"
A supervised experience linking classroom knowledge to a practice setting. Seminars focus on integration of theoretical knowledge and observation. Placement consists of approximately 60 hours of contact time. Six hours field practicum per week, and two hours bi-weekly seminar; one term
Prerequisite: GERONTOLOGY 3B03 and registration in Level III or IV of any Gerontology programme and permission of the instructor; or credit or registration in GERONTOLOGY 3B83 and registration in any Gerontology Second Degree programme and permission of the instructor
(See Note 3 above.)
GERONTOLOGY 3D03 PSYCHOLOGICAL ASPECTS OF AGING
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 programme
Not open to students with credit in PSYCH 3D03

GERONTOLOGY 3E03 INDEPENDENT STUDY IN GERONTOLOGY FOR FIRST DEGREE STUDENTS
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: Permission of the Course Coordinator or Programme Chair; and registration in Level III or IV of any Gerontology first degree programme
GERONTOLOGY 3E03 may be repeated, if on a different topic, to a total of six units.

GERONTOLOGY 3F03 GERONTOLOGICAL PRACTICE
Principles and methods of gerontological practice. The students will take part in the McMaster Summer Institute of Gerontology as partial fulfilment of course requirements, when offered in Term 1 of the Spring/Summer Session. One term
Prerequisite: GERONTOLOGY 3B03 and registration in any Gerontology Second Degree programme or Level III or IV of any Gerontology programme; or GERONTOLOGY 1A06 and an equivalent placement course and permission of the instructor
This course may be taken as elective credit by undergraduate students registered in a non-Gerontology programme. However, enrolment for such students is limited.

GERONTOLOGY 3H03 DIVERSITY AND AGING
Examines issues in gerontology related to the diversity of contemporary western societies. Aspects of diversity such as ethnicity, race, culture, disability, gender, sexual orientation, rural and urban life, and social class will be addressed.
Three hours (lectures and discussions); includes experiential components; one term
Prerequisite: GERONTOLOGY 1A06
This course may be taken as elective credit by undergraduate students registered in a non-Gerontology programme. However, enrolment for such students is limited.

GERONTOLOGY 3I03 SPECIAL TOPICS IN GERONTOLOGY
Topics may vary from year to year. Students should consult the Chair of the Committee of Instruction prior to registration concerning topics to be examined.
Three hours (lectures and discussion); one term
Prerequisite: Registration in any Gerontology programme
GERONTOLOGY 3I03 may be repeated, if on a different topic, to a total of six units.

GERONTOLOGY 3J03 AGING, WORK, RETIREMENT AND PENSIONS
An examination of the issues and concepts related to work, retirement and pensions and their implications for aging individuals and society.
Three hours (lectures and discussions); one term
Prerequisite: Registration in any Gerontology Second Degree programme or Level III or IV of any Gerontology programme; or with permission of the instructor, registration in a Labour Studies programme or GERONTOLOGY 1A06 and registration in Level II or above of any programme
This course may be taken as elective credit by undergraduate students registered in a non-Gerontology programme. However, enrolment for such students is limited.

GERONTOLOGY 3K03 IMAGES OF AGING
Explores themes in aging through critical analysis of representations in English literature, selected works of art, music, painting, photography and film, 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: GERONTOLOGY 1A06
Not open to students with credit in GERONTOLOGY 3J03 if the topic was Images of Aging.
This course may be taken as elective credit by undergraduate students registered in a non-Gerontology programme. However, enrolment for such students is limited.

GERONTOLOGY 3L03 LONG-TERM CARE FACILITIES: ISSUES AND CHALLENGES
Humanizing care for older adults living in long-term care facilities and other issues and challenges, including the structure and organization of long-term care facilities, policy, quality of life, and quality of care.
Three hours (lectures and discussion); one term
Prerequisite: Registration in any Gerontology programme
Not open to students with credit in GERONTOLOGY 3J03 if the topic was Long-term Care Facilities: Issues and Challenges

GERONTOLOGY 3M03 AGING IN A FAMILY CONTEXT
Examines the 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 grandparents/grandchild relationships.
Three hours (lectures and discussions); includes experiential components; one term
Prerequisite: GERONTOLOGY 1A06
Antirequisite: SOCIOLOGY 3C03
Not open to students with credit in GERONTOLOGY 4C03 if the topic was Aging in a Family Context.
This course may be taken as elective credit by undergraduate students registered in a non-Gerontology programme. However, enrolment for such students is limited.

GERONTOLOGY 3Q03 ANTHROPOLOGICAL APPROACHES TO THE STUDY OF AGING
An examination of the contribution of anthropology to the study of aging with an emphasis on cross-cultural comparisons, and including an assessment of the anthropological literature relating to the biological basis of aging in modern and prehistoric populations.
Three hours (lectures and discussion); one term
Prerequisite: Social/Cultural Anthropology and registration in any programme in Gerontology
Cross-list: ANTHROP 3Q03

GERONTOLOGY 4A06 GERONTOLOGY THESIS
Provides opportunity for students to integrate knowledge, practice, and research in a project related to their area of interest. Students may work with individual faculty members or community-based supervisors.
Prerequisite: GERONTOLOGY 2C03 (or 3C03) and 3G03 (or another approved three unit statistics course); and registration in Level IV of a Combined Honours Programme in Gerontology and Another Subject

GERONTOLOGY 4C03 SPECIAL TOPICS IN GERONTOLOGY
Topics may vary from year to year. Students should consult the Gerontological Studies Office prior to registration, concerning topics to be examined.
Prerequisite: Registration in Level IV of a Combined Honours Programme in Gerontology and Another Subject or any Gerontology as a Second Degree programme
GERONTOLOGY 4C03 may be repeated, if on a different topic, to a total of six units

GERONTOLOGY 4D03 CURRENT ISSUES IN GERONTOLOGY
The content of the course will vary from year to year; please consult the Chair of the Gerontology Committee of Instruction for details.
Prerequisite: Registration in Level IV of a Combined Honours Programme in Gerontology and Another Subject or any Gerontology as a Second Degree programme

GERONTOLOGY 4E03 ADVANCED SEMINAR IN GERONTOLOGY
This course examines varied methodologies for gerontological research. With an emphasis on self-directed learning, students will learn about some of these methods in depth through individual and group projects and discussions with researchers.
Three hours (lectures and discussion); one term
Prerequisite: GERONTOLOGY 2C03 or 3C03; and registration in Level IV of a Combined Honours programme in Gerontology and Another Subject or any Gerontology as a Second Degree programme

GERONTOLOGY 4F06 DIRECTED RESEARCH FOR SECOND DEGREE 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.
Prerequisite: Registration in the B.A. Gerontology as a Second Degree programme
GERONTOL 4G03 INDEPENDENT STUDY IN GERONTOLOGY FOR SECOND DEGREE STUDENTS

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.

Prerequisite: Registration in any Gerontology as a Second Degree programme

GERONTOL 4J03 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 a Combined Honours programme in Gerontology and Another Subject or any Gerontology as a Second Degree programme

Not open to students with credit in GERONTOL 4D03 if the topic was Aging and Health.

GERONTOL 4S03 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 (seminar); one term

Prerequisite: Registration in Level IV of the Combined Honours Programme in Gerontology and Another Subject or any Gerontology as a Second Degree programme

Not open to students with credit in SOC WORK 4A03.

GREEK

(SEE CLASSICS, GREEK)

HEALTH AND SOCIETY

(SEE MINOR IN HEALTH STUDIES, FACULTY OF SOCIAL SCIENCES)

HEALTH SCIENCES

Faculty Note:

This course listing is divided into two parts:
1. Bachelor of Health Sciences (Honours) programme courses.
2. Health Sciences courses normally available only to students registered in Nursing (A), (B) or (C) Streams or Oncology or Midwifery, as applicable.

BACHELOR OF HEALTH SCIENCES (HONOURS) ...

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

Health Sciences Centre, Room 1J11
Ext. 22815

Assistant Dean, Bachelor of Health Sciences (Honours)

Delsworth G. Harnish B.Sc., M.Sc., (Queen's), Ph.D. (McMaster), 3M Teaching Fellow

Note:

Detailed course descriptions are available on the programme website 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.

Three hours; one term

Prerequisite: Registration in the B.H.Sc. (Honours) Programme

Note: Students entering the B.H.Sc. (Honours) programme after completion of Level I in another programme may be required to complete HTH SCI 1E03 at the discretion of the Assistant Dean of the programme.

HTH SCI 1E03 INQUIRY

A problem-based course applying principles of scientific inquiry to selected health issues.

Three hours, one term

Prerequisite: HTH SCI 1E03

HTH SCI 1F03 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: OAC Calculus (or Advanced Functions and Introductory Calculus U)

Antirequisite: STATS 1C03

HTH SCI 1G03 PSYCHOLOGY

This course introduces essential components of the central and peripheral nervous systems as well as key regulatory systems. Concepts such as plasticity, homeostasis, compensation and adaptation and ways in which failure of these regulatory systems can lead to illness states are examined.

Two lectures, one tutorial; one term

Prerequisite: Credit or co-registration in BIOLOGY 1A03

Antirequisite: PSYCH 1A03

HTH SCI 2E03 INQUIRY II

This course will use a problem-based format to introduce major illness categories such as infectious disease, genetic diseases, cancer, and occupational/environmental.

One term

Prerequisite: HTH SCI 1E03 and credit or registration in HTH SCI 1EE3

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: BIOLOGY 1AA3, CHEM 1A06 and registration in the B.H.Sc. (Honours) programme; or permission of the Assistant Dean, B.H.Sc. Programme.

Cross-list: HTH SCI 1H03

Antirequisite: BIOLOGY 1J03, 3U03, 3U03, HTH SCI 2L03, KINESIOL 1A06, 1X06

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

Cross-list: HTH SCI 1H03

Antirequisite: BIOLOGY 1J03, 3U03, 3U03, HTH SCI 2L03, KINESIOL 1A06, 1X06

HTH SCI 2G03 HEALTH CONCEPTS

This course examines concepts of health from molecular, clinical, population to societal perspectives.

Two lectures, one tutorial; one term

Prerequisite: HTH SCI 1F03 or STATS 1CC3

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

Antirequisite: KINESIOL 2G03

HTH SCI 2K03 CELL BIOLOGY

An examination of the relationship between cell structure and function in eukaryotic (primarily) cells.

Tutorials (three hours); Problem Based Learning and Computer Laboratories (three hours); one term

Prerequisite: BIOLOGY 1A03 (or 1A06), CHEM 1A03 (or 1A06) and registration in the B.H.Sc. (Honours) programme; or permission of the instructor.

Antirequisite: BIOLOGY 2B03

Note: B.H.Sc. (Honours) students may elect to take either HTH SCI 2K03 or BIOLOGY 2B03 to meet programme requirements.

HTH SCI 3D03 GENETICS IN HEALTH SCIENCES

This course examines basic genetic issues including cytogenetics, genetic traits and inheritance as they relate to health care issues.

Two lectures, one tutorial; one term

Prerequisite: HTH SCI 2G03, 2FF3, 2K03
This course will cover health issues that are prevalent at certain times in the developmental cycle. Topics will include reproduction, health of children and adolescents, adulthood, and health care issues in the elderly.

Prerequisite: HTH SCI 2E03

HTH SCI 3F03 STRUCTURE AND FUNCTION OF TISSUES
Functional organization of cells into organs and organ systems will be examined at the light and electron microscope levels.

Two lectures, one lab; one term
Prerequisite: HTH SCI 2G03; and registration in the B.H.Sc. (Honours) programme, and permission of the instructor
Antirequisite: BIOLOGY 3K03

HTH SCI 3G03 HEALTH INTERVENTIONS
Participants will be introduced to four different types of health interventions (clinical treatments, community health programmes, prevention initiatives and screening programmes) and will learn how to use scientific standards of evidence.

Two lectures, one tutorial; one term
Prerequisite: HTH SCI 2G03

HTH SCI 3G3 HEALTH SYSTEMS AND HEALTH POLICY
This course teaches critical reasoning about health policies and health systems, illustrating the role of values, the policy process, chief paradigms and challenges with managing conflicting goals.

Two lectures, one tutorial; one term
Prerequisite: HTH SCI 2G03

HTH SCI 3H03 INQUIRY PROJECT
An opportunity to explore one or more specialized areas of Health Sciences in preparation for HTH SCI 4A09 (or HTH SCI 4B06).

One tutorial/seminar session (three hours); one term
Prerequisite: Registration in B.H.Sc. (Honours) Programme and permission of the B.H.Sc. (Honours) Programme Office
Antirequisite: BIOCHEM 4C03, 4F03, BIOLOGY 4C09, 4F06, 4FF3, MOL BIOI 4F09, PHARMAC 4F09, PSYCH 4D06, 4E09

HTH SCI 3I03 INTRODUCTORY IMMUNOLOGY
An introduction to humoral and cellular immunity. The molecular and cellular basis of immunity, and an introduction to immunological techniques.

Two lectures, one tutorial; one term
Prerequisite: BIOLOGY 2B03 or HTH SCI 2K03
Antirequisite: BIOLOGY 3K03

HTH SCI 3I3 ADVANCED TOPICS IN IMMUNOLOGY
This course will build on knowledge of the immune system and cover selected topics such as allergy, auto-immunity, tumour, reproductive and viral immunity and AIDS.

Two lectures, one tutorial; one term
Prerequisite: BIOLOGY 3X03 or HTH SCI 3I03
Antirequisite: BIOLOGY 4I03

HTH SCI 3J03 HEALTH, INJURY AND PATHOLOGY
An introduction to human pathology with emphasis on the mechanisms of pathogenesis and the morphological changes induced to occur in cells and tissues.

Two lectures, one tutorial (three hours); one term
Prerequisite: HTH SCI 2K03 and credit or registration in HTH SCI 3I03

HTH SCI 3L03 INTRODUCTION TO BIOETHICS
This course will cover ethical issues that are relevant to biological sciences. Topics will include genetic engineering and cloning, genetic screening, reproductive technology and the use of behavioural strategies to alter societal behaviours.

One term
Prerequisite: BIOLOGY 1AA3

HHTH SCI 3Y03 DEATH, DISEASE AND DEGENERATION: A HISTORY OF HEALTH AND HEALTH CARE IN CANADA
Two lectures, one small group discussion (one hour); one term
Prerequisite: Registration in Level II or above
Cross-list: HEALTHST 3Y03, HISTORY 3Y03

HHTH SCI 4A09 THESIS
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 agreement of the supervisor and a co-supervisor, must be made before the end of March in Level III.

Prerequisite: HTH SCI 3H03; and registration in B.H.Sc. (Honours) Programme; and permission of B.H.Sc. (Honours) Programme Office.
Antirequisite: BIOCHEM 4C03, 4F03, BIOLOGY 4C09, 4F06, 4FF3, HTH SCI 4B06, MOL BIOI 4F09, PHARMAC 4F09, PSYCH 4D06, 4E09

HHTH SCI 4B06 SENIOR PROJECTS
A selection of information-based research projects conducted under the supervision of one or more members of the Faculty. Arrangements to register in HTH SCI 4B06 including agreement of faculty supervisors must be made before the end of March in Level III.

Prerequisite: HTH SCI 3H03; and registration in B.H.Sc. (Honours) Programme; and permission of B.H.Sc. (Honours) Programme Office.
Antirequisite: BIOCHEM 4C03, 4F03, BIOLOGY 4C09, 4F06, 4FF3, HTH SCI 4A09, MOL BIOI 4F09, PHARMAC 4F09, PSYCH 4D06, 4E09

HHTH SCI 4C03 SCIENTIFIC THOUGHT
This course will cover the logic of science and scientific methods, how progress is defined in science, the diversity of sciences applied to health research.

One term
Prerequisite: Registration in Level III or IV of the B.H.Sc. (Honours) Programme

HHTH SCI 4C3 HEALTH RESEARCH METHODOLOGY
This course examines how scientific philosophy is operationalized into experimental design. Issues will include how research questions are developed, how literature is reviewed, how and what to measure, specific study designs and an introduction to qualitative research methods.

One term
Prerequisite: HTH SCI 4C03

HHTH SCI 4F03 CLINICAL PRACTICE ENVIRONMENT:
This course will include one or more placements for students. In conjunction with these placements, students will be required to compile a report on one or more health care delivery environments.

One term
Prerequisite: HTH SCI 3E03

HHTH SCI 4G03 ACQUISITION AND PRESENTATION OF SCIENTIFIC KNOWLEDGE
Students will examine how health information is disseminated through formats including oral presentations, journal publications, popular media and the Internet.

One term
Prerequisite: Registration in Level III or IV of the B.H.Sc. (Honours) programme

HHTH SCI 4J03 BIOCHEMICAL IMMUNOLOGY
Topics include development of immunosassays, resistance to infection and immunity in health and disease. Format is small group and problem-based.

One session (two hours), one tutorial; one term
Prerequisite: One of BIOCHEM 3A03, 3B03, 3G03 or BIOLOGY 3H03; and HTH SCI 3I03 or 3I3
Cross-list: BIOCHEM 4J03, MOL BIOI 4J03

HHTH SCI 4N03 HEALTH MEASUREMENT
The theory of measurement including statistical bases and assumptions of measurement, test validity and reliability and the measurement of human characteristics.

Three lectures; one term
Prerequisite: HTH SCI 1F03 or Stats 1CC3; and HTH SCI 1003 or PSYCH 1AA3. Students with a grade of less than B- in either HTH SCI 1F03 or STATS 1CC3 should consult with the instructor before registering in this course.

HHTH SCI 4P03 PSYCHOLOGIC ASSESSMENT
This course will cover the techniques used to measure a variety of neuro-psychologic processes.

Three lectures; one term
Prerequisite: HTH SCI 4N03

HHTH SCI 4Q03 BEHAVIOURAL PHARMACOLOGY
This course will cover behavioural measures to study drug action and the physiochemical mechanisms in normal and abnormal behaviour.

One tutorial (three hours); one term
Prerequisite: BIOLOGY 3AA3 or PHARMAC 3A06
Cross-list: PHARMAC 4B03
HEALTH SCIENCES (MIDWIFERY, NURSING) ...

Note:
The following Health Sciences courses are normally available only to students registered in Nursing (A) or (B) Streams, Nurse Practitioner (C) Stream, Oncology or Midwifery, as applicable.

Courses

**HEALTH 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) Streams; or permission of the instructor
Antirequisite: HTH SCI 1A06, 1CC7

**HEALTH 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) Streams; or permission of the instructor
Antirequisite: HTH SCI 1A06, 1CC7

**HEALTH SCI 1C06 SOCIAL AND CULTURAL DIMENSIONS OF HEALTH CARE**
This course will increase the students' understanding of individuals, social and cultural groups in relation to health and health care. Special emphasis will be placed on understanding the social and cultural meanings of pregnancy and birth to women and their families, in particular cultural communities within Ontario.
Lectures/tutorial; two terms
Prerequisite: Registration in the Midwifery Education programme

**HEALTH SCI 1C07 INTEGRATED BIOLOGICAL BASES OF NURSING PRACTICE I**
Through a small group, self-directed problem-based learning format students will apply biological and biochemical principles essential to the assessment and management of health care problems.
Lecture (two hours), two problem based tutorials (two hours each), one lab (two hours); one term
Prerequisite: Permission of the instructor
Antirequisite: HTH SCI 1A06, 12Z4
Normally taken concurrently with NURSING 3503.

**HEALTH SCI 1D06 TOPICS IN BIOLOGICAL SCIENCES**
This course covers basic concepts of human structure and function, genetics and embryology through lectures, demonstrations and appropriate laboratory assignments.
Lectures/tutorial; two terms
Prerequisite: Registration in the Midwifery Education programme

**HEALTH SCI 1H03 HUMAN ANATOMY AND PHYSIOLOGY I**
A study of anatomy and physiology of the communication and locomotion systems.
Lecture (two hours), lab or tutorial (three hours); one term
Prerequisite: Registration in Nursing I, Level I of the B.Sc.N. (D) Stream or permission of the instructor
Cross-list: HTH SCI 2F03
Antirequisite: BIOLOGY 1J03, 2A03, HTH SCI 1B07, KINESIOL 1A06, 1X06

**HEALTH SCI 1H03 HUMAN ANATOMY AND PHYSIOLOGY II**
A study of the anatomy and physiology of the systems maintaining homeostasis.
Lecture (two hours), lab or tutorial (three hours); one term
Prerequisite: HTH SCI 1H03 and registration in Nursing I, Level I of the B.Sc.N. (D) Stream; or permission of the instructor
Cross-list: HTH SCI 2F03
Antirequisite: BIOLOGY 1J03, 2A03, HTH SCI 1B07, KINESIOL 1A06, 1X06

**HEALTH SCI 1Z24 INTRODUCTORY PHYSIOLOGY FOR POST DIPLOMA NURSING STUDENTS**
This course focuses on integrative physiology of the gastrointestinal, cardiovascular, respiratory and renal systems and how these systems maintain acid base and oncotic balance and homeostasis.
Lecture (two hours), tutorial/lab (three hours); one term
Prerequisite: Credit or registration in HTH SCI 1AA3 1BB3 (or 1A06) and registration in Level III of the B.Sc.N. (B) Stream; or permission of the instructor
Antirequisite: HTH SCI 1CC7

**HEALTH SCI 2B03 HEALTH SCIENCE AND SOCIETY**
This course is concerned with the biological, environmental, behavioural, social and economic factors that determine health needs of the population. The major components to the course are: measuring health status, the determinants of health, and the provision of health care services.
Prerequisite: Registration in Level II of the Midwifery Education programme

**HEALTH SCI 2C07 INTEGRATED BIOLOGICAL BASES OF NURSING PRACTICE II**
Continued application of biological and biochemical principles essential to the management of health care problems. Particular emphasis will be placed on introduction to principles of pharmacology and mechanisms of drug action.
Lecture (two hours), two problem-based tutorials (two hours each), one lab (two hours); one term
Prerequisite: HTH SCI 1C07 or 1Z24 and registration in Level III of the B.Sc.N. (B) or (C) Streams; or permission of the instructor
Antirequisite: HTH SCI 2A02, 2B08, 2BB2, 2CC2, 2DD2, 2H03, 2HHD
Normally taken concurrently with NURSING 3T03.

**HEALTH SCI 2H03 INTRODUCTORY PHARMACOLOGY**
An examination of the administration, distribution, action, metabolism and elimination of drugs generally and as related to specific systems.
Lecture (two hours), tutorial or clinical problem (three hours); one term
Prerequisite: HTH SCI 1AA3, 1BB3 (or 1A06), 1H03, 1HHD and registration in Level II of the B.Sc.N. (A) or (D) Streams; or permission of the instructor
Antirequisite: HTH SCI 2B08, 2C07, 2DD2

**HEALTH SCI 2H23 INTRODUCTORY MICROBIOLOGY**
An examination of the generations of microbes in the human body including action, responses, treatment and prevention.
Lecture (two hours), tutorial or lab or clinical problem (three hours); one term
Prerequisite: HTH SCI 1AA3, 1BB3 (or 1A06), 1H03, 1HHD, 2H03 and registration in Level II of the B.Sc.N. (A) or (D) Streams; or permission of the instructor
Antirequisite: HTH SCI 2B08, 2C07, 2CC2

**HEALTH SCI 2I03 SOCIAL ASPECTS OF REPRODUCTION**
An interdisciplinary course exploring birth and reproduction. Topics may include: social determinants of reproductive health, fertility and birthing rituals, reproductive ethics, policy and technologies.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above
Cross-list: HEALTHST 2H03, WOMEN ST 2H03

**HEALTH SCI 2L03 ANATOMY AND PHYSIOLOGY II: 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 systems, skin, peripheral nervous systems, 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
Antirequisite: BIOLOGY 1J03, 3U03, 3U03, HTH SCI 2F03, KINESIOL 1A06, 1X06
Anatomy and Physiology II: Homeostasis

An examination of structure-function relationships in the human body systems that are responsible for maintaining normal internal physiological conditions despite a changing environment. The systems covered include: cardiovascular, respiratory, immunological, gastro-intestinal, nutritional, 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 permission of the instructor

Anatomy and Physiology II

Health, Science and Society

This course provides an introduction to a number of macrohealth issues including determinants of health and political, economic and social factors that influence the organization of health care systems.

Nine lecture/problem-based tutorials (three hours each), guided self-study (two hours); one term

Prerequisite: Registration in Level III of the B.Sc.N. (A) or (D) Streams, or the N.P. (C) Stream in Level III or IV of the B.Sc.N. (B) Stream; or registration in Level II of the Midwifery Education programme; or permission of the instructor

Health Sciences and Society

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 (two and one-half hours), guided self-study (two hours) per week; one term

Prerequisite: Normally, registration in Level III of the B.Sc.N. (A) or (B) or N.P. (C) Stream or permission of the instructor; or registration in the Paediatric or Adult Oncology programmes

Principles and Methods of Research

Advanced analysis of principles of research design, with an emphasis on quantitative and qualitative methodologies. Readings and assignments focus on selected topics of interest to midwives. This course will be taught using a combination of self-directed and distance learning techniques.

Self-study

Prerequisite: HTH SCI 3A03, 3M03

Critical Appraisal for Midwifery

Introduction to the principles of clinical research and statistical inference with particular emphasis on critical assessment of evidence as presented in the health sciences literature related to the care of patients. A problem-based approach will be taken.

Lecture (three hours), problem based tutorial (three hours), guided self-study (two hours); one term

Prerequisite: Registration in the Midwifery Education Programme

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 supervisor.

Lecture or equivalent (three hours); one term

Prerequisite: Registration in Level II or above of the B.Sc.N. programme; 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. programme.

Introduction to Health Care Leadership/Management

Theories and principles of leadership and management are applied to the health care disciplines. Given in both problem based tutorial format and through distance education. Enrolment in tutorial format is limited. Problem based tutorial or equivalent (four hours); Independent study at a clinical site (six hours); one term

Prerequisite: A minimum of one year clinical work experience in a health care profession or permission of the instructor

Prerequisite: 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.

Three hours (lecture/problem-based tutorials); one term

Prerequisite: HTH SCI 3B03 and registration in Level III or IV of the B.Sc.N. programme; or permission of the instructor

Leading Effective Teams in Health Care Organizations

This course introduces health care providers to the concepts and dynamics of teams within health care organizations. Theories and concepts related to leadership, communication and health systems are applied in the current work environment. Distance education and tutorial formats.

Three hours (problem-based tutorial or equivalent); one term

Prerequisite: Health care professional and permission of the instructor

A non-clinical course in Health Sciences, focusing on the care of patients. A problem-based approach will be taken.

Director

Academic Advisory Committee

1. HEALTHST 1E03 and 1S03 are available to all students.
2. HEALTHST 2C03, 2D03, 2H03 and 3Y03 may be taken as electives by students enrolled in Level II and above of a non-Health Studies programme.
3. HEALTHST 3D03, 3E03, 3F03, 4C03, 4D03, 4F03 may be taken as electives by students enrolled in Level III and above of a non-Health Studies programme. Enrolment for such students is limited and places are assigned on a first come basis.

Courses

If no prerequisite is listed, the course is open.

Introduction to Health Studies: Social and Political Contexts

An introduction to the key themes and questions in health studies, with an emphasis on the social, economic, and political bases of health and illness.

Three hours (lectures and tutorials); one term

Prerequisite: HEALTHST 1A03, HTH SCI 3B03, SOC SCI 1H03

Not open to students in a Nursing or Midwifery programme.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisite</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTHST 1S03</td>
<td>INTRODUCTION TO HEALTH STUDIES:</td>
<td>Enrolment is limited.</td>
<td>Three hours (lectures and tutorials); one term An introduction to the key themes and questions in health studies, with an emphasis on the cultural and environmental forces that underlie health and illness in Canada and internationally.</td>
</tr>
<tr>
<td>HEALTHST 2A03</td>
<td>MODELS OF HEALTH AND ILLNESS</td>
<td>Enrolment is limited.</td>
<td>Three hours (lectures and discussion); one term Prerequisite: Registration in Level II or above of a Health Studies programme A review of the major models of health and illness (including biomedicine), and their implications for health care policy and practice.</td>
</tr>
<tr>
<td>HEALTHST 2B03</td>
<td>RESEARCH METHODS IN HEALTH STUDIES</td>
<td>Enrolment is limited.</td>
<td>Three hours (lectures and discussion); one term Prerequisite: Registration in Level II or above of a Health Studies programme A review of the major methodological approaches used in health studies research. The course will examine methods such as historical, qualitative, quantitative, and narrative.</td>
</tr>
<tr>
<td>HEALTHST 2C03</td>
<td>INTRODUCTION TO HEALTH ECONOMICS</td>
<td>Enrolment is limited.</td>
<td>Three hours (lectures and discussion); one term Prerequisite: Registration in Level II or above Cross-list: ECON 2C03 Economic analyses of health and health care, with a special emphasis on policy issues in the Canadian health care system.</td>
</tr>
<tr>
<td>HEALTHST 2D03</td>
<td>MENTAL HEALTH</td>
<td>Enrolment is limited.</td>
<td>Three hours (lectures and discussion); one term Prerequisite: Registration in Level II or above Antirequisite: HISTORY 3V03 An examination of mental health and illness from different social, cultural and historical perspectives, including consideration of changing notions of diagnosis, treatment and prevention.</td>
</tr>
<tr>
<td>HEALTHST 2H03</td>
<td>SOCIAL ASPECTS OF REPRODUCTION</td>
<td>Enrolment is limited.</td>
<td>Three hours (lectures and discussion); one term Prerequisite: Registration in Level II or above Cross-list: HTH SCI 203 Two lectures, one tutorial, one tutorial An interdisciplinary course exploring birth and reproduction. Topics may include: social determinants of reproductive health, fertility and birthing rituals, reproductive ethics, policy and technologies.</td>
</tr>
<tr>
<td>HEALTHST 3A03</td>
<td>HEALTH ISSUES</td>
<td>Enrolment is limited.</td>
<td>Three hours (lectures and discussion); one term Prerequisite: Registration in Level III or above of a Health Studies programme An examination of a selected health issue (such as tuberculosis, madness or healers) from various social science and humanities perspectives.</td>
</tr>
<tr>
<td>HEALTHST 3B03</td>
<td>HEALTH KNOWLEDGE</td>
<td>Enrolment is limited.</td>
<td>Three hours (lectures and discussion); one term Prerequisite: Registration in Level III or above of a Health Studies programme An examination of the construction of knowledge relating to health and illness from various social science and humanities perspectives. Emphasis on development of critical analysis of health knowledge.</td>
</tr>
<tr>
<td>HEALTHST 3C03</td>
<td>OCCUPATIONAL HEALTH AND SAFETY</td>
<td>Enrolment is limited.</td>
<td>Three hours (lectures and discussion); one term Prerequisite: Registration in Level III or above of a Health Studies programme 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.</td>
</tr>
<tr>
<td>HEALTHST 3D03</td>
<td>DISABILITIES AND CHRONIC ILLNESS</td>
<td>Enrolment is limited.</td>
<td>Three hours (lectures and discussion); one term Prerequisite: Registration in Level III or above of any programme An examination of issues relating to disabilities and chronic illness. Topics will vary from year to year.</td>
</tr>
<tr>
<td>HEALTHST 3E03</td>
<td>ETHICAL ISSUES</td>
<td>Enrolment is limited.</td>
<td>Three hours (lectures and discussion); one term Prerequisite: Registration in Level III or above of any programme Ethical issues of current relevance to debates in health and health care. Topics will vary from year to year.</td>
</tr>
<tr>
<td>HEALTHST 3F03</td>
<td>SELECTED TOPICS IN HEALTH STUDIES I</td>
<td>Enrolment is limited.</td>
<td>Three hours (lectures and discussion); one term Prerequisite: Registration in Level III or above of any programme An examination of the social aspects of the HIV epidemic. Discussion may include epidemiological aspects, community and policy responses, international issues, social implications of new medical treatments and cultural representations.</td>
</tr>
<tr>
<td>HEALTHST 3G03</td>
<td>SELECTED TOPICS IN HEALTH STUDIES II</td>
<td>Enrolment is limited.</td>
<td>Three hours (lectures and discussion); one term Prerequisite: Registration in Level III or above of any programme Enrolment is limited. A critical examination of the consumption and use of health research. Consideration of the use of research by media, governments, and industry, and of the potential for consumer empowerment and community development.</td>
</tr>
<tr>
<td>HEALTHST 4A03</td>
<td>HEALTH STUDIES INQUIRY</td>
<td>Enrolment is limited.</td>
<td>Three hours (seminar); one term Prerequisite: Registration in Level IV of a Health Studies programme Systematic inquiry of a selected topic in a problem-based seminar. Students will identify a health issue, formulate questions, conduct research and present findings.</td>
</tr>
<tr>
<td>HEALTHST 4B03</td>
<td>CRITICAL PERSPECTIVES ON CONSUMING HEALTH RESEARCH</td>
<td>Enrolment is limited.</td>
<td>Three hours (seminar); one term Prerequisite: Registration in Level IV of any programme Enrolment is limited. 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.</td>
</tr>
<tr>
<td>HEALTHST 4D03</td>
<td>HEALTH IN CROSS CULTURAL AND INTERNATIONAL PERSPECTIVES</td>
<td>Enrolment is limited.</td>
<td>Three hours (seminar); one term Prerequisite: Registration in Level IV of any programme Enrolment is limited. Examination of contemporary issues in health and illness from cross cultural and international perspectives.</td>
</tr>
<tr>
<td>HEALTHST 4E03</td>
<td>ENVIRONMENT AND HEALTH</td>
<td>Enrolment is limited.</td>
<td>Three hours (seminar); one term Prerequisite: Registration in Level IV of a Health Studies programme Cross-list: GEO 4HH3 Environment and health Models and methods for research and policy on environment and health.</td>
</tr>
<tr>
<td>HEALTHST 4F03</td>
<td>SELECTED TOPICS IN HEALTH STUDIES III</td>
<td>Enrolment is limited.</td>
<td>Three hours (seminar); one term Prerequisite: Registration in Level IV of any programme Enrolment is limited. An examination of selected topics in health studies. Topics may vary from year to year.</td>
</tr>
<tr>
<td>HEALTHST 4G06</td>
<td>INDEPENDENT STUDY</td>
<td>Enrolment is limited.</td>
<td>Three hours (seminar); one term Prerequisite: Registration in Level IV of a Health Studies Programme and permission of the Director of Health Studies Enrolment is limited. Independent research supervised by a faculty member.</td>
</tr>
<tr>
<td>HEALTHST 4H03</td>
<td>DIRECTED RESEARCH IN HEALTH STUDIES</td>
<td>Enrolment is limited.</td>
<td>Three hours (seminar); one term Prerequisite: Registration in Level IV of a Health Studies Programme and permission of the Director of Health Studies Enrolment is limited. 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.</td>
</tr>
</tbody>
</table>
HEBREW
(See Religious Studies, Hebrew)

HISPANIC STUDIES
(See Modern Languages and Linguistics, Hispanic Studies)

HISTORY

WEB ADDRESS: http://www.humanities.mcmaster.ca/~history/
Chester New Hall, Room 619
Ext. 24270

Faculty as of January 15, 2002

Chair
Virginia Aksan

Professors
J. Michael Gauvreau/B.A. (Laurentian), M.A., Ph.D. (Toronto)
Daniel J. Geagan/A.B. (Boston), Ph.D. (Johns Hopkins)
Bernice M. Kaczynski/B.A. (Bryn Mawr), M.L.S. (Denver), Ph.D. (Yale)
Daniel R. Woolf/B.A. (Queen's), D.Phil. (Oxford)

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 Cruikshank/B.A. (Carleton), M.A., Ph.D. (York)
Ruth Frager/B.A. (Rocheiner), M.A., Ph.D. (Yale)
Evan 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)

Assistant Professors
Karen Balcom/B.A. (Carleton), M.A. (Dalhousie), Ph.D. (Rutgers)
Steven Streeter/B.S. (Bates), M.A. (SUNY-Stonybrook), M.A. (California-Riverside), Ph.D. (Connecticut)
Pamela Swett/A.B. (Bryn Mawr), M.A., Ph.D. (Brown)

Adjunct Assistant Professor
Andrew Bone/B.A. (Carleton), B.A. (Birmingham), M.A., Ph.D. (McMaster)

Associate Members
Nancy B. Bouchei/Kinesiology/B.A., M.A., Ph.D. (Western Ontario)
Peter J. George/Economics C.M., B.A., M.A., Ph.D. (Toronto), D.U. (Hon) (Ottawa), D. Hon. C. (Liverpool)
Richard S. Harlil/Geography and Geology/B.A. (Cambridge), M.A. (Ohio State), Ph.D. (Queen's)

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 programmes in History, but students will be admitted to programmes in History from CLASSICS 1L06 (or 1L03 and 1L13), cross listed as HISTORY 1L06 (or 1L03 and 1L13). Students may take only 12 units of these Level I History courses.

2. Not every History course listed in this Calendar is offered every year. Students should consult the Department of History website (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 programme 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 courses may be applied towards degree requirements in History at Levels II and III:

HUMAN 2F03 Selected Interdisciplinary Topics in Medieval Life and Culture
KINESIOL 3A03 History of Physical Culture and Sports Medicine
KINESIOL 3H03 Historical Interpretations of Sport and Physical Activity

The following course may, with permission of the instructor and the Department of History, be applied towards degree requirements in an Honours programme in History at Level IV:

KINESIOL 4L06 Advanced Topics In Canadian Sport History

Courses

If no prerequisite is listed, the course is open.

HISTORY 1A03 EUROPE FROM THE RENAISSANCE TO THE FRENCH REVOLUTION
An examination of the principal themes and issues of European history from the Renaissance to the French Revolution. Three hours (lectures and tutorials); one term
Antirequisite: HISTORY 1A06

HISTORY 1A03 EUROPE FROM THE FRENCH REVOLUTION TO THE END OF THE SECOND WORLD WAR
An examination of the principal themes and issues of European history from the French Revolution to the end of the Second World War. Three hours (lectures and tutorials); one term
Antirequisite: HISTORY 1A06

HISTORY 1B03 AMERICA AND THE WORLD: FROM THE COLONIAL PERIOD TO THE TWENTIETH CENTURY
An examination of the development of America in relation to European national and imperial histories from the settlement period to 1900. Three hours (lectures and tutorials); one term

HISTORY 1B03 AMERICA AND THE WORLD: THE TWENTIETH CENTURY
An examination of the global interactions among nations of the world as shaped by and shaping America. Three hours (lectures and tutorials); one term

HISTORY 1L06 HISTORY AND ARCHAEOLOGY OF THE ANCIENT WORLD I
The history of the Ancient Near East and Greece down to the end of the 5th century B.C. based on documentary sources and archaeological evidence. Two lectures, one tutorial; one term
Cross-list: CLASSICS 1L03
Antirequisite: CLASSICS 1L06, HISTORY 1L06
This course is administered by the Department of Classics.

HISTORY 1L03 HISTORY AND ARCHAEOLOGY OF THE ANCIENT WORLD II
The history of Greece and Rome from the 4th century B.C. to the fall of Rome based on documentary sources and archaeological evidence. Two lectures, one tutorial; one term
Cross-list: CLASSICS 1L03
Antirequisite: CLASSICS 1L06, HISTORY 1L06
This course is administered by the Department of Classics.

HISTORY 2B06 WOMEN'S ROLE IN WESTERN EUROPEAN SOCIETY
An exploration of the history of European women and gender from the Medieval to the Modern periods, focusing on the political, social, intellectual, and economic realms. Three hours; two terms
Prerequisite: Registration in Level II or above
Cross-list: WOMEN ST 2B06
HISTORY 2C06 MODERN EUROPE
An examination of major themes in 19th- and 20th-century European history up to the 1990s.
Three lectures; two terms
Prerequisite: Registration in Level II or above

HISTORY 2E03 ISLAM AND MEDITERRANEAN SOCIETY, 600-1300
An introduction to Islamic civilization from its beginnings in Arabia to the period of the Crusades, with an emphasis on Mediterranean culture of the period.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: RELIG ST 2E03

HISTORY 2E23 ISLAM IN THE WORLD, 1300-1800
A survey course which emphasizes the role of Islam in the global setting in the period of the great Islamic empires.
Three lectures; one term
Prerequisite: Registration in Level II or above

HISTORY 2E3 ISLAM IN THE WORLD, 1800-2000
A survey course which examines the role of Islam in the modern world.
Three lectures; one term
Prerequisite: Registration in Level II or above

HISTORY 2G03 CHINA: HISTORICAL FOUNDATIONS
Political, social and cultural background to the modern age, with emphasis on the late imperial period (1600-1900).
Three lectures; one term
Prerequisite: Registration in Level II or above
Antirequisite: HISTORY 2B06

HISTORY 2J03 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

HISTORY 2L03 HISTORY OF 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 2L23 HISTORICAL ROSE AND 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 2L23
This course is administered by the Department of Classics.

HISTORY 2N03 BRITISH HISTORY, 1500-1970
Emphasis will be placed on the main political, religious, economic, and social developments.
Three hours (lectures and discussion groups); two terms
Prerequisite: Registration in Level II or above

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: Registration in Level II of an Honours programme in History or permission of the Department
Enrolment is limited.

HISTORY 2R03 U.S. HISTORY TO THE CIVIL WAR
A survey of the political, cultural, social, and economic development of the United States to 1877, from the colonial and revolutionary era to the Civil War and Reconstruction.
Three hours (lectures and discussion groups); one term
Prerequisite: Registration in Level II or above
Antirequisite: HISTORY 2N06

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
Antirequisite: HISTORY 2R06

HISTORY 2503 WAR IN THE WEST, 1789-1945
A survey of the development of warfare in the Western World from 1789 to 1945. Particular attention is paid to the French Revolutionary and Napoleonic Wars, and the Two World Wars in the twentieth century.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: PEACE ST 2503

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 2T06

HISTORY 2T13 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 2T06

HISTORY 2U03 HISTORICAL ANTECEDENTS OF GLOBALIZATION, 1200-1700
An introduction to interpretations of globalization, the appearance and expansion of cross-cultural trade systems, colonization, and population diasporas.
Three hours (two lectures, one tutorial); one term
Prerequisite: Registration in Level II or above
Antirequisite: HISTORY 2U06

HISTORY 2U13 HISTORICAL ANTECEDENTS OF GLOBALIZATION, 1700-1950
The emergence of global economies, settlement colonies, the dispersal of flora and fauna, the spread of ideas about property and economic development, innovations in finance and communications.
Three hours (two lectures, one tutorial); one term
Prerequisite: Registration in Level II or above
Antirequisite: History 2U06

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 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 REPUBLIC
An examination and analysis of major themes in the political, social and economic history of Rome from the mid-second century B.C. to the assassination of Caesar.
Three lectures; one term
Prerequisite: One of HISTORY 1L06, 1L13, 2K03, 2L3, 3CC3, 3E03; and registration in Level II or above
Cross-list: CLASSICS 3C03
Antirequisite: HISTORY 3MM3
Alternates with HISTORY 3CC3.
This course is administered by the Department of Classics.

HISTORY 3CC3 THE EARLY EMPIRE
An examination and analysis of major themes in the political, social and administrative history of Rome under the early emperors.
Three lectures; one term
Prerequisite: One of HISTORY 1L06, 1L33, 2K03, 2L33, 3C03, 3E03; and registration in Level II or above
Cross-list: CLASSICS 3C03
Antirequisite: HISTORY 3M33
Alternates with HISTORY 3C03.
This course is administered by the Department of Classics.

HISTORY 3D03 — THE FRENCH REVOLUTION;
ERA IN EUROPE
A study of a change in eighteenth-century Europe, with emphasis on the origins, nature and impact of the Enlightenment and the French Revolution.
Three hours (lectures and discussion); one term.
Prerequisite: Six units of History and registration in Level II or above

HISTORY 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.
Prerequisite: Registration in Level II or above
Cross-list: RELIG ST 3D03
This course is administered by the Department of Religious Studies.

HISTORY 3E03 — THE ROMAN FAMILY
The ancient Roman family, including social, economic, and legal aspects.
Three lectures; one term.
Prerequisite: One of HISTORY 1L06, 1L33, 2K03, 2L33, 3C03, 3C33; and registration in Level III or above
Cross-list: CLASSICS 3E03
Alternates with HISTORY 3E33.
This course is administered by the Department of Classics.

HISTORY 3E33 — THE GREEK HISTORIANS
The study in translation of Herodotus, Thucydides, and other Greek historical writers, with consideration of the evolution of their genre and their contributions to the development of historiography.
Three lectures; one term.
Prerequisite: Registration in Level III or above
Cross-list: CLASSICS 3E33
This course is administered by the Department of Classics.

HISTORY 3F03 — MEDIEVAL SOCIETY
An examination of the aristocratic, monastic, urban and rural communities of the Middle Ages. Attention will be given to patterns of social organization as well as to such specific themes as gender, popular piety, justice and warfare.
Three hours (lectures and discussion group); one term.
Prerequisite: Registration in Level II or above

HISTORY 3F03 — THE UNITED STATES: 1919-1950
American society and culture in the inter-war and immediate post-WW II period. Topics include the roaring 1920s, the Depression crisis, war and American society, life in a nuclear age.
Three hours (lectures and discussion); one term.
Prerequisite: Registration in Level II or above

HISTORY 3G03 — BUSINESS HISTORY: THE CANADIAN EXPERIENCE IN INTERNATIONAL PERSPECTIVE
An examination of major developments in the formation of the modern corporation and the international business system, including a consideration of the impact of the business system on Canadian society.
Three hours (lectures and discussion); one term.
Prerequisite: Registration in Level II or above

HISTORY 3G03 — 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 2G06

HISTORY 3H06 — THE HISTORY OF MODERN RUSSIA
A survey of the history of Russia with major emphasis on the 19th and 20th centuries.
Three lectures; two terms.
Prerequisite: Registration in Level II or above

HISTORY 3I03 — THE INTERNATIONAL RELATIONS OF THE EUROPEAN POWERS, 1870-1945
An examination of the origins and course of the First World War; the failure of post-war stabilization; and the origins and course of the Second World War.
Three lectures; one term.
Prerequisite: Registration in Level II or above

HISTORY 3J03 — THE UNITED STATES IN THE 1960s
An examination of the political, social and cultural changes that occurred in the United States during the 1960s. Topics include the civil rights struggle, Black Power movement, New Left, opposition to the Vietnam War, counterculture, feminism and the conservative backlash.
Three hours (lectures and discussion); one term.
Prerequisite: Registration in Level II or above

HISTORY 3J03 — CRIME, CRIMINAL JUSTICE AND PENAL 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

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 3K33 — 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: PEACE ST 3K33
Antirequisite: GSCHIE 4H03

HISTORY 3L03 — THE HISTORY OF SOCIAL ACTIVISM, 1500-2000
A thematic study of community activism in Europe and North America. Students will be exposed to the religious, socio-economic and political contexts of social activism, and the historical theory and practice of community-based actions.
Three hours; one term.
Prerequisite: Registration in Level II or above
Cross-list: PEACE ST 3L03

HISTORY 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.
Prerequisite: One of HISTORY 1L06, 2L33 or six units of Classics
Cross-list: CLASSICS 3L33
This course is administered by the Department of Classics.

HISTORY 3M33 — TOPICS IN ROMAN HISTORY
Studies of Roman history and institutions during the Republic of the Empire. Consult the Department for the topic to be offered.
Three lectures; one term.
Prerequisite: One of HISTORY 1L06, 1L33, 2K03, 2L03, 2L33
Cross-list: CLASSICS 3M33
Antirequisite: HISTORY 3C33

HISTORY 3M33 may be repeated, if on a different topic, to a total of six units.

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 3N33 — CANADA'S REVOLUTIONS: 1839-1882
An intensive treatment, through the lenses of society, ideology and politics, of the revolutionary experience of the post-war decades. The course will examine the country's transition from a prevailing conservative liberalism premised on community solidarity to a liberal democracy which exerts individual rights.
Three hours (lectures and discussion); one term.
Prerequisite: Registration in Level II or above
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 3P03 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 HISTORY OF MODERN GERMANY
This course examines the complexities of German social and political history since 1890, including World War One, Third Reich, cold war division, questions of national identity, and the peaceful revolution of 1989. Three hours (lectures and discussion groups); one term
Prerequisite: Registration in Level II or above
Cross-list: PEACE ST 3Q03

HISTORY 3R03 EUROPE BETWEEN THE WARS, 1918-1938
This course explores the political radicalism, social transformation, and cultural experimentation which defined Europe in the roaring 1920's and the crisis-ridden 1930's. Three hours (lectures and discussion groups); one term
Prerequisite: Registration in Level II or above

HISTORY 3SS3 ASPECTS OF THE CULTURAL HISTORY OF ENGLAND, 1500-1688
An introduction to courtly, urban, and rural culture from pre-Ref ormation humanism through to the Restoration era, with emphasis upon social, political and religious influences. Three hours (lectures and discussion groups); one term
Prerequisite: Registration in Level II or above

HISTORY 3V03 MADNESS IN THE AGE OF REASON: MENTAL ILLNESS AND SOCIETY FROM 1750 TO THE PRESENT DAY
An exploration of the history of madness from the rise of the asylum to the present day. Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Antirequisite: HEALTHST 2D03

HISTORY 3W03 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 (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: WOMEN ST 3G03
Antirequisite: HISTORY 3X03

HISTORY 3W03 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: 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 small group session (one hour); one term
Prerequisite: Registration in Level II or above
Cross-list: HEALTHST 3Y03, HTH SCI 3Y03

HISTORY 3Y03 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: PEACE ST 3J03

HISTORY 3Z03 JUDAISM, THE JEWISH PEOPLE AND THE BIRTH OF THE MODERN WORLD
On the issues 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
This course is administered by the Department of Religious Studies.

HISTORY 3Z23 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 identities in literature and the arts. Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above
Cross-list: RELIG ST 3Z23
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 programme. Enrolment will be limited to approxi mately 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 SPECIAL STUDIES IN THE HISTORY OF TUDOR AND STUART ENGLAND
Studies in the political, religious, intellectual and social life of Tudor and Stuart England.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2N06, 3S33, or 3T73; and registration in Level III or IV of any Honours programme in History
Enrolment is limited. Departmental permission required.

HISTORY 4B06 MODERN CANADA, 1896-1966: AN INTELLECTUAL AND CULTURAL HISTORY
An intensive study of the shaping of the twentieth-century outlook in English-speaking Canada. Topics will include the growth of the welfare state, ideologies (liberalism, conservatism, socialism, feminism), the cultural impact of depression and the two world wars, and the role of religion in shaping the Canadian community.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2J06, 2T03, 2TT3 or 3NN3; and registration in Level III or IV of any Honours programme in History
Enrolment is limited. Departmental permission required.

HISTORY 4B86 SPECIAL TOPICS IN THE HISTORY OF MODERN JAPAN
Japan from the Meiji Restoration to the post-war resurgence, with emphasis on political developments and social change.
Seminar (two hours); two terms
Prerequisite: HISTORY 3B03 and registration in Level III or IV of any Honours programme in History; or JAPAN ST 3B03 (HISTORY 3B03) with a grade of at least B- and registration in Level III or IV of the Japanese Studies programme
Enrolment is limited. Departmental permission required.

HISTORY 4E06 SPECIAL TOPICS IN THE HISTORY OF MODERN BRITAIN
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2N06, 3P03 or 3RR3 and registration in Level III or IV of any Honours programme in History
Enrolment is limited. Departmental permission required.
HISTORY 4GG6  TOPICS IN MIDDLE EASTERN AND ISLAMIC HISTORY
Aspects of the social history of the Middle East and Islamic world, such as the Muslim-Christian encounters, gender and ethnicity.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2EA3, 2EB3, 3A03, 3A3A; and registration in Level III or IV of any Honours programme in History
Enrolment is limited. Departmental permission required.

HISTORY 4H08  CANADIAN WOMEN'S HISTORY
An examination of historical changes in women's roles in Canadian society, particularly since Confederation. This includes investigation of family dynamics, women's work and women's political involvement.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2BB6, 2J03, 2T03, 2TT3, 3W03, 3WW3 or 3X03; and registration in Level III or IV of any Honours programme in History
Enrolment is limited. Departmental permission required.

HISTORY 4J06  SPECIAL TOPICS IN THE HISTORY OF THE UNITED STATES SINCE 1865
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2H06, 2R03, 2R33 or 3FF3; and registration in Level III or IV of any Honours programme in History
Enrolment is limited. Departmental permission required.

HISTORY 4J06  SPECIAL TOPICS IN THE HISTORY OF U.S. FOREIGN RELATIONS
Topics in the history of the United States Foreign relations in the modern era.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2H06, 2R03, 2R33 or 3FF3; and registration in Level III or IV of any Honours programme in History
Enrolment is limited. Departmental permission required.

HISTORY 4K06  ENVIRONMENT AND ENVIRONMENTALISM IN MODERN NORTH AMERICA, 1890-1990
Explore how different social groups in the United States and Canada confronted the sometimes adverse impact of urban and industrial growth on the physical environment of their communities.
Seminar (two hours); two terms
Prerequisite: Registration in Level III or IV of any Honours programme in History
Not open to students with credit in HISTORY 4K06 if taken in 2001-2002.
Enrolment is limited. Departmental permission is required.

HISTORY 4Q06  RUSSIA AND REVOLUTION
The Impact of modernization upon the Soviet state and society.
Seminar (two hours); two terms
Prerequisite: HISTORY 3H06 and registration in Level III or IV of any Honours programme in History
Enrolment is limited. Departmental permission required.

HISTORY 4P06  CONTEMPORARY EUROPE
Topics in the history of Europe during the 20th Century
Seminar (two hours); two terms
Prerequisite: Six units from HISTORY 2C06, 2G03, 3H03, 3H13, 3I03, 3Q03, or 3R03; and registration in Level III or IV of any Honours programme in History
Enrolment is limited. Departmental permission required.

HISTORY 4Q06  SPECIAL TOPICS IN THE HISTORY OF LATE ANTIQUITY AND BYZANTINUM
An examination of the shift from pagan to Christian paradigms in the Mediterranean world, beginning with the conversion of Constantine in 313 and ending with the fall of Constantinople in 1453.
Seminar (two hours); two terms
Prerequisite: Six units from HISTORY 2I06, 2L03, 2L33, 3F03, 3L33, 3MM3, 3UU3, 3VV3; and registration in Level III or IV of any Honours programme in History
Enrolment is limited. Departmental permission required.

HISTORY 4U08  INDEPENDENT RESEARCH
A research and/or project programme under the supervision of one member of the Department. A major paper is required, as well as a formal oral examination.
Prerequisite: Registration in Level IV of any Honours programme in History with a CGA of at least 9.0; and permission of the Department
Enrolment is limited. Departmental permission required.

HISTORY 4W06  THE NORTHERN AMERICAN CITY, 1700 TO THE PRESENT
An examination of: founders' designs; practices and influence of business communities; the impact of technology and architecture; spatial organization of class and ethnicity; shelter and urban services; differences between Canadian and American cities.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2H06, 2J06, 2R03, 2R33, 2T03 or 2TT3; and registration in Level III or IV of any Honours programme in History
Enrolment is limited. Departmental permission required.

HISTORY 4Y08  THE SECOND WORLD WAR
Emphasis will be placed on the military and diplomatic aspects of the subject.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2C06, 2G03 3I03, 3Q03 or 3R03; and registration in Level III or IV of any Honours programme in History
Enrolment is limited. Departmental permission required.

HUMANITIES (GENERAL)

Courses

INQUIRY 1HU3  INQUIRY IN THE HUMANITIES
This introduction to the systematic investigation of an issue develops skills that will serve students well in their university careers. Students learn how to formulate questions, gather and interpret evidence, and reach well-considered conclusions, using, as content, a topic central to research in the Faculty of Humanities.
Three hours; one term
Prerequisite: Registration in Humanities I or Music I
Enrolment is limited.

HUMAN 2C03  CRITICAL THINKING
This course aims to improve skills in analyzing and evaluating arguments and presentations found in everyday life and academic contexts, and to improve critical judgement.
Two lectures; one tutorial; one term
Prerequisite: Registration in Level II or above
Cross-list: CMST 2W03
Antirequisite: ARTS&SCI 1B06, PHILOS 2R03

HUMAN 2G03  SELECTED INTERDISCIPLINARY TOPICS IN MEDIEVAL LIFE AND CULTURE
The course focuses on themes promoting discussion and analysis of the roles played by women and men in the Middle Ages. Topics will include: the history of health care and life cycles; the depiction of women by Latin and vernacular writers; female/male roles in the realm of spirituality; women as patrons and performers, authors, musicians and artists in medieval society; gender issues in legislation and law enforcement.
Three lectures; one term
Prerequisite: Registration in Level II or above

HUMAN 2J03  HUMANITIES COMMUNICATION PRACTICUM
Students will study writing problems common to Level I or II writing assignments and instructional techniques for addressing them. Students will serve as writing mentors.
Three hours (tutorials and labs); one term
Prerequisite: Registration in Level III or IV of any Honours programme in the Faculty of Humanities and permission of the instructor (Dr. J. Buckley, TSH-308)
Enrolment is limited.

HUMAN 3W03  APPLIED HUMANITIES I
An opportunity for students to gain applied experience in a field related to a Humanities discipline. A student will apply 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 programme 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.

HUMAN 4W03  APPLIED HUMANITIES II
An opportunity for students to gain applied experience in a field related to a Humanities discipline. A student will apply 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 programme 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.
INDEEDURER STUDIES

WEB ADDRESS: http://www.mcmaster.ca/indigenous/
Chester New Hall, Room 228
Ext. 27426

Director
D.J. Martin-Hill/B.A., M.A., Ph.D. (McMaster)

Lecturers
B. Jacobs/L.L.B. (Windsor), L.L.M. (Saskatchewan)
R. Monture/B.A., M.A. (McMaster)
T. McCarthy/B.A., M.A. (Western Ontario)

Committee of Instructors
T. Deer, Mohawk Language Instructor
I. Toulouse, Ojibwe Language Instructor

Associate Elders
W. Cooke, Ojibwe
A. General, Confederacy Chief, Six Nations
N. General, Faithkeeper, Six Nations

President's Committee on Indigenous Issues

Co-Chairs
S. Bowerbank (McMaster University Representative)
Roberta Jamieson (Chief of Six Nations Band Council)

INDEEDURER STUDIES ... Courses

If no prerequisite is listed, the course is open.

INDIG ST 1A03 INTRODUCTION TO INDEEDURER 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 INDEEDURER 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 INTRODUCTION TO INDEEDURER 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, 1A06; or one of CAYUGA 1Z03, 1Z05, INDIG ST 1A06, MO-HAWK 1Z03, 1Z05; or permission of the instructor
Antirequisite: INDIG ST 2A06

INDIG ST 2AA3 INDEEDURER 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, 1A06; or one of CAYUGA 1Z03, 1Z05, INDIG ST 1A06, MO-HAWK 1Z03, 1Z05; or permission of the instructor
Antirequisite: INDIG ST 2AA3

INDIG ST 2B03 HISTORY OF INDEEDURER PEOPLES' SOVEREIGNTY
An examination of North America Indigenous People's political and economic history in the pre-contact, early contact, and colonial era 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, 1A06 (or 1A08); or permission of the instructor
Antirequisite: INDIG ST 2B03

INDIG ST 2C03 CONTEMPORARY INDEEDURER SOCIETIES AND ISSUES
A review of the geographic, cultural and demographic composition of Inuit, First Nations and Metis, and of the major current developments on land, cultural integrity, treaties, economic development, community social development and self-government.
Three hours (lectures and seminars); one term
Prerequisite: INDIG ST 1A03, 1A06 (or 1A08); or permission of the instructor

INDIG ST 2D03 TRADITIONAL INDEEDURER ECOLOGICAL KNOWLEDGE
This course is a study of the ecological teachings of Indigenous peoples and of their relationships with the natural environment in historical and contemporary times.
Three hours (lectures and seminars); one term
Prerequisite: INDIG ST 1A03, 1A06 (or 1A08); or permission of the instructor
Antirequisite: INDIG ST 3C03 if the topic was Traditional Indigenous Ecological Knowledge.

INDIG ST 2E03 ABORIGINAL COMMUNITY AND ECONOMIC DEVELOPMENT
This course will examine the infrastructure of Aboriginal Reserve and urban communities, focusing on the colonial legislation which governs their ability to achieve goals and aspirations conducive to improving standards of living.
Three hours (lectures and seminars); one term
Prerequisite: INDIG ST 1A03, 1A06 (or 1A08); or permission of the instructor

INDIG ST 3C03 STUDY OF IROQUOIS FIRST NATIONS IN CONTEMPORARY TIMES
An intensive examination of the Iroquois First Nations Confederacy and its attempts to maintain its culture, socio-political systems and economic independence.
Three hours (lectures and seminars); one term
Prerequisite: A Level II Indigenous Studies course or permission of the instructor

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: INDIG ST 1A03, 1A03 (or 1A06); or six units of Level I English; or permission of the instructor
Cross-list: ENGLISH 3W03, PEACE ST 3W03

INDIG ST 3E03 CONTEMPORARY NATIVE LITERATURE IN THE UNITED STATES
A study of contemporary works by Native writers in the United States. Native representations of voice, identity, gender, and popular culture will be examined.
Three hours (lectures and seminars); one term
Prerequisite: INDIG ST 1A03, 1A03 (or 1A06); or six units of Level I English; or permission of the instructor
Cross-list: ENGLISH 3X03, PEACE ST 3X03

INDIG ST 3G03 INDIGENOUS CREATIVE ARTS AND DRAMA
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: INDIG ST 2A03, 2AA3 (or 2AA6); or permission of the instructor

INDIG ST 3H03 TRADITIONAL APPROACHES TO HEALING AND WELLNESS (PHILOSOPHY)
This course will examine the Aboriginal concepts of health and wellness. The holistic 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: A Level II Indigenous Studies Course or permission of the instructor
Not open to students with credit in INDIG ST 3CC3 if the topic was Traditional Approaches to Hea11ing and Wellness.

INDIG ST 3HH3 TRADITIONAL APPROACHES TO HEALING AND WELLNESS II (PRACTICAL)

This course will examine the concept of traditional medicines, their histories and their connection to Aboriginal philosophies of wellness (studied in Part I); procedures for procurement and use of the medicines will be addressed and emphasis will be placed on the reasons for efficacy.
Three hours (lectures and seminars); one term
Prerequisite: A Level II Indigenous Studies Course or permission of the instructor
Not open to students with credit in INDIG ST 3CC3 if the topic was Traditional Approaches to Hea11ing and Wellness.

INDIG ST 3I03 INDIGENOUS PEOPLES AND SOCIAL POLICY

Examines the evolution of colonial policies and their impact on Indigenous peoples social structures, socio-economic status and relationship with the government of Canada. The emphasis will be on the decolonization of family and community; assessing how the Indian Act and Child Welfare Act shaped the current First Nations realities and challenges. There will be a focus on gender indigenous analysis of colonialism.
Three hours (lectures and seminars); one term
Prerequisite: A Level II Indigenous Studies Course or permission of the instructor

CAYUGA ...

COURSES

CAYUGA 1Z03 INTRODUCTION TO CAYUGA LANGUAGE AND CULTURE

This course will study the Cayuga language, in its spoken and written forms, in the context of Iroquoian cultural traditions, values, beliefs and customs.
Three hours (lecture and seminars); one term
Antirequisite: CAYUGA 1Z06

CAYUGA 2Z03 INTERMEDIATE CAYUGA

This course expands on the vocabulary and the oral skills for the Cayuga language. In addition, the course reviews the written component of the language.
Three hours (lecture and seminars); one term
Prerequisite: CAYUGA 1Z03 or 1Z06
Antirequisite: CAYUGA 2Z06

MOHAWK ...

COURSES

MOHAWK 1Z03 INTRODUCTION TO MOHAWK LANGUAGE AND CULTURE

This course will study the Mohawk language, in its spoken and written forms, in the context of Iroquoian cultural traditions, values, beliefs and customs.
Three hours (lecture and seminars); one term
Antirequisite: MOHAWK 1Z06

MOHAWK 2Z03 INTERMEDIATE MOHAWK

This course expands on the vocabulary and the oral skills for the Mohawk language. In addition, the course reviews the written component of the language.
Three hours (lecture and seminars); one term
Prerequisite: MOHAWK 1Z03 or 1Z06
Antirequisite: MOHAWK 2Z06

OJIBWE ...

COURSES

OJIBWE 1Z03 INTRODUCTION TO OJIBWE LANGUAGE AND CULTURE

This course will study the Ojibwe language, in its spoken and written forms, in the context of Ojibwe cultural traditions, values, beliefs and customs.
Three hours (lecture and seminars); one term
Antirequisite: OJIBWE 1Z06

OJIBWE 2Z03 INTERMEDIATE OJIBWE

This course expands on the vocabulary and the oral skills for the Ojibwe language. In addition, the course reviews the written component of the language.
Three hours (lecture and seminars); one term
Prerequisite: OJIBWE 1Z03 or 1Z06
Antirequisite: OJIBWE 2Z06

INQUIRY

Note:
These Level I courses unite the expertise of the Faculty's 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

INQUIRY 1H03 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 1S03 INQUIRY IN SCIENCE

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 student's interest.
One hour, term one; Two hours, term two
Prerequisite: Registration in Science I or Mathematics and Statistics I
Enrolment is limited.

INQUIRY 1S53 INQUIRY IN THE SOCIAL SCIENCES

This introduction to the systematic investigation of an issue develops skills that will serve students well in their university careers. Students learn how to formulate questions, gather and interpret evidence, and reach well-considered conclusions, using, as content, a topic central to research in the Faculty of Social Sciences. Topics may vary from session to session.
Three hours; one term
Prerequisite: Registration in Social Sciences I or Kinesiology I

Note:
The following courses are upper level Inquiry Courses offered by the Science Faculty. Each course deals with the systematic investigation of broad themes from various areas of science. Students will work in small groups using an interdisciplinary approach. Normally, only one of the following courses may be taken to satisfy programme requirements for Inquiry Courses. However, students who are not able to register for three units of Inquiry in their own departments may take a maximum of two of the following courses to meet programme requirements.
INQUIRY 3S03  TEACHING INQUIRY (PEER TUTORING)

This course provides an opportunity to learn about the teaching of Inquiry through practical experience as a peer tutor working closely with an inquiry instructor, and through projects investigating some aspects of inquiry in more detail.

Prerequisite: Credit in three units of an inquiry course and permission of the instructor

Antirequisite: INQUIRY 4S03

INQUIRY 4S83  INQUIRY IN SCIENCE II (BIOLOGY)

Three hours (seminars and discussion); one term

Prerequisite: At least three units of Biology and registration in Level IV of an Honours programme in the Faculty of Science other than Biology

Antirequisite: INQUIRY 4SA3, 4SC3, 4SE3, 4SF3, 4SG3, 4SH3, 4SI3

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

INQUIRY 4S83  INQUIRY IN SCIENCE I (CHEMISTRY)

Three hours (seminars and discussion); one term

Prerequisite: At least three units of Chemistry and registration in Level IV of an Honours programme in the Faculty of Science other than Chemistry

Antirequisite: INQUIRY 4SA3, 4SB3, 4SC3, 4SE3, 4SF3, 4SG3, 4SH3, 4SI3

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

INQUIRY 4S83  INQUIRY IN SCIENCE II (GEOSCIENCE)

Three hours (seminars and discussion); one term

Prerequisite: At least three units of Mathematics or Statistics and registration in Level IV of an Honours programme in the Faculty of Science other than Mathematics or Statistics

Antirequisite: INQUIRY 4SA3, 4SB3, 4SC3, 4SE3, 4SF3, 4SG3, 4SH3, 4SI3

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

INQUIRY 4S83  INQUIRY IN SCIENCE II (MATHEMATICS AND STATISTICS)

Three hours (seminars and discussion); one term

Prerequisite: At least three units of Mathematics or Statistics and registration in Level IV of an Honours programme in the Faculty of Science other than Mathematics or Statistics

Antirequisite: INQUIRY 4SA3, 4SB3, 4SC3, 4SE3, 4SF3, 4SG3, 4SH3, 4SI3

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

INQUIRY 4S83  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 programme in the Faculty of Science other than Physics

Antirequisite: INQUIRY 4SA3, 4SB3, 4SC3, 4SE3, 4SF3, 4SG3, 4SH3, 4SI3

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

INQUIRY 4S83  INQUIRY IN SCIENCE II (PSYCHOLOGY)

Three hours (seminars and discussion); one term

Prerequisite: At least three units of Psychology and registration in Level IV of an Honours programme in the Faculty of Science other than Psychology

Antirequisite: INQUIRY 4SA3, 4SB3, 4SC3, 4SE3, 4SF3, 4SG3, 4SI3

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

INQUIRY 4S83  INQUIRY IN SCIENCE II (RADIATION AND LIFE)

Three hours (seminars and discussion); one term

Prerequisite: Registration in Level IV of an Honours programme in the Faculty of Science

Antirequisite: INQUIRY 4SA3, 4SB3, 4SC3, 4SE3, 4SF3, 4SG3, 4SH3

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

ITALIAN

(SEE MODERN LANGUAGES AND LINGUISTICS, ITALIAN)

JAPANESE AND JAPANESE STUDIES

(SEE MODERN LANGUAGES AND LINGUISTICS, JAPANESE)

JEWISH STUDIES

(SEE INTERDISCIPLINARY MINORS AND THEMATIC AREAS)

KINESIOLOGY

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

Inver Wyne Centre, Room 203

Ext. 24462

Faculty as of January 15, 2002

Acting Chair

Nick Cipriano

Associate Chair (Undergraduate Affairs)

Sue Ingles

Professors

Cameron J. Bitkin/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

Audrey Hicks/B.P.E., M.Sc., Ph.D. (McMaster)
Timothy D. Lee/B.H.K., M.A. (Windsor), Ph.D. (Louisiana State)
Neil McCartney/B.Ed. (Exeter), Ph.D. (McMaster)
Digby G. Saile/B.P.H.E. (Toronto), M.A. (Western Ontario), Ph.D. (Toronto)

Janet L. Starkes/B.A. (Western Ontario), M.Sc., Ph.D. (Waterloo)

Associate Professors

Nancy B. Bouchier/B.A., M.A., Ph.D. (Western Ontario)
Nick Cipriano/B.P.H.E., M.Sc. (Lakehead)
James J. Dowling/B.H.K., M.H.K. (Windsor), Ph.D. (Waterloo)
Robert J. Henderson/B.P.E. (McMaster) M.A., Ph.D. (Alberta)

Enrolment Courses

Sue Ingls/B.P.E., M.A. (Alberta), Ph.D. (Ohio State)
Mary E. Keys/B.A., M.A. (Western Ontario), Ph.D. (Ohio State)
Kathleen A. Martin/B.Sc. (Toronto), M.A. (Western Ontario), Ph.D. (Waterloo)
Mark A. Tarnopol/B.P.E., M.D., Ph.D., F.R.C.P. (C) (McMaster)
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)
Martin J. Gibala/B.H.K. (Windsor), M.Sc. (McMaster), Ph.D. (Guelph)
Maureen J. MacDonald/B.Sc. (Acadia), M.Sc., Ph.D. (Waterloo)
Stuart M. Phillips/B.Sc., M.Sc. (McMaster), Ph.D. (Waterloo)

Associate Members

Oded Bar-Ori/Pediatrics) M.D. (Hebrew Univ., Jerusalem)
Vicki Galea/(Rehabilitation Science) B.Sc., M.Sc. (Waterloo), Ph.D. (McMaster)

A.J. McComas/Physiotherapy) B.Sc., M.B., B.S. (Durham), F.R.C.P. (C)
Robert S. McAuley/Physiotherapy) B.Sc., M.B., M.D. (Western Ontario), Ph.D. (McMaster)
Michael Pierniowski/(Rehabilitation Science) B.Sc., M.Sc. (Waterloo), Ph.D. (Simon Fraser)

Laurie Wishart/(Rehabilitation Science) Dip.P.KOT, 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 1X06 is available to all students.

4. The following courses are available for elective credit for students enrolled in Level III or above of a non-Kinesiology programme: KINESIOLOGY 3D03, 3F03, 3I03, 3L03, 3M03, 3P03, 3S03, 3T03, 3Y03, 4D03, 4G03, 4I03, 4M03, 4T03, 4U03 and 4V03. Enrolment for such students is limited and places are assigned on a first come basis.

5. KINESIOLOGY 3E03 and 4P03 may be used to satisfy Psychology requirements for Kinesiology students pursuing a Minor In Psychology.

6. KINESIOLOGY 3G03 and 3S03 may be used to satisfy Health Studies requirements for Kinesiology students pursuing a Minor in Health Studies.

Webpage last updated: 1/15/2002
Courses

KINESIOL 1A06  HUMAN ANATOMY AND PHYSIOLOGY
Macroscopic and microscopic anatomy and physiology of the skeletal, muscular, nervous, cardiovascular, and respiratory systems. The basic anatomy of the integumentary, immune, digestive, endocrine, and urogenital systems will also be presented.
Three hours (lectures, labs); two terms
Prerequisite: Registration in Kinesiology
Antirequisite: BIOLOGY 1J03, 4G06, HTH SCI 1H03, 1H3S, 2F03, 2FF3, 2L03, 2L3, KINESIOL 1X06

KINESIOL 1E03  PSYCHOMOTOR BEHAVIOUR
The behavioural and psychological principles underlying motor control and motor learning.
Three hours (lectures, labs); one term
Prerequisite: Registration in Kinesiology

KINESIOL 1H03  SPORT, HUMAN MOVEMENT AND CULTURE
Critical examination of contemporary issues and problems of sport in Canadian Society.
Three hours (lectures); three terms
Prerequisite: Registration in Kinesiology
Antirequisite: KINESIOL 2B03

KINESIOL 1K03  INTRODUCTION TO KINESIOLOGY
This experiential course gives students an insight into the discipline of Kinesiology. Lectures and practice focus on human movement, holistic health options, team-building, faculty research and career options. Includes CPR/First Aid.
Two hours; one term
Prerequisite: Registration in Kinesiology

KINESIOL 1X06  HUMAN ANATOMY AND PHYSIOLOGY
Macroscopic and microscopic anatomy and physiology of the skeletal, muscular, nervous, cardiovascular, and respiratory systems. The basic anatomy of the integumentary, immune, digestive, endocrine, and urogenital systems will also be presented.
Three hours (lectures, labs); two terms
Completion of OAC Biology (or Biology U) is strongly recommended.
Antirequisite: BIOLOGY 1J03, HTH SCI 1H03, 1H3S, 2F03, 2FF3, 2L03, 2L3, KINESIOL 1A06
Not open to students registered in a Kinesiology programme, Science I, the Bachelor of Health Sciences (Honours) programme or to students with credit or registration in BIOLOGY 4G06.
Enrolment is limited.

KINESIOL 2A03  BIOMECHANICS
An introduction to basic mechanical principles and concepts as applied to human physical activity and the musculoskeletal system.
Three hours (lectures, lab); one term
Prerequisite: KINESIOL 1A06 and registration in Level II of a Kinesiology programme

KINESIOL 2C06  PHYSIOLOGY OF EXERCISE
The effects of exercise on the physiological systems, and the application of physiological principles to human exercise performance.
Three hours (lectures, labs); two terms
Prerequisite: KINESIOL 1A06 and registration in Level II of a Kinesiology programme

KINESIOL 2G03  HEALTH PSYCHOLOGY
An introduction to health psychology issues including stress, exercise, weight control and diet, health promotion, addictions and coping with illness.
Three hours (lectures); one term
Prerequisite: Registration in Level II of a Kinesiology programme
Antirequisite: HTH SCI 2J03

KINESIOL 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 practise such as physical education and sports medicine.
Three hours (lectures, tutorials); one term
Prerequisite: Registration in Level II of a Kinesiology programme
Antirequisite: KINESIOL 1D03

KINESIOL 3A03  HISTORY OF PHYSICAL CULTURE AND SPORTS MEDICINE
Selected topics in the social and cultural history of physical culture and sports medicine in the Western World, with a particular emphasis on nineteenth and twentieth century developments in North America.
Three hours (lectures); one term
Prerequisite: Registration in Level III or above of any Kinesiology or History programme
Enrolment is limited.

KINESIOL 3A03  BIOMECHANICS II
Study of kinematics and kinetics of human movement, including electro-myography, fluid and tissue mechanics with applications.
Three hours (lectures, lab); one term
Prerequisite: KINESIOL 1A06, 2A03 and registration in Level III or above of a Kinesiology programme
Antirequisite: KINESIOL 2A06

KINESIOL 3B03  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: KINESIOL 1A06, 2G03
Corequisite: Registration in KINESIOL 3B03
Students who do not successfully complete the required KINESIOL 3B03 placement will forfeit credit in KINESIOL 3B03.

KINESIOL 3C03  STATISTICS
Research design and descriptive and inferential statistics in Kinesiology.
Three hours (lectures, labs); one term
Prerequisite: Registration in Level III or above of a Kinesiology programme

KINESIOL 3D03  FOUNDATIONS OF OUTDOOR EXPERIENTIAL EDUCATION
An analysis of curricular programs in O.E.E. including, environmental, earth, and eco-political education; expeditionary and adventure based learning; eco-psychology and eco-tourism.
Prerequisite: Registration in Level III or above
Antirequisite: KINESIOL 4D03
This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology programme. However, enrolment for such students is limited.

KINESIOL 3E03  NEURAL CONTROL OF HUMAN MOVEMENT
Neuromuscular control underlying human movement. Topics include basic neurophysiology, mechanisms of sensation, reflexes, voluntary movement and theories of motor control.
Three hours (lectures); one term
Prerequisite: KINESIOL 1A06, 1E03 and registration in Level III or above of a Kinesiology programme; or PSYCH 2F03 and registration in Level III or above of an Honours Psychology programme and permission of the instructor. (See Note 5 above.)

KINESIOL 3F03  MANAGEMENT CONCEPTS AND PROGRAMME 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/programme 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 programme. However, enrolment for such students is limited.

KINESIOL 3H03  HISTORICAL INTERPRETATIONS OF SPORT AND PHYSICAL ACTIVITY
A survey examining major themes and issues in sport history from Ancient Greece to the modern day.
Two lectures, one seminar; one term
Prerequisite: Registration in Level III or above of any Kinesiology or History programme
Enrolment is limited.
KINESIOLOGY

KINESIOLOGY 3L03  HISTORY OF MODERN DANCE
A survey of trends in modern dance including modern dance 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
Antirequisite: KINESIOLOGY 4L03
This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology programme. However, enrolment for such students is limited.

KINESIOLOGY 3K03  SPORTS INJURIES
Common athletic injuries will be discussed under the following headings: mechanism of injury, prevention, preliminary assessment, tissue healing, basic taping techniques, and emergency care.
Two lectures, one lab; one term
(Aproximately $30.00 will be charged for supplies used in labs.)
Prerequisite: KINESIOLOGY 1A06, 2C06
Enrolment is limited. Priority will be given to Level IV Kinesiology students.

KINESIOLOGY 3L03  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: COMMERCIAL 2B03
This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology programme.
Enrolment is limited.

KINESIOLOGY 3M03  FOUNDATIONS OF ATHLETIC COACHING
An examination of the coaching process with emphasis placed on the behavioural aspects. Topics include leadership styles and decision making, motivation in sport, ethics in coaching, group cohesion and psychological considerations for youth in sport.
Three hours (lectures and discussion); one term
Prerequisite: One of KINESIOLOGY 1H03, 2B03, SOCIOLOGY 1A06 and registration in Level III or above
Not open to students with credit or registration in SOCIOLOGY 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 programme. However, enrolment for such students is limited.

KINESIOLOGY 3S53  BODY, MIND, SPIRIT
An exploration of the relationship between body, mind and spirit from the standpoint of eastern and western religious and philosophical thought with special reference to current perspectives on human potential. Course work includes experiential 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 programme.
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 hour (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 programme.
(Approximate cost of field component is $30.00.)

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: KINESIOLOGY 1A06 or 2X06; 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 programme. However, enrolment for such students is limited.

KINESIOLOGY 3Z03  HUMAN MOVEMENT PRACTICUM
Experiential learning in three movement activities selected from team games, individual sports, indoor and outdoor recreational activities, body awareness and dance. (depending on the activity, there may be a fee charged for course materials.)
Prerequisite: Registration in Level III or above of a Kinesiology programme
Antirequisite: KINESIOLOGY 3Z23
Enrolment is limited.

KINESIOLOGY 3Z23  HUMAN MOVEMENT PRACTICUM
Experiential learning in three movement activities selected from team games, individual sports, indoor and outdoor recreational activities, body awareness and dance. (Depending on the activity, there may be a fee charged for course materials.)
Prerequisite: Registration in Level III or above of a Kinesiology programme
Antirequisite: KINESIOLOGY 3Z03
Enrolment is limited.

KINESIOLOGY 4A06  ADVANCED BIOMECHANICS
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
Enrolment 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

KINESIOLOGY 4C03  CARDIO-RESPIRATORY AND METABOLIC REGULATION DURING EXERCISE AND TRAINING
An in-depth analysis of the cardiorespiratory and metabolic factors which regulate human physical performance, with an emphasis on the physiological and biochemical integration that occurs during exercise and following training.
Three hours (lectures, labs); one term
Prerequisite: KINESIOLOGY 2C06
Enrolment is limited.

KINESIOLOGY 4C3  NEUROMUSCULAR EXERCISE PHYSIOLOGY
Neuromuscular physiology of strength, power, and speed performance, including adaptations to training and training methods.
Three hours (lectures, labs); one term
Prerequisite: KINESIOLOGY 2C06
Enrolment is limited.

KINESIOLOGY 4D03  OUTDOOR EDUCATION
An examination of skills, pedagogy and perspectives of outdoor (expeditions) education. This course involves a 9 day canoe/camping field component before classes start.
Three hours (lectures, tutorials, field experiences); one term
Prerequisite: Registration in Level III or above of a Kinesiology programme; or registration in Level III or above of a non-Kinesiology programme and permission of the instructor
This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology programme.
(Approximate cost of field component is $350.00.)
Enrolment is limited.

KINESIOLOGY 4E03  ADVANCED PLACEMENT
Students take part in a supervised practical experience that links classroom knowledge to professional practice. Placements are offered in aging, cardiac rehabilitation, 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, 3K03, 3M03, 4B03, 4D03, 4I03, 4JJ3, 4SS3; and completion of one of the corresponding non-credit placements; and registration in Level IV of an Honours Kinesiology program; and permission of the Associate Chair and instructor
KINESIOL 4F03  SELECTED TOPICS IN KINESIOLOGY
Each year the Department of Kinesiology offers a number of different courses under this category reflecting topics of contemporary interest with emphasis upon current theory and research. Students are advised to contact the Department of Kinesiology, Undergraduate Office, for descriptions of the courses offered during the current academic year.
Three hours (lectures); one term
Prerequisite: Registration in Level III or above of a Kinesiology programme
Enrolment is limited for some topics.

KINESIOL 4F03  SELECTED TOPICS IN KINESIOLOGY II
2002-2003: Physiological Consequences of Spinal Cord Injury and Rehabilitation Techniques
Prerequisite: KINESIOL 4F03
Three hours (lectures); one term
Prerequisite: Registration in Level III or above of a Kinesiology programme
Enrolment is limited.

KINESIOL 4G03  PEDAGOGY OF CONTEMPORARY AND TRADITIONAL WILDERNESS TRAVEL
An examination of Canadian winter travel skills (traditional and contemporary), travel literature and pedagogy of travel guiding. Part of the course requirement is a mandatory five-day traditional winter travel experience during the February mid-term recess.
Three hours (lectures, tutorials, field experiences); one term
Prerequisite: KINESIOL 4G03 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 programme.
(Approximate cost of field component is $80.00.)
Enrolment is limited.

KINESIOL 4H03  PHYSICAL ACTIVITY AND LIFESTYLE INFLUENCES ON CHRONIC DISEASE
The relationship between physical activity and associated lifestyle influences on selected chronic diseases is examined from a biological perspective.
Three hours (two lectures, poster presentation); one term
Prerequisite: KINESIOL 1A06, 2C06, 2G06

KINESIOL 4I03  EXERCISE PSYCHOLOGY
A review and evaluation of research from the areas of exercise psychology and behavioural medicine, and interventions used to promote physical activity participation.
Three hours (lectures); one term
Prerequisite: KINESIOL 2G03 and registration in Level III or above of a Kinesiology programme
Not open to students with credit in KINESIOL 4F03 if the topic was Exercise Psychology.
Enrolment is limited.

KINESIOL 4J03  FUNCTIONAL ANATOMY
A hands-on applied study of functional anatomy for independent learners. The focus is on the structure and function of the oesophagus, articulart, muscular, and supportive tissues of the human body as it relates to sport and activity.
Four hours (lectures, lab); one term
Prerequisite: KINESIOL 1A06, 2C06 and registration in Level III or above of a Kinesiology programme
Prerequisite (Beginning 2003-2004): KINESIOL 1A06, 2C06, 3K03 and registration in Level III or above of a Kinesiology programme
Not open to students with credit in KINESIOL 4F03 if the topic was Functional Anatomy.
(Approximately $35.00 will be charged for supplies used in labs.)
Enrolment is limited. Priority will be given to Level IV Kinesiology students.

KINESIOL 4J03  DANCE IN CONTEMPORARY SOCIETY
A survey of topics pertaining to the dance industry and the lifestyles of dancers in contemporary society. Content includes dance careers, administration, production, technology, education, health and special populations.
Three hours (lectures, seminars); one term
Prerequisite: Registration in Level III or above
Antirequisite: KINESIOL 4J03
This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology programme.
Enrolment is limited.

KINESIOL 4K03  PERCEPTUAL-MOTOR BEHAVIOUR
An advanced examination of current topics regarding perceptual-motor behaviour with particular reference to everyday experiences.
Three hours (lectures, labs); one term
Prerequisite: KINESIOL 1E03 and registration in Level III or above of a Kinesiology programme
Enrolment is limited.

KINESIOL 4K03  FUNDAMENTALS OF REHABILITATION
This course will outline the basic principles of rehabilitation and explore the more common techniques and modalities. Application of principles will be explored in a number of impairments including, acquired brain injury, amputees, spinal cord injury, neuromuscular disease, stroke, etc.
Three hours (lectures, lab); one term
Prerequisite: KINESIOL 1A06, 2C06 and registration in Level III or above of a Kinesiology programme
Enrolment is limited. Priority will be given to Level IV Kinesiology students.

KINESIOL 4L05  ADVANCED TOPICS IN CANADIAN SPORT HISTORY
An examination of selected topics and themes in the historical development of sport and physical activity in nineteenth and twentieth century Canada and supervised research involving scholarly secondary and primary source data.
Three hours (seminar); two terms
Prerequisite: KINESIOL 3A03 or 3H03, and registration in Level III or above of a Kinesiology programme; or registration in Level III or above of an Honours History programme
Not open to students with credit in KINESIOL 4F03 if the topic was Canadian Sport History.

KINESIOL 4M03  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 programme.
Enrolment is limited.

KINESIOL 4N03  ATHLETIC COACHING: TRAINING AND PLANNING PERSPECTIVES
An analysis of factors that facilitate sport performance at the elite level. Topics include periodization, talent identification, environmental factors, optimal arousal and scouting.
Three hours (lectures); one term
Prerequisite: KINESIOL 3M03

KINESIOL 4P03  THE BRAIN AND HUMAN MOVEMENT
A study of the role of the brain in movement control in normal and special populations.
Three hours (lectures, labs); one term
Prerequisite: KINESIOL 3E03; and registration in Level III or above of a Kinesiology or Honours Psychology programme. (See Note 5 above.)
Enrolment is limited.

KINESIOL 4Q03  PAEDIATRIC EXERCISE PHYSIOLOGY
Physiologic aspects of physical activity in children and adolescents in health and disease.
Two lectures, one lab; one term
Prerequisite: KINESIOL 2C06, 3D03
Enrolment is limited.

KINESIOL 4R03  INDEPENDENT RESEARCH
Investigation of a selected theoretical or applied problem mutually acceptable to instructor and student.
Prerequisite: Registration in Level IV of an Honours Kinesiology programme and permission of the Associate Chair and instructor
Antirequisite: KINESIOL 4R03

KINESIOL 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.
Prerequisite: Registration in Level IV of an Honours Kinesiology programme and permission of the Associate Chair and instructor by April 30
Antirequisite: KINESIOL 4R03
KINESIOLOGY

KINESIOL 4503 PHYSICAL ACTIVITY IN CHRONIC HEALTH IMPAIRMENTS
Focus on specific health impairments prevalent in our society and the various benefits/risks of physical activity in these populations.
Three hours (two lectures, one seminar); one term
Prerequisite: KINESIOL 3B03, 3P00
Enrolment is limited.

KINESIOL 4S33 HUMAN AGING: BIOLOGICAL AND LIFESTYLE INFLUENCES
The interrelationship between biological processes of aging and associated lifestyle factors (e.g., exercise/inactivity) will be explored in various human systems.
Three hours (lectures); one term
Prerequisite: KINESIOL 1A06, 2C06, 2G03

KINESIOL 4T03 GENDER, SPORT AND LEISURE
The influence of sport and leisure on the social construction of masculinity and femininity.
Three hours (seminars); one term
Prerequisite: One of KINESIOL 1H03, 2B03, SOCIOL 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 programme.
Enrolment is limited.

KINESIOL 4U03 ADVENTURE BASED LEARNING
Adventure based learning foundations, philosophy, and pedagogy will be examined through a combination of practices and theories relevant to contemporary educational issues.
Lectures, tutorials, and field experiences; one term
(Average field component cost is $140.00)
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 programme.
Enrolment is limited.

KINESIOL 4V03 HUMAN FACTORS AND ERGONOMICS
The abilities and limitations of human performance are examined with respect to how individuals interact with objects in their environment.
Three hours (lectures, labs); one term
Prerequisite: KINESIOL 1A06, 1E03, 2A03
Enrolment is limited.

KINESIOL 4W03 POSTURE AND GAIT
An examination of neural and mechanical factors in posture and gait control in normal and special populations. The format will be lectures, labs and group discussion of case studies. The first part of the course will include neuroanatomy labs.
Three hours (lectures, labs); one term
Prerequisite: KINESIOL 1A06, 2A03, 3E03
Enrolment is limited.

KINESIOL 4X06 THEORY AND PRACTICE IN HEALTH PROMOTION AND 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
Prerequisite: Registration in Level IV of an Honours Kinesiology programme; and two of KINESIOL 3B03, 4B03, 4I03, 4J03, 4SS3; and a minimum G.A. of 7.0; and permission of the instructor
Enrolment is limited.

KINESIOL 4Y03 NUTRITION AND ERGONOMIC AIDS
Emphasis on biochemical mechanisms behind the current fads and myths surrounding the use of popular ergogenic aids. Ergonomic aids relating to human physical performance and health will be covered.
Four hours (lectures, tutorials, stand-alone presentations and a research paper); one term
Prerequisite: KINESIOL 3Y03 and registration in Level III or above of a Kinesiology programme
Not open to students with credit in KINESIOL 4F03 if the topic was Nutrition and Ergonomic Aids
Enrolment is limited. Priority will be given to Level IV Kinesiology students.

KINESIOL 4Z03 SELECTED TOPICS IN SPORT MANAGEMENT
A senior level seminar course related to management theory and practice in sport, recreation and physical activity.
Three hours (seminars and presentations); one term
Prerequisite: KINESIOL 3F03, and COMMERCE 2BA3 or KINESIOL 3L03; 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 programme. However, enrolment for such students is limited.

NON-CREDIT PLACEMENTS...

KINESIOL 3B00 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 programmes in a variety of community settings.
Prerequisite: KINESIOL 3B03
This placement must be completed in conjunction with KINESIOL 3B03. Students who do not successfully complete this placement will forfeit credit in KINESIOL 3B03.

KINESIOL 3F00 MANAGEMENT PLACEMENT
This placement is designed to provide practical experience in applied management concepts in a variety of community settings.
This placement may be completed in conjunction with KINESIOL 3F03.

KINESIOL 3P00 DANCE PLACEMENT
This placement is designed to provide practical experience in dance production, choreography and improvisation.
This placement may be completed in conjunction with KINESIOL 3J03 or 4J03.

KINESIOL 3K00 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 programme; and a grade of at least B- in KINESIOL 3K03; and valid CPR/First Aid certification; and permission of the instructor
Enrolment is limited.

KINESIOL 3M00 COACHING PLACEMENT
This placement is designed to apply the principles and theories of athletic coaching in a practical setting. The student will coach an athletic team for one season.
This placement may be completed in conjunction with KINESIOL 3M03 or 4N03.

KINESIOL 4D00 OUTDOOR EDUCATION PLACEMENT
This placement is designed to allow the student to experience a variety of outdoor education activities.
This placement may be completed in conjunction with KINESIOL 4D03.

KINESIOL 4F00 HEALTH PROMOTION AND REHABILITATION PLACEMENT
Supplements classroom learning of the major issues affecting physical activity in the older adult, in patients undergoing cardiac rehabilitation and in those with spinal cord injury. Students serve as exercise leaders in the Centre for Health Promotion and Rehabilitation.
This placement may be completed in conjunction with one of KINESIOL 3B03, 4B03, 4I03, 4S03 or 4SS3.

LABOUR STUDIES

WEB ADDRESS: http://www.soscsc.mcmaster.ca/lbstr/

Kenneth Taylor Hall, Room 717
Ext. 24692

Faculty as of January 15, 2002

Director
W. Lewchuk

Professor
W. Lewchuk/B.A., M.A. (Toronto), Ph.D. (Cambridge)

Associate Professors
R. Storey/B.A. (Toronto), M.A. (Dalhousie), Ph.D. (Toronto)
D. Wells/B.A. (Western Ontario), M.A. (British Columbia), Ph.D. (Toronto)
C. Yates/B.A. (Winnipeg), M.A. (Queen’s), Ph.D. (Carleton)

Assistant Professors
D. Barnes/B.S.W. (Carleton), M.S.W. (Carleton), Ph.D. (Toronto)
G. McElligott/B.A., M.A., (Carleton), Ph.D. (York)
The following courses may be taken for elective credit by qualified students registered in any programme. However, enrolment for such students is limited and permission of the instructor is required.

**LABR ST 2A03**  
Trade Unions

**LABR ST 2C03**  
Theoretical Foundations of the Labour Movement

**LABR ST 2D03**  
Different Labours, Different Voices

**LABR ST 3A03**  
Economics of Labour Market Issues

**LABR ST 3C03**  
Labour Law and Policy

**LABR ST 3D03**  
Occupational Health and Safety

**LABR ST 3E03**  
Women, Work and Trade Unionism

**LABR ST 3F03**  
Selected Topics in Labour Studies

**LABR ST 3G03**  
Economic Restructuring and Work Organization

The Honours B.A. Programme and the B.A. Programme in Labour Studies are supervised and coordinated by an Interdisciplinary Labour Studies Committee.

### Courses

If no prerequisite is listed, the course is open.

**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 1203**  
WORK, WORKERS AND UNIONS IN A GLOBAL ECONOMY

An introduction to major issues in the field of Labour Studies. Topics will include the nature of work, technology, occupational health and safety, labour-management relations and the role of government in a global context.

Lectures and discussion; one term

Antirequisite: LABR ST 1A03

**LABR ST 2A03**  
TRADE UNIONS

An examination of trade unions and their economic and social environment. Topics may include collective bargaining, labour-state relations, internal union decision-making processes and public sector unions.

Lectures and discussion; one term

Prerequisite: Registration in a Labour Studies programme or permission of the instructor

Antirequisite: LABR ST 2A06

**LABR ST 2B03**  
SOCIAL WELFARE I

An examination of social welfare policy and the income security system in Canada in historical perspective.

Lectures and discussion; one term

Prerequisite: Registration in a Labour Studies programme

Cross-list: SOC WORK 2B03.

Students in a Labour Studies programme must register for this course as LABR ST 2B03.

**LABR ST 2BB3**  
SOCIAL WELFARE II

An examination of particular social problems and the institutional arrangements intended to address them.

Lectures and discussion; one term

Prerequisite: LABR ST 2B03 and registration in a Labour Studies Programme

Corequisite: Must be taken in the same academic session as LABR ST 2B03.

Cross-list: SOC WORK 2BB3

**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 programme or permission of the instructor

Antirequisite: LABR ST 1B03

**LABR ST 2D03**  
DIFFERENT LABOURS, DIFFERENT VOICES

An overview of the ways in which people's changing experiences of work are shaped by gender, race, class and culture in Canada and the wider global context.

Lectures and discussion; one term

Prerequisite: Registration in a Labour Studies programme or permission of the instructor

**LABR ST 2I06**  
THE SOCIOLOGY OF ORGANIZATIONS

A theoretical and empirical analysis of formal and informal organizational structures and processes in the major sectors of modern industrial society.

Lectures and discussion; two terms

Prerequisite: SOCIO 1A06 and registration in a Labour Studies programme

Cross-list: SOCIO 2I06

Antirequisite: LABR ST 2I03, 3I03, SOCIO 2I03

**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 programme; or permission of the instructor

Cross-list: ECON 2A03

**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 programme

Cross-list: ECON 2T03

**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 programme; 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 programme or permission of the instructor

Cross-list: HEALTHST 3C03

Generally offered in alternate years.

**LABR ST 3E03**  
WOMEN, WORK AND TRADE UNIONISM

An examination of the historical and contemporary relations between women and work, and women and trade 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 programme; 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 programme; or permission of the instructor

LABR ST 3F03 may be repeated, if on a different topic, to 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 programme; or permission of the instructor
Antirequisite: LABR ST 3A03

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 programme
Antirequisite: LABR ST 4A09

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 programme
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 4B03 and registration in Level III or IV of a Labour Studies programme
Cross-list: COMMERCE 4G03

LABR ST 4D03  COMPARATIVE INDUSTRIAL RELATIONS

A discussion of industrial relations, policies and practices in several selected countries. Topics will include the development, structure, objectives and strategies of labour and management organizations.

Lectures and discussion; one term
Prerequisite: Registration in Level III or IV of a Labour Studies programme
Cross-list: COMMERCE 4H09

LATIN

(SEE CLASSICS, LATIN)

LINGUISTICS

(SEE MODERN LANGUAGES AND LINGUISTICS, LINGUISTICS)

MANUFACTURING ENGINEERING

(SEE MECHANICAL ENGINEERING, MANUFACTURING ENGINEERING)

MANUFACTURING TECHNOLOGY

John Hodgins Engineering Building, Room A215
Ext. 27013

Note:

Manufacturing Technology courses are open only to students registered in the Bachelor of Technology Degree Programme in Manufacturing Engineering Technology and are subject to prerequisite requirements.

Courses

MAN TECH 1CD3  ADVANCED CADD

Design cycle; graphics workstations; representation methods; Brep, CSG; shape then size modelling-profiles, relational dimensioning; libraries; assemblies; mechanism design; IGES/STEP; hardware, software, graphics, networking.

One lecture, one lab (two hours); one term
Corequisite: ENG TECH 1PG3

MAN TECH 1D3  INDUSTRIAL ENGINEERING

Production and operations management; decision making tools; forecasting; strategies and capacity; location, operations layout and aggregate planning, inventory management and JIT tactics; material requirements; project management.

Three lectures; one term

MAN TECH 1TF3  THERMO FLUIDS I

Thermodynamic principles; steam plant cycles; heat engines; gas and steam turbine cycles; refrigeration and heat pumps; air conditioning; condensation; transient systems; corrosion; radiation; heat exchangers.

Three lectures, one tutorial; one term
Corequisite: ENG TECH 1MA3

MAN TECH 2MD3  MACHINE DYNAMICS

Transient and steady state vibrations of single degree-of-freedom systems, natural and forced vibrations; lumped mass systems—multidegree of freedom; vibrations of continuous systems; balancing and critical speeds of shafts.

Three lectures; one term
Prerequisite: ENG TECH 1MA3

MAN TECH 2MT3  MACHINING TECHNOLOGY

Metal removal; chip formation; tool life; cutting temperature, fluids and forces, power, optimization, finish, tolerances; CNC machine tools; structures and drives; control; machineability; complex tools; non-traditional processes.

Three lectures, one lab (one hour); one term
Prerequisite: ENG TECH 1MA3

MAN TECH 3FB3  FABRICATION TECHNOLOGY

Welding: fuel gases, cutting and brazing; arc welding methods; welding joints, types of welds; laser beam welding and electron beam welding; general safety; casting: pattern and mould types design, die casting, centrifugal casting, defects, heat treatment; steel ingots, continuous casting, wrought structure, furnaces.

Two lectures, one lab (two hours); one term
Prerequisite: ENG TECH 1PG3
Corequisite: MAN TECH 2MT3

MAN TECH 3FT3  FORMING TECHNOLOGY

Plasticity theory, yield surfaces, kinematic hardening, anisotropic plasticity and slip line field models; forming processes: plasticity models; process optimization; fabrication for metal and non-metallic materials including composites and polymers.

Three lectures, one lab (one hour); one term
Prerequisite: ENG TECH 1MA3

MAN TECH 3FM3  CIM AND FLEXIBLE MANUFACTURING

Linear and circular interpolation, manual NC programming—G codes; CAM software; computer vision; coordinate measuring machines (CMM), touch probes; manipulator kinematics, dynamics and trajectory generation; robot programming.

Two lectures, one lab (two hours); one term
Prerequisite: ENG TECH 1PG3
Corequisite: MAN TECH 2MT3

MAN TECH 3FT3  FORMING TECHNOLOGY

Plasticity theory, yield surfaces, kinematic hardening, anisotropic plasticity and slip line field models; forming processes: plasticity models; process optimization; fabrication for metal and non-metallic materials including composites and polymers.

Three lectures, one lab (one hour); one term
Prerequisite: ENG TECH 1MA3

MAN TECH 3MT3  MECHATRONICS

Sensors; actuators: DC, AC and stepper motors, actuators; programmable controllers; modelling of dynamic systems. System identification; computer simulation and control; computer interfacing. Analog to digital conversion. Communication interfaces; case studies.

Three lectures, one lab (one hour); one term
Prerequisite: ENG TECH 2OT3

MAN TECH 3ST3  STATISTICAL PROCESS AND QUALITY CONTROL

Statistical methods; statistical process control; control charts for variables, rational sampling and attributes; experimental design; two level factorial designs; Taguchi’s approach to quality of design; ISO 9000; reliability and life testing; management of quality.

Three lectures; one term
Prerequisite: ENG TECH 1MA3
MATERIALS SCIENCE AND ENGINEERING

WEB ADDRESS: http://mse.mcmaster.ca/
John Hodgins Engineering Building, Room 357
Ext. 24295

Faculty as of January 15, 2002

Chair
George C. Weatherly

University Professors
Gary R. Purdy/M.Sc. (Alberta), Ph.D. (McMaster), D.H.C. (Grenoble),

Professors
In Ferrous Metallurgy
Gyan P. Johari/B.Sc., M.Sc., Ph.D. (Garakhpur), D.H.C. (Lyon), F.R.S.C.
Adrian Kitab/B.Sc. (McMaster), Ph.D. (Cornell), P.Eng.
Anthony Petric/B.Sc. (Toronto), Ph.D. (Ecole Polytechnique), P.Eng.
David S. Wilkinson/B.A.Sc. (Toronto), Ph.D. (Cambridge), F.C.I.M.,
Shipling Zhu/B.Eng. (Zhejiang), Ph.D. (McMaster)

Adjunct Professors
Yves Brechet/D.E.A. (Ecole Polytechnique), Ph.D. (Grenoble)
C.H. Chee/B.A.Sc. (Ottawa), M.A.Sc., Ph. D. (Toronto)
Zoran D. Popovic/Dipl.Eng., M.Sc. (Belgrade), Ph.D. (McMaster)
Barry A. Stratthde/B.A.Sc., Ph.D. (Toronto), P.Eng.
S.V. Murti Subramanian/B.Sc. (Bangras), M.Met., Ph.D. (Sheffield)
K.T. Conlon/National Research Council, Ph.D. (McMaster)

Associate Professors
Ken S. Coley/B.Sc., (Strathclyde), Ph.D., D.I.C. (Imperial College, London)
Gu Xu/M.Sc., Ph.D. (Phillips, D.E.S. (Colchester)
Geoffrey Brooks/B.Eng. (RMIT), B.A. (Swinburne), Ph.D. (Melbourne)
Gianluigi Bolton/B.Eng.,Ph.D. (Ecole Polytechnique)

Assistant Professor
Marek Niewczas/M.Sc., Ph.D. (Krakow)

Courses
If no prerequisite is listed, the course is open.

MATLS 1A03 INTRODUCTION TO MATERIALS
Application of chemistry and physics to the production of metals, ceramics, polymers and amorphous and opto-electronic materials. Control of mechanical and electrical properties by change of microscopic and atomic level structures.
Two lectures, one tutorial; first term
Prerequisite: Registration in or completion of Science
Antirequisite: Registration in the Faculty of Engineering, or ENGINEER 2E03, 2003, 2004, MATLS 2B03

MATLS 2B03 THERMODYNAMICS OF MATERIALS I
Thermodynamics of gases and critical phenomena. The three laws of thermodynamics applied to materials processing; reactions in gases and condensed phases; Ellingham Diagrams. An introduction to statistical thermodynamics.
Three lectures, one tutorial; first term
Prerequisite: CHEM 1A03 or 1E03
Antirequisite: MATLS 2B06

MATLS 2B03 THERMODYNAMICS OF MATERIALS II
Solution thermodynamics, reactions and equilibria, Gibbs phase rule; aqueous electrochemistry.
Three lectures, one tutorial; second term
Prerequisite: CHEM 1A03 or 1E03; and MATLS 2B03
Antirequisite: MATLS 2B05

MATLS 2H03 MEASUREMENTS AND COMMUNICATION
Basic experimental skills relating to materials structure and properties. In additions, students improve their written and oral communication skills through workshops, plant visits and assignments.
Two labs (three hours), first term: one lab (three hours); second term
Prerequisite: COMP SCI 1MC3 or ENGINEER 1D04; and CHEM 1A03 or 1E03, and registration in a program administered by the Department of Materials Science and Engineering

MATLS 2K03 PROPERTIES OF ENGINEERING MATERIALS
The physical and chemical basis for the wide range of properties exhibited by materials and how this affects their application in structural and functional devices. Introduction to computational materials selection.
Two lectures, one tutorial; first term
Prerequisite: At least 12 units of Level I Chemistry, Mathematics or Physics
Antirequisite: ENGINEER 2E03, 2003, 2004, MATLS 1A03

MATLS 2X02 CRYSTALLINE STRUCTURE OF MATERIALS
Crystal geometry, x-ray diffraction methods for the determination of crystalline structures and chemical compositions, electron and neutron diffraction methods, microanalysis, crystalline defects.
One lecture, one lab (two and one half hours); second term
Prerequisite: ENGINEER 2003

MATLS 3B03 MATERIALS PRODUCTION
Surface science and technology related to the preparation of fine particles of minerals, metals and ceramics for industrial production. Application of electrochemistry for diverse materials processing, such as electrometallurgy, thin film production and anodizing.
Two lectures, one lab (three hours); second term
Prerequisite: MATLS 2B06; or MATLS 2B03 and 2D03

MATLS 3C03 SOLUTION THERMODYNAMICS
Solution thermodynamics and its relationship to binary equilibrium diagrams; high temperature electrochemistry; use of computerized thermodynamics data bases.
Two lectures, one lab (three hours) every other week, one tutorial; first term
Prerequisite: MATLS 2B06 or 2D03
Antirequisite: MATLS 3B03

MATLS 3D03 THERMODYNAMICS AND KINETICS
Three lectures, one tutorial; second term
Prerequisite: MATLS 2B03 or 2B06
Antirequisite: MATLS 3105
Open to Level III and IV Science and Engineering students with permission of the department.

MATLS 3E04 MASS TRANSFER
Phenomenological and mechanism approaches to diffusion; boundary conditions; diffusion in fluids and solids; point defects in solids.
Three lectures, two tutorials; second term
Prerequisite: ENGINEER 2003 or MATLS 1A03; and either MATH 2M06 or both MATH 2A03 and 2C03

MATLS 3M03 MECHANICAL BEHAVIOUR OF MATERIALS
How materials are made strong, tough, ductile, formable. How to prevent failures. Materials selection using computer databases.
Two lectures, one tutorial and/or laboratory; first term
Prerequisite: ENGINEER 2003 or both MATLS 1A03 and ENGINEER 2P04; or permission of the department
Antirequisite: ENGINEER 3P03, MATLS 3P03

MATLS 3Q03 MATERIALS FOR ELECTRONIC APPLICATIONS
The functional properties of materials of interest in electronic applications, including conductivity, magnetism, dielectric behaviour and luminescence. Includes a discussion of phenomena such as ferro- and piezoelectricity, ionic conductivity.
Three lectures; second term
Prerequisite: ENGINEER 2E03 or 2003

MATLS 3T04 PHASE TRANSFORMATIONS
Review of thermodynamics, binary phase diagrams and solid state diffusion. Role of interfaces; solidification, diffusion and martensite transformations; welding; oxidation. Materialographic examination will be featured in laboratory work.
Three lectures or tutorial, one lab (three hours); first term
Prerequisite: ENGINEER 2003 or MATLS 2X02

MATLS 4A02 SEMINARS AND PLANT VISITS
Seminars and discussions by technical personnel from industry. Corresponding plant visits made by the class and reported both in written and oral form. Workshops on: Statistical Process Control; ISO 9000; Industrial Health and Safety; Entrepreneurship.
One seminar/tutorial/plant visit (three hours); both terms.
Prerequisite: Registration in the final level of a programme administered by the Department of Materials Science and Engineering
Three lectures, second term
Prerequisite: One of ENGINEER 3P03, MATLS 3M03 or 3P03

MATLS 4R04  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 programme in Materials Engineering

MATHEMATICS AND STATISTICS
WEB ADDRESS:
http://www.science.mcmaster.ca/MatStat/Dept.html
Burke Science Building, Room 133
Ext. 24581

Faculty as of January 15, 2002

Chair
Matthew A. Valeriote
Associate Chair
Appointment Pending

Professors
Stanley Alama/B.Sc. (Columbia), M.Sc., Ph.D. (Courant, NYU)
N. Balakrishnan/B.Sc., M.Sc. (Madras), Ph.D. (I.I.T., Kanpur)
Lisa Bronsard/B.A. Montreal, M.Sc., Ph.D. (Courant, NYU)
Walter Craig/A.B. (California-Berkeley), M.S., Ph.D. (Courant, NYU); Senior Canada Research Chair
Thomas M.K. Davison/B.Sc. (Sir George Williams), M.A., Ph.D. (Toronto)
Pengfei Guan/B.Sc. (Zhejiang), Ph.D. (Princeton)
Ian Hambleton/B.Sc., M.Sc. (Toronto), Ph.D. (Yale), Britton Professor of Mathematics
Bradd Hart/B.Math. (Waterloo), Ph.D. (McGill)
Fred M. Hoppe/B.Sc. (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), Habilit. (Munster)
Peter D.M. MacDonald/B.Sc., M.Sc. (Toronto), D.Phil. (Oxford)/Graduate Advisor, Statistics
Maung Min-Oo/B.Sc. (Rangoon), Dipl. Math., Dr. rer. nat., Habilit. (Bonn)
Andrew J. Nicas/B.Sc. (McGill), M.A., Ph.D. (Princeton)/Undergraduate Advisor
Eric T. Sawyer/M.Sc. (McGill), McKay Professor of Mathematics
Matthew A. Valeriote/B.Math. (Waterloo), Ph.D. (California-Berkeley)
Roman Viveros-Aguilera/B.A. (Veracruzana, Mexico), M.A. (National Polytechnic Inst., Mexico), Ph.D. (Waterloo)
Gail R. Wolkowicz/B.Sc., M.Sc. (McGill), Ph.D. (Alberta)
Patrick C. Yip/B.Sc. (Memorial), Ph.D. (McMaster)

Adjunct Professor
Abdel H. El-Shaarawy/B.Sc., M.Sc. (Cairo), Ph.D. (Waterloo)/part-time
Ron A. Keman/Brook University/B.A., M.A. (Manitoba), Ph.D. (Toronto)

Associate Professors
Hans Boden/B.Sc. (New Hampshire), Ph.D. (Brandeis)
Shui Feng/B.Sc., M.Sc. (Beijing Normal), Ph.D. (Carleton)
Jean-Pierre Gabardo/B.Sc. Université de l’Est a Mons, Ph.D. (Maryland)
Delcride Haskell/B.A. (Oxford), M.S., Ph.D. (Stanford)
Zdzislaw K. Kornicki/B.Sc. (Charles, Prague), Ph.D. (Toronto)
Ernest R. Mead/B.A., M.A., Ph.D. (Western Ontario), A.S.A.

Assistant Professors
Angelo Canty/B.Sc. (University College, Cork), M.Sc., Ph.D. (Toronto)
Aaron Chi/Cs/B.Sc., M.Sc., Ph.D. (McMaster)
David Earm/B.Sc., M.Sc., Ph.D. (Cambridge)
Nicholas Kevlahan/B.Sc. (British Columbia), Ph.D. (Cambridge)
Miroslav Lovric/B.Sc. (Zagreb), M.S., Ph.D. (Ohio State)
Dmitry E. Palinovsky/B.Sc. (Nizhny Novgorod State, Russia), Ph.D. (Monash, Australia)
Courses  If no prerequisite is listed, the course is open.

MATH 1A03  CALCULUS I
Differential calculus, the definite integral, techniques of integration, differential equations and applications.
Three lectures, one tutorial; one term
Prerequisite: OAC Calculus (or Advanced Functions and Introductory Calculus U) or MATH 1K03; and one of OAC Finite Mathematics (or Mathematics of Data Management U), OAC Algebra and Geometry (or Geometry or Discrete U), STATS 1L03
Antirequisite: MATH 1N03, ARTS & SCI 1D06

MATH 1A3  CALCULUS II
Power series, partial derivatives, extremal problems, multiple integrals.
Three lectures, one tutorial; one term
Prerequisite: MATH 1A03
Antirequisite: MATH 1NN3, ARTS & SCI 1D06

MATH 1B03  LINEAR ALGEBRA I
Vectors, matrices, determinants, solvability of linear systems, Euclidean geometry, complex numbers, with applications.
Three lectures, one tutorial; one term
Prerequisite: One of OAC Finite Mathematics (or Mathematics of Data Management U), OAC Algebra and Geometry (or Geometry or Discrete U), STATS 1L03
Antirequisite: MATH 1H03, MATH 1H05, 1H1H

MATH 1C03  INQUIRY IN MATHEMATICS I
Material covered in the course may include topics from: geometry, discrete math, number theory, algebra.
Three hours; one term
Prerequisite: OAC Calculus (or Advanced Functions and Introductory Calculus U); and one of OAC Finite Mathematics (or Mathematics of Data Management U), OAC Algebra and Geometry (or Geometry or Discrete U), and registration in Science I
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

MATH 1H03  LINEAR ALGEBRA FOR ENGINEERING
Linear systems of equations, matrices, determinants, vectors and vector spaces, inner product spaces.
Three lectures, one tutorial; one term
Prerequisite: Registration in Engineering I
Antirequisite: MATH 1B03, 1H05

MATH 1H3  LINEAR ALGEBRA AND DISCRETE MATHEMATICS FOR ENGINEERING
Continuation of MATH 1H03. Linear transformations, complex numbers, eigenvalues and eigenvectors, with applications. Basic concepts of discrete mathematics. Propositional logic, set theory, combinatorics, probability.
Three lectures, one tutorial; one term
Prerequisite: MATH 1H03 and registration in Engineering I
Antirequisite: MATH 1B03, 1H05

MATH 1J03  MATHEMATICAL COMPUTING
Introduction to scientific programming; the Matlab environment, statements and control structures, scripts and functions, matrix computations, symbolic algebra, numerical differentiation and integration, plotting, data analysis, applications to modelling problems.
Two lectures, one lab (two hours); one term
Prerequisite: Credit or registration in MATH 1A03 and 1B03
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

MATH 1K03  INTRODUCTORY CALCULUS FOR BUSINESS, HUMANITIES AND THE SOCIAL SCIENCES
An introduction to differential calculus and its applications.
Three lectures, one tutorial; one term
Prerequisite: OSIS Grade 12 Mathematics (Advanced) or OSS Grade 11 Mathematics
Normally not open to students who have completed OAC Calculus (or Advanced Functions and Introductory Calculus U).
Students transferring to the Faculty of Science do not retain credit for this course.

MATH 1M03  CALCULUS FOR BUSINESS, HUMANITIES AND THE SOCIAL SCIENCES
Differential and integral calculus.
Three lectures, one tutorial; one term
Prerequisite: MATH 1K03 or OAC Calculus (or Advanced Functions and Introductory Calculus U)
Not open to students with credit or registration in MATH 1A03, 1N03, ARTS & SCI 1D06.
Students transferring to the Faculty of Science do not retain credit for this course. Students considering upper year mathematics courses should take MATH 1A03.

MATH 1N03  CALCULUS FOR ENGINEERING II
Applications of integration, differential equations, sequences and series, differential calculus of several variables, applications.
Three lectures, one tutorial; one term
Prerequisite: MATH 1N03
Antirequisite: MATH 1A3

MATH 2A03  CALCULUS III
Functions of several variables, chain rule, Taylor's formula, extremal problems, Lagrange multipliers; multiple integrals, change of variables formula, line and surface integrals, Green's, Gauss' and Stokes' theorems.
Three lectures; one term
Prerequisite: One of MATH 1A03, 1N03, ARTS & SCI 1D06; and credit or registration in one of MATH 1B03, 1H05 or 1H1H
Antirequisite: MATH 2Q04

MATH 2A83  INTRODUCTION TO REAL ANALYSIS
Fundamental topics in analysis; properties of real numbers, sequences and series, power series, uniform continuity, uniform convergence.
Three lectures; one term
Prerequisite: MATH 1A03 and credit or registration in MATH 1B03
Antirequisite: MATH 2AA3

MATH 2C03  DIFFERENTIAL EQUATIONS
Three lectures; one term
Prerequisite: One of MATH 1A03, 1N03, ARTS & SCI 1D06; and one of MATH 1B03, 1H05, 1H1H
Antirequisite: MATH 2003, 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 1A03, 1N03, ARTS & SCI 1D06; and credit or registration in one of MATH 1B03, 1H05, 1H1H
Enrolment is limited. However, all students in programmes requiring this course will be admitted. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

MATH 2K03  FINANCIAL MATHEMATICS
Nominal and effective rates of interest and discount, forces of interest and discount, compound interest, annuities certain; amortization, sinking funds; bonds, security evaluation, determination of yields.
Three lectures; one term
Prerequisite: One of MATH 1A03, 1N03, 1N03, ARTS & SCI 1D06
MATH 2L03 MATHEMATICAL METHODS FOR BUSINESS AND SOCIAL SCIENCES

Selected topics from: linear programming, Markov chains, game theory, differential equations, and the calculus of several variables.

Three lectures; one term
Prerequisite: One of MATH 1A03, 1M03, 1NN3, ARTS & SCI 1D06, and one of MATH 1B03, STATS 1L03, OAC Finite Mathematics (or Mathematics of Data Management U)

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 MATH 1H05 or 1HH3

MATH 2P04 DIFFERENTIAL EQUATIONS FOR ENGINEERING


Three lectures and two tutorials; one term
Prerequisite: MATH 1NN3 and either MATH 1H05 or 1HH3; or registration in Honours Numerical Computation and credit or registration in MATH 1B03
Antirequisite: MATH 2C03

MATH 2Q04 ADVANCED CALCULUS FOR ENGINEERING

Vector algebra, curves, partial differentiation, multiple integrals, Green's Theorem, line and surface integrals, integral theorems, scalar and vector potentials, orthogonal curvilinear coordinates, introduction to partial differential equations.

Three lectures and two tutorials; one term
Prerequisite: MATH 1NN3 and either MATH 1H05 or 1HH3; or registration in Honours Numerical Computation and credit or registration in MATH 1B03
Antirequisite: MATH 2A03

MATH 2R03 LINEAR ALGEBRA II

Abstract vector spaces, basis and dimension, linear transformations, linear equations, inner product spaces, eigenvalues, spectral theorems.

Three lectures; one term
Prerequisite: One of MATH 1AA3, 1NN3, ARTS & SCI 1D06; and one of MATH 1B03, 1H05, 1HH3

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

Numerical solution of linear and nonlinear systems of equations; root finding, LU factorization, Jacobi iteration, conditioning and stability, QR factorization, least squares, power iteration and other eigenvalue algorithms.

Three lectures; one term
Prerequisite: MATH 2R03

MATH 2U03 TEACHING MATHEMATICS

This course is designed to give a maximum of 20 students practical experience with teaching methods in mathematics. The course also provides an introduction to mathematics writing and development of communication skills relevant to mathematics.

Two lectures and one practicum; one term
Prerequisite: A grade of A- in both MATH 1A03 and 1AA3 or in ARTS & SCI 1D06; and permission of the instructor
Enrolment is limited. Applications must be submitted to the instructor by May 1 of the academic year prior to registration, with selection for placements announced by September 9.
See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

MATH 3A03 REAL ANALYSIS I

The real number system, metric spaces, compactness, sequences and series, continuity, differentiability, the Riemann-Stieltjes integral, uniform convergence.

Three lectures; one term
Prerequisite: MATH 2AB3, 2C03, 2R03

MATH 3A03 REAL ANALYSIS II

Equicontinuous functions, functions of several variables, the inverse function theorem, the implicit function theorem, the rank theorem, Stokes' Theorem, the Lebesgue Integral.

Three lectures; one term
Prerequisite: MATH 3A03

MATH 3B03 TOPICS IN GEOMETRY

Selected topics from: affine and projective geometry, Euclidean, spherical and hyperbolic geometry, differential geometry of curves and surfaces.

Three lectures; one term
Prerequisite: MATH 2A03, 2R03

MATH 3C03 MATHEMATICAL PHYSICS I

Linear algebra and eigenvalue problems; partial differential equations, orthogonal functions, Fourier series, Legendre functions, spherical harmonics.

Three lectures; one term
Prerequisite: MATH 2A03 or 2Q04; and MATH 2C03 or 2P04. One of PHYSICS 2B06, 2D03 or 2K03 is recommended.
Not open to students with credit or registration in MATH 3FF3, 3J04.

MATH 3D03 MATHEMATICAL PHYSICS II

Functions of a complex variable, probability and statistics, boundary value problems, Bessel functions.

Three lectures; one term
Prerequisite: MATH 3C03
Antirequisite: MATH 3K03
Not open to students with credit or registration in MATH 3J04, 3X03.
Not open to students registered in Honours Mathematics and Physics.

MATH 3E03 ALGEBRA I

An introduction to group theory, including Sylow theorems and structure of finitely generated Abelian groups; applications of group theory.

Three lectures; one term
Prerequisite: MATH 2D03

MATH 3EE3 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, 2C03, and credit or registration in MATH 2R03

MATH 3FF3 PARTIAL DIFFERENTIAL EQUATIONS I

First order equations, well-posedness, characteristics, wave equation, heat equation, Laplace equation, boundary conditions, Fourier series, applications.

Three lectures; one term
Prerequisite: MATH 2A03, 2C03, 2R03

MATH 3H03* NUMBER THEORY

Selected topics from: congruence and residues, continued fractions, approximation of irrationals, arithmetic in selected quadratic number fields. Diophantine equations; partitions, geometry of numbers, quadratic reciprocity.

Three lectures; one term
Prerequisite: Credit in at least 12 units of Level II Mathematics or Statistics

MATH 3I03 PARTIAL DIFFERENTIAL EQUATIONS FOR ENGINEERING

Topics in partial differential equations of interest to mechanical, material and ceramic engineering, including the wave equation, the heat diffusion equation and Laplace equation, in various co-ordinate systems.

Three lectures; first term
Prerequisite: MATH 2M06, or MATH 2P04 and 2Q04; or registration in Level III or IV of a programme in the Department of Materials Science and Engineering

MATH 3J04 ENGINEERING MATHEMATICS III

Topics in mathematics of interest for civil engineering, including probability and statistics, partial differential equations, numerical analysis, and matrix algebra.

Four hours; one term
Prerequisite: MATH 2M06

MATH 3K03 ENGINEERING MATHEMATICS III

Complex variable theory with applications to electrical and computer engineering.

Three lectures; one term
Prerequisite: MATH 2P04, 2Q04
Antirequisite: MATH 3D03
Mathematics and Statistics

MATH 3N03  Mathematical Biology
Population dynamics: models of discrete and continuous growth; competition and predation; epidemic models. Partial differential equations; diffusion and pattern formation in biological settings. Biological oscillators.
Three lectures; one term
Prerequisite: MATH 2E03, 3F03

MATH 3Q03  Numerical Analysis II
Interpolation and approximation, numerical integration and differentiation, solution of ordinary differential equation systems, partial differential equations, study of stiffness and stability.
Three lectures; one term
Prerequisite: MATH 2A03, 2T03
Antirequisite: MATH 4Q03

MATH 3P03  Set Theory and General Topology
Naive set theory, Zorn's Lemma, metric spaces, point set topology.
Three lectures; one term
Prerequisite: MATH 2R03
Antirequisite: MATH 4P03

MATH 3X03  Complex Analysis I
Analytic functions, Cauchy's theorem, Cauchy's integral formula, residues, zeros of analytic functions; Laurent series, the maximum principle.
Three lectures; one term
Prerequisite: MATH 2A03, 2C03, 3R03

MATH 3Z03  Inquiry: History of Mathematics
An introduction to the history of mathematics, including interaction with other phases of culture, with special emphasis on the past three centuries.
Three lectures; one term
Prerequisite: At least two Level II Mathematics or Statistics courses other than MATH 2K03, 2L03

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 2A03 or 2A03

MATH 4BB3  Differential Geometry
Riemannian metrics, connections, curvature, topological and analytical properties of Riemannian manifolds.
Three lectures; one term
Prerequisite: MATH 4B03

MATH 4C03*  Combinatorics
Inversion formulae, systems of distinct representatives, block designs and other configurations; and other topics.
Three lectures; one term
Prerequisite: MATH 2A03, 2R03

MATH 4E03  Algebra III
Selected topics in algebra, such as an introduction to algebraic number theory, commutative algebra or algebraic geometry.
Three lectures; one term
Prerequisite: MATH 3EE3

MATH 4EE3  Algebra IV
Selected topics in algebra, such as: representation theory, rings and modules, homological algebra.
Three lectures; one term
Prerequisite: MATH 3EE3

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 4G03  Partial Differential Equations II
Elliptic, parabolic, and hyperbolic equations in several space dimensions; fundamental solutions, maximum principle, Sobolev spaces, variational methods, nonlinear equations, applications.
Three lectures; one term
Prerequisite: MATH 3F03. MATH 3A03 is recommended.

MATH 4J03*  Graph Theory
Graphs, trees, bipartite graphs, connectivity, graph colouring, matrix representations, applications.
Three lectures; one term
Prerequisite: MATH 2A03, 2R03

MATH 4L03*  Introduction to Mathematical Logic
First order logic, deduction systems, completeness and compactness theorems, modal theory.
Three lectures; one term
Prerequisite: MATH 3EE3
Antirequisite: MATH 3L03

MATH 4Q03  Numerical Methods for Ordinary and Partial Differential Equations
Three lectures; second term
Prerequisite: Credit or registration in MATH 3D03 or 3FF3; or permission of the instructor
Antirequisite: MATH 3Q03

MATH 4S03*  Theory of Computability
Automata and regular languages, Turing machines, recursive functions, decidability, Godel's incompleteness theorems.
Three lectures; one term
Prerequisite: MATH 2S03 or 2T03
Antirequisite: COMP SCI 4T03
Offered in 2002-2003.

MATH 4T03*  Algebraic Topology
Fundamental groups and covering spaces, topics selected by the instructor.
Three lectures; one term
Prerequisite: MATH 3E03, 3S03

MATH 4V03  Applied Mathematical Analysis
Lebesgue integration, distribution theory, Fourier Analysis, partial differential equations, integral equations, calculus of variations; additional topics.
Three lectures; one term
Prerequisite: MATH 3D03 or 3FF3

MATH 4W03  Directed Reading
Directed reading in areas of mathematics of interest to the student and the instructor.
Prerequisite: Permission of the Chair of the Department. Application for permission must be received by March 31st of the academic year prior to registration.

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...

Note:
Students wishing to register in Honours Mathematics and Statistics 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: OIS/G 12 Mathematics or OSS Grade 11 Mathematics
Not open to students registered in the Faculty of Science or in a Kinesiology programme.
Not open to students with credit or registration in Commerce 2A03, Econ 2B03, Psych 2R03, Soc Sci 2U03, Stats 1C03, 2D03, 2M03.

Stats 1C03  Introductory Computer-Aided Statistics
Applied statistics including simple probability calculations based on binomial, Poisson and normal distributions, with emphasis on inferential methodologies and linear regression using computer statistics packages.
Two lectures, one lab (two hours); one term
Prerequisite: MATH 1A03 or 1M03
Antirequisite: Commerce 2QA3, Econ 2BG3, HTH Sci 1F03, Psych 2G03, 2R03
<table>
<thead>
<tr>
<th>STAT 1L03</th>
<th>PROBABILITY AND LINEAR ALGEBRA</th>
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<tbody>
<tr>
<td>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.</td>
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<tr>
<td>Three lectures; one tutorial; one term.</td>
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<tr>
<td>Prerequisite: OAC Grade 12 Mathematics or OSS Grade 11 Mathematics</td>
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<tr>
<th>STAT 2D03</th>
<th>PROBABILITY THEORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
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<tr>
<td>Three lectures; one term.</td>
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<tr>
<td>Prerequisite: STATS 1A03 or 1M03; and credit or registration in MATH 1B03</td>
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<tr>
<th>STAT 3N03</th>
<th>STATISTICAL METHODS FOR ENGINEERING</th>
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<tr>
<td>Introduction to probability, data analysis, statistical inference, regression, correlation and analysis of variance.</td>
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<tr>
<td>Three lectures; one term</td>
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<tr>
<td>Prerequisite: Registration in a programme in Engineering above Level I</td>
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<tr>
<td>Antirequisite: STATS 3V03</td>
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<tr>
<th>STAT 3S03*</th>
<th>SURVEY SAMPLING</th>
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<tr>
<td>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.</td>
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<tr>
<td>Three lectures; one term.</td>
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<tr>
<td>Prerequisite: STATS 2D03, 2MB3</td>
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<tr>
<th>STAT 3U03</th>
<th>STOCHASTIC PROCESSES</th>
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<tr>
<td>Random walk, Markov chains, discrete and continuous parameter Markov processes, branching processes, birth and death processes, queuing processes.</td>
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<tr>
<td>Three lectures; one term.</td>
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<tr>
<td>Prerequisite: MATH 2A03, STATS 2D03</td>
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<tr>
<th>STAT 4B03</th>
<th>DESIGN OF EXPERIMENTS AND REGRESSION</th>
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<tbody>
<tr>
<td>Analysis of variance; linear models; randomized block designs; Latin squares; factorial experiments; regression and inference. Emphasis on applications.</td>
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<tr>
<td>Three lectures; one term.</td>
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<tr>
<td>Prerequisite: STATS 3D03 (or 3D06)</td>
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<tr>
<td>Antirequisite: STATS 4R03, 4T03</td>
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| STAT 3A03, STATS 2D03 |
|------------------|------------------|
| Three lectures; one term. |
| Prerequisite: MATH 2A03, STATS 2D03 |

<table>
<thead>
<tr>
<th>STAT 4G03</th>
<th>BROWNIAN MOTION AND DIFFUSION</th>
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<tbody>
<tr>
<td>Brownian motion, stochastic integrals, one-dimensional Ito’s formula, diffusion processes, option pricing and other financial applications. Simulation of the Black-Scholes formula and related models.</td>
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<tr>
<td>Three lectures; one term.</td>
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<tr>
<td>Prerequisite: STATS 2D03</td>
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<tr>
<th>STAT 4R03*</th>
<th>OPERATIONS RESEARCH</th>
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<tr>
<td>Network models and algorithms, dynamic models, queuing models and other topics.</td>
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<tr>
<td>Three lectures; one term.</td>
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<tr>
<td>Prerequisite: Credit or registration in STATS 3D03 (or 3D06)</td>
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<tr>
<th>STAT 4M03</th>
<th>MULTIVARIATE ANALYSIS</th>
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<tr>
<td>Multivariate distributions: Normal, Wishart, T2 and other distributions, and selected topics from robust inference, Bayesian inference, nonparametric inference and resampling methods.</td>
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<tr>
<td>Three lectures; one term.</td>
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<tr>
<td>Prerequisite: STATS 3D03</td>
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<tr>
<th>STAT 4O03*</th>
<th>ORDER STATISTICS</th>
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<td>Three lectures; one term.</td>
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<tr>
<td>Prerequisite: Credit or registration in STATS 3D03 (or 3D06)</td>
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<tr>
<th>STAT 4V03*</th>
<th>ADVANCED APPLIED STATISTICS</th>
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<tbody>
<tr>
<td>Statistical computing; statistical software packages; working with large data sets; exploratory data analysis; graphical methods; statistical consulting practice.</td>
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<tr>
<td>Three lectures; second term</td>
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<tr>
<td>Prerequisite: STATS 4M03</td>
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<tr>
<th>STAT 4U03*</th>
<th>NONPARAMETRIC METHODS IN STATISTICS</th>
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<tr>
<td>Rank tests and nonparametric methods; rank correlation; comparisons with parametric methods.</td>
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<tr>
<td>Three lectures; one term.</td>
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</tr>
<tr>
<td>Prerequisite: Credit or registration in STATS 3D03 (or 3D06)</td>
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MECHANICAL ENGINEERING
WEB ADDRESS: http://www.mech.mcmaster.ca
John Hodgins Engineering Building, Room 316
Ext. 24294

Faculty as of January 15, 2002

Chair
David S. Weaver

Professors
Namdouh Shoukri/B.Sc. (Cairo), M.Eng., Ph.D. (McMaster), P.Eng.
David S. Weaver/B.Sc., M.A.Sc. (Toronto), Ph.D. (Waterloo), P.Eng.
Samir Ziada/B.Sc. (Cairo), M.Eng. (McMaster), Ph.D. (Leigh)

Adjunct Professors
M. Helmi Atta/B.Sc., M.Sc. (Alexandria), Ph.D. (McGill)
Kamram Behdinan/B.A.Sc. (Toosi), M.A.Sc. (Sharif), Ph.D. (Victoria)
Tahanny I. El Wardany/B.Sc., M.Sc. (Alexandria), Ph.D. (Birmingham)
Grzegorz Frantkowski/B.A.Sc., M.A.Sc., (Gdansk), Ph.D. (Memorial)
Vincent M. Sowa/B.Sc. (Illinois), M.A. (Purdue), Ph.D. (Waterloo)

Associate Professors
Chan Y. Ching/B.S. (Peradeniya), Ph.D. (Syracuse)
Robert C. Hudspith/B.Eng., M.Eng. (McMaster)
Mateusz P. Sklad/M.Sc., Ph.D. (Warsaw)
Allan D. Spencer/B.Math., M.A.Sc. (Waterloo), Ph.D. (British Columbia), P.Eng.

Assistant Professors
Dan Ewing/B.A.Sc. (Waterloo), Ph.D. (SUNY-Buffalo)
Philip Koehe/B.A. (Anna), Ph.D. (IIT Kanpur)
Marliony L. Lightstone/B.A.Sc. (Queen's), M.A.Sc. (Waterloo), Ph.D. (Waterloo), P.Eng.

Associate Members
Dwaker Gupta (Business) B.Tech. (New Delhi), M.A.Sc. (Windsor), Ph.D. (Waterloo), P.Eng.
W.F. Skipper Poehlman/Computing and Software) B.S. (Niagara), B.Sc. (Brook), M.Sc., Ph.D. (McMaster), P.Eng.
Philip E. Wood/Chemical Engineering) B.A.Sc. (Waterloo), Ph.D. (California Institute Tech.), P.Eng.

MANUFACTURING LABORATORY I

Laboratory exercises in metalworking practices, measurements and solids mechanics.
One lab (three hours); both terms
Prerequisite: Registration in Manufacturing Engineering

MANUFACTURING LABORATORY II

Laboratory exercises in metalworking practices, solid mechanics and controls.
One lab (three hours); both terms
Prerequisite: MANUFACT 3M02

MANUFACTURING LABORATORY III

MANUFACTURING LABORATORY IV

MANUFACTURING LABORATORY V

MANUFACTURING LABORATORY VI

DESIGN OF EXPERIMENT

DEPARTMENT RESEARCH EFFORTS

MECHANICAL ENGINEERING...
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 a programme administered by the Department of Mechanical Engineering

MECH ENG 3D03 THERMODYNAMICS II
Re-examination of the thermodynamic laws. Applied thermodynamics including advanced engineering thermodynamic processes, psychometry, and an introduction to combustion, compressible flow and environmental problems.
Three lectures; second term
Prerequisite: MECH ENG 2W04

MECH ENG 3E04 MECHANICAL ENGINEERING DESIGN II
3-D stress transformation, curved beams, thick walled pressure vessels, contact stresses, fatigue, bolted and welded joints, machine elements. The laboratories feature a major design project from concept to formal report preparation.
Three lectures, one lab (three hours); second term
Prerequisite: ENGINEER 2P04, MECH ENG 3A03, and ENGINEER 2004 or MECH ENG 2004

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 a programme administered by the Department of Mechanical Engineering.

MECH ENG 3M02 COMPOSITE LABORATORY
Laboratory exercises in fluid mechanics, thermodynamics and solid mechanics.
One lab (three hours); both terms
Prerequisite: Registration in a programme administered by the Department of Mechanical Engineering

MECH ENG 3N04 FLUID MECHANICS I
Fluid properties and statics, conservation laws, applications of the continuity, momentum and energy equations, dimensional analysis and similarity, boundary layer flow, internal and external flows.
Three lectures, one tutorial (two hours); first term
Prerequisite: MATH 2M06 or MATH 2P04 and 2004

MECH ENG 3R03 HEAT TRANSFER
Three lectures; second term
Prerequisite: MATH 2M06, MECH ENG 2W04

MECH ENG 4A03 COMPUTER-AIDED MANUFACTURING
Geometric dimensioning and tolerancing, fixturing and part setups for machining and inspection, computer-aided tool path generation for machining and inspection, sculptured surface machining and digitizing.
Two lectures, one tutorial (one hour), one lab (one hour); second term
Prerequisite: Registration in Level IV or V of a Mechanical Engineering programme
Cross-list: MANUFACT 4A03
First offered in 2004-2005.

MECH ENG 4D03 MANUFACTURING PROCESSES (METAL REMOVAL)
Three lectures; second term
Prerequisite: MECH ENG 3C03

MECH ENG 4R03 MECHATRONICS
Integration of mechanical engineering with electronics and computer control. Sensors, actuators (including pneumatic and hydraulic), modeling using block diagrams and state space methods, model-based control, programming of PLCs with practical demonstrations.
Three lectures; second term
Prerequisite: One of ELEC ENG 3CA3, 3TP4 or MECH ENG 4R03

MECH ENG 4O03 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 4Q03 FLUID MECHANICS III
Study of high Reynolds number flows occurring in engineering applications. Topics include turbulent boundary layers, aerodynamics, separated flows, drag reduction and heat transfer.
Three lectures; second term
Prerequisite: MECH ENG 4S03

MECH ENG 4K03 INTRODUCTION TO ROBOTIC MECHANICS
Spatial descriptions and transformations, manipulator kinematics, inverse and direct kinematics. Jacobians, dynamics.
Three lectures; first term
Prerequisite: ENGINEER 2Q04 or MECH ENG 2004

MECH ENG 4L03 INDUSTRIAL DESIGN
Introduction for engineering students to the techniques of industrial design, case studies and introduction to illustration techniques.
Three lectures; second term
Prerequisite: MANUFACT 2C03 or MECH ENG 2C03; and permission of the Department

MECH ENG 4M04 PROJECT
A major project related to any option or branch of engineering which may be of a design or experimental nature, to be completed under the supervision of a faculty member holding an appointment in the Department of Mechanical Engineering.
One lab (three hours), first term; three labs (three hours); second term
Prerequisite: Registration in Level IV Mechanical Engineering, or in Level V Mechanical Engineering and Management or Mechanical Engineering and Society
First offered in 2004-2005.

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 a programme administered by the Department of Mechanical Engineering

MECH ENG 4Q03 MECHANICAL VIBRATIONS
Tightened-up 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.
Two lectures, one tutorial (two hours); 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 (Offered in both terms in 2004-2005.)
Prerequisite: Registration in Level III Mechanical Engineering, or in Level IV Mechanical Engineering and Management or Mechanical Engineering and Society or in a programme administered by the Department of Mechanical Engineering
Antirequisite: ELEC ENG 3CA3, 3CK4, 3TP4

MECH ENG 4S03 FLUID MECHANICS II
Introduction to potential flows, internal and external laminar and turbulent incompressible flows. Introduction to compressible flows and incompressible flow machines.
Three lectures; first term
Prerequisite: MECH ENG 3O04
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 a programme administered by the department of Mechanical Engineering

MECH ENG 4U03 THERMODYNAMICS III

Compressible flows: Fanno and Rayleigh flows, normal and oblique shocks. Turbomachines: axial and radial flow gas and steam turbines, axial and radial flow compressors and fans.

Three lectures; second term

Prerequisite: MECH ENG 3D03

MECH ENG 4V03 THERMO-FLUIDS SYSTEMS DESIGN AND ANALYSIS

Design, operation and application characteristics of equipment commonly used in thermal systems. Modelling performance characteristics of piping systems, pumps, compressors, fans, heat exchangers, boilers and cooling towers. System simulation and optimization. Selection criteria of thermal equipment. Design optimization and system performance evaluation.

Three lectures; second term

Prerequisite: MECH ENG 2W04, 3J04, 3R03

MECH ENG 4Z03 COMPUTER AIDED DESIGN

Project-oriented CAD course, 3-D modelling and graphics, design by features, use of mechanical design application packages.

Two lectures, one tutorial (one hour); one lab (one hour); first term

Prerequisite: Registration in Level IV or Level V of a programme administered by the Department of Mechanical Engineering

MEDICAL PHYSICS AND APPLIED RADIATION SCIENCES

WEB ADDRESS: http://www.science.mcmaster.ca/medphys/index

Nuclear Research Building, Room 101 Ext. 27650

Courses

If no prerequisite is listed, the course is open.

MED PHYS 3R03 COMPUTATIONAL MEDICAL PHYSICS

Formerly: Physics 3R03

A problem-based introduction to the use of numerical methods in medical physics.

Three lectures; second term

Prerequisite: Registration in Level III of Honours Medical and Health Physics or Year 4 of Honours Medical and Health Co-op.

MED PHYS 3T03 RADIOACTIVITY AND RADIATION INTERACTIONS

Formerly: Physics 3T03

Radioactivity and radiation phenomenology: interaction of radiations with matter, dosimetry, radiation in medicine, biological effects, radiation levels and regulations, radiation protection.

Three lectures; one term

Prerequisite: One of PHYSICS 1B03, 1B03 or permission of the instructor

Antirequisite: BIOLOGY 3L03, PHYSICS 3T03

MED PHYS 4A03 MEDICAL PHYSICS COMMUNICATIONS

Formerly: Physics 3I01, 4I01

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 programme, co-op students complete the course in Year IV, term one and Year V, term two

Prerequisite: Registration in Level IV of Honours Medical and Health Physics or Year 4 and Year 5 of Honours Medical and Health Physics Co-op

Antirequisite: MED PHYS 3I01, 4I01, PHYSICS 3I01, 4A03, 4I01

MED PHYS 4R06 RADIATION AND RADIOISOTOPE METHODOLOGY

Formerly PHYSICS 4R06

Techniques and theory of the measurement of radiation. Includes radioactive and radioactive decay, solid state dosimetry, principles of radioactive detectors, counting statistics and data reduction, advanced multidetector systems.

One lecture 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

Formerly: Physics 4T03

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 2G04; and one of MATH 2C03, 3J03, or 2P04; and one of BIOLOGY 3L03, ENG PHYS 3D03, MED PHYS 3T03, PHYSICS 3T03

Antirequisite: PHYSICS 4T03

MED PHYS 4XX3 HUMAN BIOLOGY FOR PHYSICAL SCIENTISTS

Formerly: Physics 4XX3

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 3X3X, PHYSICS 3XX3, 4XX3

BIOLOGY 4J03 RADIATION BIOLOGY

The effects of radiation on biological material at the molecular, cellular, tissue and whole organism level.

Three lectures; or two lectures and one tutorial; one term

Prerequisite: One of BIOLOGY 2B03 or 2G03, and one of BIOLOGY 3L03, MED PHYS 3T03, PHYSICS 3T03; or registration in Year 4 of Medical and Health Physics Co-op; or permission of the instructor

Faculty as of January 15, 2002

Chair

Appointment Pending

Associate Chair

Fiona E. McNeill

Professors

David R. Chettle/B.Sc., M.Sc., Ph.D. (Birmingham)

William V. Prestwich/B.Sc., Ph.D. (McMaster)

Assistant Professors

Douglas R. Boreham/B.Sc. (Laurentian), Ph.D. (Ottawa)/Chair Committee of Instruction Honours Medical and Health Physics Co-op

Fiona E. McNeill/B.Sc. (Edinburgh), Ph.D. (Laurentian)

Gerald R. Moran/B.Sc. (McMaster), Ph.D. (Guelph)

Joanne M. O'Meara/B.Sc., Ph.D. (McMaster)/Undergraduate Advisor

John F. Valliant/B.Sc., Ph.D. (McMaster)

Associate Members

Richard G. Butler/Pathology) B.Sc., M.Sc. (Toronto), Ph.D. (A.N.U. Canberra), M.B.A. (McMaster)

Thomas J. Farrell/Radiology) B.Sc., B.Ed. (Toronto), M.Sc. (Western Ontario), Ph.D. (McMaster)

Claude Nahmias/Radiology) B.Sc. (Cairo), Ph.D. (Surrey)

Michael S. Patterson/Radiology) B.Sc. (Queen's), M.Sc. (McMaster), Ph.D. (Toronto)

Andrew J. Rainbow/Biology) B.Sc. (Manchester), M.Sc. (London), Ph.D. (McMaster)

Colin E. Webber/Radiology) B.Sc. (Birmingham), M.Phil., Ph.D. (Surrey)

Douglas R. Wyman/Radiology) B.Math (Waterloo), Ph.D. (McMaster)

Special Lecturers

David M. Tucker/Health Physics) B.Sc. (McMaster), C.H.P. (American Board of Health Physics)
MIDWIFERY

Faculty as of January 15, 2002

Assistant Dean
Karyn Kaufman

Professor
Karyn Kaufman/B.S.N. (Michigan), M.S. (New York), Dr.P.H. (North Carolina), R.M.

Assistant Professors
Eileen Hutton/B.N.Sc. (Queen's), M.N.Sc. (Toronto), R.M.
Helen McDonald/M.H.Sc. (McMaster), R.M.
Patricia McNiven/M.Sc. (Toronto), Ph.D. (Toronto), R.M.
Bruce Wainman/B.Sc., (Laurentian), M.H.Sc. (McMaster), Ph.D. (York)

Assistant Professors
Helen McDonald/M.H.Sc., Inga Liutton/B.N.Sc.

Assistant Dean
Karyn Kaufman/B.S.N. (Michigan), M.S. (New York), Dr.P.H. (North Carolina), R.M.

Courses: If no prerequisite is listed, the course is open.

MIDWIF 1A06 INTRODUCTION TO MIDWIFERY
Through small group discussions and arranged experiences, students will be oriented to the midwife's role, the philosophy of practice in Ontario and the future direction of midwifery in Canada. Includes one week with all students in one site and follow-through of clients in fall and spring terms.
Prerequisite: Registration in the Midwifery Education Programme

MIDWIF 1C03 LIFE SCIENCE FOR MIDWIFERY
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 entities and pathologies, and the significance of laboratory values.
One term
Prerequisite: Registration in the Midwifery Education Programme
Co-requisite: HTH SCI 1D06

MIDWIF 2A03 MIDWIFERY CARE I-CLINICAL SKILLS
This course involves four (4) weeks of structured learning experiences to prepare for an individualized placement in a midwifery practice. Fundamental clinical skills and theoretical information will be included.
Prerequisite: MIDWIF 1A06

MIDWIF 2B15 MIDWIFERY CARE II
This clinical course provides the student with an extended period of clinical experience within a midwifery practice. The course begins with a seven day intensive. Weekly tutorials will cover topics in preconception, antepartum, intrapartum, postpartum and newborn care.
One term
Prerequisite: MIDWIF 2A03, 2E12

MIDWIF 2C15 MIDWIFERY CARE III
This course will further develop knowledge and skills relating to topics in preconception, antepartum, intrapartum, postpartum and newborn care. Weekly tutorials will move from simple to more complex situations with further integration of the biological, behavioral and social concepts.
One term
Prerequisite: MIDWIF 2B15

MIDWIF 2D03 REPRODUCTIVE PHYSIOLOGY
This course provides an in-depth understanding of human reproduction with particular emphasis on intrinsic control mechanisms and extrinsic methods of regulation of reproduction. This course will also provide the basis for understanding alterations from normal mechanisms including the influence of medical conditions on reproductive processes.
One term
Prerequisite: HTH SCI 1D06

MIDWIF 2E12 MIDWIFERY CARE I-CLINICAL PRACTICUM
This clinical placement focuses on assessment of prenatals and postnatal clients and observation of births. Physical assessment and history-taking skills can be practised under supervision. Included in 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
Antirequisite: MIDWIF 1B12, 1E09

MIDWIF 2F03 PHARMACOTHERAPY
This course is an overview of basic concepts in pharmacy, pharmacology and therapeutics relevant to the practice of midwifery in Ontario. Content areas include pharmacokinetics, toxicology, adverse drug reactions during pregnancy and lactation and pharmacology in the neonate.
One term
Prerequisite: HTH SCI 1D06

MIDWIF 3A09 COMMUNITY PLACEMENTS
Three one month placements will be organized over the term. A placement will be organized with a hospital laboratory and delivery department or family physician and an obstetrician. The third placement will be chosen by the student and may take place within or outside the province or country.
Prerequisite: MIDWIF 2B15

MIDWIF 3B15 MIDWIFERY CARE IV
Integrates theoretical and clinical content progressively and a sound knowledge base of clinical skills to provide care throughout the childbearing cycle. The weekly tutorial situations will increasingly focus on the recognition of indications for consultation and referral and the relationships with other health care providers.
Prerequisite: MIDWIF 2C15
Antirequisite: MIDWIF 3B12

MIDWIF 3C12 MIDWIFERY CARE CLERKSHIP
This course examines clinical judgement and decision making skills. The student will be expected to participate in all phases of childbirth care in all available settings and should be increasingly able to devise the plan of care and make clinical decisions with minimal supervision.
One term
Prerequisite: MIDWIF 3B15

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.
Self-study; one term
Prerequisite: HTH SCI 1C06

MIDWIF 3E03 PROFESSIONAL ISSUES
This is a two-week intensive covering topics related to the profession of midwifery.
One term
Prerequisite: MIDWIF 3B15
Co-requisite: MIDWIF 3C12

MIDWIF 3F03 MIDWIFERY SYNTHESIS PAPER
The goal of this course is the synthesis of knowledge and critical analysis about a selected topic that leads to relevant application of the information for the midwifery profession. Each student is assigned to a faculty supervisor who will work closely with the student throughout the preparation of the paper.
One term
Prerequisite: Registration in Level III of the Midwifery Education Programme

MODERN LANGUAGES AND LINGUISTICS

Faculty as of January 15, 2002

Chair
Gabriele Erasmi

Professors
Nina Kolesnikoff/M.A. (Moscow State), Ph.D. (Alberta)

Associate Professors
Maria del C. Cerezo/B.A. (Puerto Rico), M.A. (McGill), Ph.D. (Toronto)
Inga Dolfini Hitchcock/M.A., Ph.D. (Leningrad)
Gabriele Erasmi/B.A. (Yale), M.A., Ph.D. (Minnesota)
MODERN LANGUAGES 235

Florigio Minelli/B.A., M.A. (Western Ontario), Ph.D. (Brown)
Magda Stroinska/M.A. (Warsaw), Ph.D. (Edinburgh)
Jean Wilson/B.A. (McMaster), B.Ed., M.A., Ph.D. (Toronto)

Adjunct & Associate Professor


Assistant Professors

Iris Bruce/M.A., Ph.D. (Toronto)
Vittoria Cecchetto/B.A., M.A., Ph.D. (Toronto)
Anna L. Moran/B.A., M.A., Ph.D. (Toronto)
Branka Popovic/B.A., M.A., Ph.D. (Belgrade)

Lecturers

Eiko Virginia Ariga/B.A. (Doshisha), M.A. (Toronto), M.A. (Texas)
Nicola Gargano/B.A., M.A. (Toronto)
Tsuneko Iwai/B.A., M.Ed. (Toronto)
Pong-Mei Lau/B.A., M.A. (Toronto)
Ruth Renters/Statseexamen (Bochum), M.A. (McMaster)

Department Notes:

1. The Department of Modern Languages and Linguistics administers all courses in Catalan, Chinese, 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 offered on an annual basis. Students should consult the timetable for available courses.

CATALAN...

Courses in Catalan are administered within the Department of Modern Languages and Linguistics of the Faculty of Humanities. For information and counselling, please contact the departmental office, Togo Salmon Hall, Room 613.

Notes:

1. Students should note that the Department has classified its Catalan language courses under the following categories:

   **Introductory Level Language Courses**
   
   - CATALAN 2A03, 2A3
   
   **Intermediate Level Language Courses**
   
   - CATALAN 3A03, 3A3

2. Not all courses are offered on an annual basis. Students should consult the timetable for available courses.

Courses **If no prerequisite is listed, the course is open.**

**CATALAN 2A03 INTENSIVE BEGINNER'S CATALAN I**

An introduction to the Catalan language for students with no previous knowledge of Catalan. Emphasis will be placed on grammar, reading, writing, and oral practice. The sequel to this course is CATALAN 2A3.

Four hours; one term

Enrolment is limited.

**CATALAN 2A3 INTENSIVE BEGINNER'S CATALAN II**

This course is a continuation of CATALAN 2A03. It completes the grammatical structures introduced and continues reading, writing, and oral practice. The sequel to this course is CATALAN 3A03.

Four hours; one term

Prerequisite: CATALAN 2A03

Enrolment is limited.

**CATALAN 2B03 THE LITERATURE AND CULTURE OF CATALONIA**

This course is taught in English and provides an introduction to the historical, artistic, musical and literary developments in Catalonia.

Three hours; one term

**CATALAN 3A03 INTERMEDIATE CATALAN I**

Review of grammatical structures and the introduction of idiomatic expressions in the language. Emphasis is placed on the expansion of reading, writing, and oral skills acquired. Introduction to Catalan texts. The sequel to this course is CATALAN 3A3.

Four hours; one term

Prerequisite: CATALAN 2A3

Enrolment is limited.

**CATALAN 3A3 INTERMEDIATE CATALAN II**

This course is a continuation of CATALAN 3A03. There is grammar review and the expansion of grammatical structures and of the oral and written skills acquired. The reading of literary texts continues.

Four hours; one term

Prerequisite: CATALAN 3A03

Enrolment is limited.

**CHINESE ...**

Courses in Chinese are administered within the Department of Modern Languages and Linguistics of the Faculty of Humanities. For information and counselling, please contact the departmental office, Togo Salmon Hall, Room 613.

Notes:

Not all courses are offered on an annual basis. Students should consult the timetable for available courses.

Courses **If no prerequisite is listed, the course is open.**

**CHINESE 2A03 INTRODUCTORY MODERN CHINESE I**

This intensive course is aimed at beginners with no prior knowledge of Modern standard (Mandarin) Chinese. Students will learn to read, write and speak at an elementary level. Pronunciation, basic sentence structure and vocabulary will be taught together with about 300 Chinese characters.

Four hours; one term

Prerequisite: CATALAN 2A23, 2Z03, 2ZZ3

Antirequisite: CHINESE 1203, 1206; OAC Chinese (or U or U/C equivalent) or other equivalent. Students who either speak any Chinese dialect or read Chinese may not register in this course.

The Department reserves the right to place students in the course most appropriate to their abilities.

Enrolment is limited.

**CHINESE 2AA3 INTRODUCTORY MODERN CHINESE II**

A continuation of CHINESE 2A03. An additional 300 Chinese characters will be taught.

Four hours; one term

Prerequisite: CHINESE 2A03

Antirequisite: CHINESE 1206

The Department reserves the right to place students in the course most appropriate to their abilities.

Enrolment is limited.

**GERMAN ...**

Courses and programmes in German are administered within the Department of Modern Languages and Linguistics of the Faculty of Humanities. For information and counselling, please contact the departmental office, Togo Salmon Hall, Room 613.

Notes:

1. Students should note that the Department has classified its German language courses under the following categories:

   **Introductory Level Language Course**
   
   - GERMAN 1Z03, 1Z23
   
   **Intermediate Level Language Courses**
   
   - GERMAN 1B03, 1BB3, 2Z03, 2ZZ3
   
   **Advanced Level Language Courses**
   
   - GERMAN 3G03, 3G3, 3CC3, 4203

2. Not all courses are offered on an annual basis. Students should consult the timetable for available courses.

Courses **If no prerequisite is listed, the course is open.**

**GERMAN 1B03 INTERMEDIATE GERMAN I**

A course designed to further proficiency in spoken and written German while reviewing grammatical structures. Use is made of original German materials for listening comprehension and reading. Topics on the culture and civilization of the German-speaking peoples are studied. The sequel to this course is GERMAN 1BB3.

Four hours; one term

Prerequisite: OAC German (or Grade 12 U or U/C equivalent) or permission of the Department

Antirequisite: GERMAN 1606, 2203, 2206, 22Z3

Not open to students with credit or registration in GERMAN 1BB3.

The Department reserves the right to place students in the course most appropriate to their abilities.
GERMAN 1BB3 INTERMEDIATE GERMAN I
The course develops further proficiency in spoken and written German while emphasizing more advanced grammatical structures. Material in the original language on the culture of the German-speaking peoples is used extensively for listening comprehension and reading. The sequels to this course are GERMAN 3E03 and 3G03.

Four hours; one term
Prerequisite: GERMAN 1B03 or permission of the Department
Antirequisite: GERMAN 1B06, 2Z06, 2Z23
The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 1C03 INTRODUCTION TO THE GERMAN WORLD
A course on German Culture, taught in English. This course presents a chronological overview of the developments in the fields of history, language development, literature, music and art of German-speaking people within the European context.

NOTE: Admission to the Combined Honours in German program requires completion of GERMAN 1BB3 or 1Z23.

Prereq: GERMAN 1B03 or permission of the Department
Antirequisite: OAC German (or Grade 12 U or UIC equivalent), GERMAN 1B06
Not open to students with credit or registration in GERMAN 1Z23.
The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 1Z03 BEGINNER'S INTENSIVE GERMAN I
This course is designed to give students a basic knowledge of German grammar and a reasonable amount of speaking and reading skills. Small tutorial groups ensure maximum participation by each student. This course is enhanced by a CD-ROM and a Web-Page. The sequel to this course is GERMAN 1Z23.

Four hours; one term
Antirequisite: OAC German (or Grade 12 U or UIC equivalent), GERMAN 1Z06
Not open to students with credit or registration in GERMAN 1Z23.
The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 1Z23 BEGINNER'S INTENSIVE GERMAN II
This course is designed to introduce more advanced grammatical structures and to practice speaking, reading and writing skills. Students will be able to express themselves reasonably in German. Small tutorial groups ensure maximum participation by each student. This course is enhanced by a CD-ROM and a Web-Page. The sequel to this course is GERMAN 2Z03.

Four hours; one term
Prerequisite: GERMAN 1Z03 or permission of the Department
Antirequisite: OAC German (or Grade 12 U or UIC equivalent), GERMAN 1Z06
The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 2A03 INTRODUCTION TO GERMAN LITERATURE
Lectures outline the development of German literature against its cultural background and through readings of literary texts.

Three hours; one term
Prerequisite: One of GERMAN 1B06, 1B33, 2Z06, 2Z23; or concurrent registration in GERMAN 2Z03 or 2Z23

GERMAN 2C03 GERMANY THROUGH THE AGES: CULTURE AND SOCIETY
Historical and cultural events as well as personalities which have shaped German culture and society are examined. Texts are taken from various genres: literature, journalism, history, the fine arts, etc.

Three hours; one term
Prerequisite: One of GERMAN 1B06, 1B33, 2Z06 or 2Z23; or concurrent registration in GERMAN 2Z03 or 2Z23

GERMAN 2Z03 INTERMEDIATE GERMAN I
A course designed to further proficiency in spoken and written German. Extensive use is made of original German materials for listening comprehension and reading. There will also be an introduction to the culture and civilization of the German-speaking peoples. The sequel to this course is GERMAN 2Z23.

Three hours; one term
Prerequisite: One of GERMAN 1Z06, 1Z23 or permission of the Department
Antirequisite: GERMAN 1B03, 1B06, 2Z06
Not open to students with credit or registration in GERMAN 2Z23.
The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 2Z23 INTERMEDIATE GERMAN II
The course develops further proficiency in spoken and written German while emphasizing more advanced grammatical structures. Material in the original language on the culture and civilization of the German-speaking peoples is used extensively for listening comprehension and reading. The sequels to this course are GERMAN 3E03 and 3G03.

Three hours; one term
Prerequisite: GERMAN 2Z03 or permission of the Department
Antirequisite: GERMAN 1B06, 1B33, 2Z06
The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 3E03 GERMAN GRAMMAR
A systematic review of grammar; this knowledge will be applied to writing short essays and translations. The sequel to this course is GERMAN 4Z03.

Three hours; one term
Prerequisite: One of GERMAN 1B06, 1B33, 2Z06 or 2Z23
Antirequisite: GERMAN 2E03
The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 3G03 PRACTICE IN GERMAN
The course develops the skills of speaking, writing and listening comprehension. Emphasis will be on fluent and correct expression. The sequel to this course is GERMAN 4Z03.

Three hours; one term
Prerequisite: One of GERMAN 1B06, 1B33, 2Z06 or 2Z23
Antirequisite: GERMAN 2G03
Priority is given to students in a programme 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
Principles in the translation of texts of a literary and non-literary nature. (English to German and German to English). This course makes use of a special Annotated Screens program available in the Humanities Computer Laboratory.

Three hours; one term
Prerequisite: GERMAN 3Z03 or 4Z03

GERMAN 4F03 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.

Three lectures; one term
Prerequisite: GERMAN 2A03 or 2C03
Alternates with GERMAN 4H03.

GERMAN 4H03 GERMAN LANGUAGE THROUGH THE AGES
The course follows the development of the German language from its Indo-European origin to the present situation in three German speaking countries. Selected texts from major writers of the Old and Middle High German periods, as well as works on linguistic and social history of the German language will be studied.

Three lectures; one term
Prerequisite: Nine units of German above Level I
Alternates with GERMAN 4F03.
GERMAN 4113 INDEPENDENT STUDY
The student will prepare, under the supervision of a faculty member, a research paper involving independent study in an area where the student has already demonstrated competence.
Prerequisite: 12 units of German above Level I and permission of the Department.

GERMAN 4T03 TOPICS IN GERMAN LITERATURE
Possible Topics: Kafka after Kafka; German Expressionism and Film; German Literature of Exile and the Inner Emigration; The Legacy of the Holocaust in German Film and Fiction; Berlin/Vienna; The Cultural Life of a City; The Literature of Reunification, etc. Consult with the Department concerning topics to be offered.
Three lectures; one term
Prerequisite: GERMAN 2A03 or 2C03
Note: GERMAN 4T03 may be repeated, if on a different topic, to a total of six units.

GERMAN 4Z03 ADVANCED LANGUAGE PRACTICE
A course designed to increase the student's facility in oral and written communication. Students will be required to express their views on a variety of topics in written assignments and class discussions. Extensive reading will expand the student's vocabulary and improve general language ability.
Three hours; one term
Prerequisite: GERMAN 2E03 or 3E03
Antirequisite: GERMAN 3Z03

HISPANIC STUDIES...
Courses and programmes in Hispanic Studies are administered within the Department of Modern Languages and Linguistics of the Faculty of Humanities. For information and counselling, please contact the departmental office, Togo Salmon Hall, Room 613.

Notes:
1. Students should note that the Department has classified its Spanish language courses under the following categories:
   - Introductory Level Language Course
   - 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.

Courses: If no prerequisite is listed, the course is open.

HISPANIC 1A03 INTERMEDIATE SPANISH I
First part of an intensive review of the grammatical structures of Spanish. Emphasis will be on composition, expansion of vocabulary and oral practice. Written works in the original will be studied. The sequel to this course is HISPANIC 1A03.
Three hours; one term
Prerequisite: OAC Spanish (or Grade 12 U or U/C equivalent) or permission of the Department.
Antirequisite: HISPANIC 1A06, 2Z03, 2Z06, 2ZZ3
Not open to students with credit or registration in HISPANIC 1A03.
The Department reserves the right to place students in the course most appropriate to their abilities.

HISPANIC 1A04 INTERMEDIATE SPANISH II
Second part of an intensive review of grammatical structures of Spanish. Emphasis will be on composition, expansion of vocabulary and oral practice. Written works in the original will be studied. The sequel to this course is HISPANIC 2A03.
Three hours; one term
Prerequisite: HISPANIC 1A03 or permission of the Department.
Antirequisite: HISPANIC 1A06, 2206, 22Z3
The Department reserves the right to place students in the course most appropriate to their abilities.

HISPANIC 1Z03 BEGINNER'S INTENSIVE SPANISH I
No prior knowledge of the language is needed to take this course. Basic vocabulary and grammatical structures are studied. Focus is on reading and writing, but students completing this level should be able to understand and speak reasonably well. This course is enhanced by a Computer Assisted Language Learning (CALL) module. The sequel to this course is HISPANIC 1Z23.
Four hours; one term
Antirequisite: OAC Spanish (or Grade 12 U or U/C equivalent) or prior knowledge of Spanish, HISPANIC 1Z06.
The Department reserves the right to place students in the course most appropriate to their abilities.

HISPANIC 1Z23 BEGINNER'S INTENSIVE SPANISH II
A continuation of HISPANIC 1Z03, students shall broaden their grammar base and expand their vocabulary to the point where they will be able to exchange information (orally and in writing) in contexts that reflect real situations. This course is enhanced by a Computer Assisted Language Learning (CALL) module. The sequel to this course is HISPANIC 2Z03.
Four hours; one term
Prerequisite: HISPANIC 1Z03 or permission of the Department.
Antirequisite: OAC Spanish (or Grade 12 U or U/C equivalent) or prior knowledge of Spanish, HISPANIC 1Z06.
The Department reserves the right to place students in the course most appropriate to their abilities.

HISPANIC 2A03 LANGUAGE PRACTICE
A course devoted to the expansion of vocabulary, the improvement of comprehension, and the achievement of greater confidence and versatility in the language by using different and creative forms of communication. The sequel to this course is HISPANIC 3A03.
Three hours; one term
Prerequisite: One of HISPANIC 1A06, 1A03, 2206 or 2ZZ3; or concurrent registration in HISPANIC 2Z03, or permission of the Department.
Not available to students who have native fluency in Spanish.
The Department reserves the right to place students in the course most appropriate to their abilities.

HISPANIC 2B03 INTRODUCTION TO SPANISH LITERATURE AND CIVILIZATION
A survey of Spanish literature from the Middle Ages to the present. Discussions will bring into focus the historical, intellectual and aesthetic context in which this literature flourished.
Three lectures; one term
Prerequisite: One of HISPANIC 1A06, 1A03 or 22Z3

HISPANIC 2L03 SPANISH AMERICAN LITERATURE AND CIVILIZATION
A survey of Spanish American literature from the fifteenth century to the present. The most significant cultural currents and representative writers will be covered with the purpose of understanding the development of literary genres and the cultural, political and social context in which they flourished.
Three lectures; one term
Prerequisite: One of HISPANIC 1A06, 1A03 or 2ZZ3

HISPANIC 2Z03 INTERMEDIATE SPANISH I
A continuation of HISPANIC 1Z03, students shall broaden their grammar base and expand their vocabulary to the point where they will be able to exchange information (orally and in writing) in contexts that reflect real situations. This course is enhanced by a Computer Assisted Language Learning (CALL) module. The sequel to this course is HISPANIC 2ZZ3.
Three hours; one term
Prerequisite: One of HISPANIC 1Z06, 1ZZ3, 2206 or 22Z3; or concurrent registration in HISPANIC 2Z03, or permission of the Department.
The Department reserves the right to place students in the course most appropriate to their abilities.

HISPANIC 2ZZ3 INTERMEDIATE SPANISH II
Second part of an intensive review of grammatical structures of Spanish. Emphasis will be on composition, expansion of vocabulary and oral practice. Written works in the original will be studied. The sequel to this course is HISPANIC 3Z03.
Three hours; one term
Prerequisite: HISPANIC 2Z03 or permission of the Department.
Antirequisite: HISPANIC 1A06, 1A03, 1ZZ3, 2206
The Department reserves the right to place students in the course most appropriate to their abilities.

HISPANIC 3A03 ADVANCED GRAMMAR AND COMPOSITION I
The emphasis is on clarity, precision, conciseness and other pertinent aspects of the language. Students will prepare written works such as letters, memos, application forms and résumés and will develop related vocabulary. The sequel to this course is HISPANIC 3D03.
Three hours; one term
Prerequisite: HISPANIC 2A03
The student will prepare, focusing primarily on prose and poetry.

Prerequisite: Nine units of Hispanic Studies above Level I, including HISPANIC 2L03

Offered in alternate years.

HISPANIC 4F03 SURVEY OF MEDIEVAL AND RENAISSANCE LITERATURE

This course will study Spain's literary masterpieces of these periods, focusing primarily on prose and poetry.

Three lectures; one term

Prerequisite: Nine units of Hispanic Studies above Level I, including HISPANIC 2L03

Offered in alternate years.

HISPANIC 4F3 SURVEY OF SPANISH THEATRE

This course will focus on the major developments in Spanish drama and stage from Lope to Lorca.

Three lectures; one term

Prerequisite: Nine units of Hispanic Studies above Level I, including HISPANIC 2L03

Offered in alternate years.

HISPANIC 4H03 SPANISH NOVEL OF THE 19TH- AND 20TH-CENTURIES

This course will examine the masterpieces and trends of the Spanish novel over the last 150 years.

Three lectures; one term

Prerequisite: Nine units of Hispanic Studies above Level I, including HISPANIC 2B03

Offered in alternate years.

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.

ITALIAN 1A03 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 1A03.

Four hours; one term

Prerequisite: OAC Italian (or Grade 12 U or U/C equivalent) or other equivalent or permission of the Department

Antirequisite: ITALIAN 1A06, 2Z03, 2Z06

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 1A03 INTERMEDIATE ITALIAN

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 1A03.

Four hours; one term

Prerequisite: ITALIAN 1A03 or permission of the Department

Antirequisite: ITALIAN 1A06, 2Z03, 2Z06

The Department reserves the right to place students in the course most appropriate to their abilities.

ITALIAN 1C03 BEGINNER'S INTENSIVE ITALIAN

The course gives the student a basic knowledge of Italian grammar and the opportunity to practice the spoken language. The course is enhanced by a CALL (Computer-Aided Language Learning) module. The sequel to this course is ITALIAN 1C03.

Four hours; one term

Antirequisite: OAC Italian (or Grade 12 U or U/C equivalent) or other equivalent, ITALIAN 1D03, 1D06, 1D26, 1Z26

The Department reserves the right to place students in the course most appropriate to their abilities.

Enrollment is limited.

ITALIAN 1C03 BEGINNER'S INTENSIVE ITALIAN

The course builds on the grammatical structures acquired through 1C03 and offers students the opportunity to practice the spoken language. The course is enhanced by a CALL (Computer-Aided Language Learning) module. The sequel to this course is ITALIAN 2Z03.

Four hours; one term

Prerequisite: ITALIAN 1C03 or permission of the Department

Antirequisite: OAC Italian (or Grade 12 U or U/C equivalent) or other equivalent, ITALIAN 1D03, 1D06, 1D26, 1Z26

The Department reserves the right to place students in the course most appropriate to their abilities.

Enrollment is limited.

ITALIAN 2F03 CONTEMPORARY ITALIAN LITERATURE AND CULTURE

This course will study Italian literature from Fascism and the Second World War, focusing on Neorealism in literature and film, and on major contemporary authors.

Three lectures; one term

Prerequisite: One of ITALIAN 1A06, 1AA3, 2Z03, 2Z06 or concurrent registration-in ITALIAN 2Z03

ITALIAN 2G03 ITAL Y THROUGH THE AGES

The development of Italian literary forms from the Middle Ages to the present. Selected texts from major authors placed in their historical contexts.

Three lectures; one term

Prerequisite: One of ITALIAN 1A06, 1AA3, 2Z03, 2Z06 or concurrent registration in ITALIAN 2Z03

Notes:
1. Students should note that the Department has classified its Italian language courses under the following categories:

   Introductory Level Language Courses
   ITALIAN 1C03, 1C05

   Intermediate Level Language Courses
   ITALIAN 1A03, 1AA3, 2Z03, 2Z23

   Advanced Level Language Courses
   ITALIAN 3A03, 3D03, 4A03, 4B03

2. Not all courses are offered on an annual basis. Students should consult the timetable for available courses.
ITALIAN 2Z03 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 2ZZ3.
Four hours; one term
Prerequisite: One of ITALIAN 1C03, 1D03, 1D05, 1Z06 or permission of the Department
Antirequisite: ITALIAN 1A06, 1AA3, 2Z06, 2ZZ3
The Department reserves the right to place students in the course most appropriate to their abilities.

ITALIAN 2Z03 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 2Z03 or permission of the Department
Antirequisite: ITALIAN 1A06, 1AA3, 2Z06
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 1A06, 1AA3, 2Z06, 2ZZ3 or permission of the Department
Antirequisite: ITALIAN 2A03, 2G03

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: One of ITALIAN 2G03, 3A03 or permission of the Department

ITALIAN 3N03 EARLY TWENTIETH-CENTURY ITALIAN LITERATURE AND CULTURE
This course will study Italian literature and drama with emphasis on D’Annunzio, Svevo, Pirandello and the Hermetic school of poetry.
Three lectures; one term
Prerequisite: One of ITALIAN 1A06, 1AA3, 2Z06 or 2ZZ3
Offered in alternate years.

ITALIAN 3R03 DANTE
This course will focus on the Divina Commedia, with special reference to its historical and literary significance.
Three lectures; one term
Prerequisite: One of ITALIAN 1A06, 1AA3, 2Z06 or 2ZZ3
Offered in alternate years.

ITALIAN 3RR3 BOCCACCIO AND PETRARCH
A study of Petrarch’s Canzoniere and Boccaccio’s Decameron.
Three lectures; one term
Prerequisite: One of ITALIAN 1A06, 1AA3, 2Z06 or 2ZZ3
Offered in alternate years.

ITALIAN 4A03 COMPOSITION AND STYLISTICS II
An advanced course in composition and stylistics designed to develop the student’s skills in critical writing and oral expression. The sequel to this course is ITALIAN 4B03.
Three hours; one term
Prerequisite: ITALIAN 3D03
Antirequisite: ITALIAN 4M03

ITALIAN 4B03 INTRODUCTION TO TRANSLATION
A course designed to introduce the students to the basic techniques of translation from English to Italian and from Italian to English, including comparative stylistics. Translation materials will be selected from contemporary literary and journalistic sources.
Three hours; one term
Prerequisite: ITALIAN 4A03 or permission of the Department

ITALIAN 4G03 NINETEENTH-CENTURY ITALIAN LITERATURE AND CULTURE
This course will study Italian poetry, fiction and drama, with special emphasis on the works of Foscolo, Manzoni, Leopardi, Carducci, Verga, Fogazzaro and Pascoli.
Three lectures; one term
Prerequisite: One of ITALIAN 1A06, 1AA3; 2Z06 or 2ZZ3
Offered in alternate years.

ITALIAN 4L03 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 Italian above Level I and permission of the Department

ITALIAN 4R03 RENAISSANCE
A study of the literature of the Renaissance.
Three lectures; one term
Prerequisite: One of ITALIAN 1A06, 1AA3, 2Z06 or 2ZZ3
Offered in alternate years.

ITALIAN 4T03 TOPICS IN ITALIAN LITERATURE
Previous topics include: Italian drama, Italian Romantic opera, political literature of the eighteenth and nineteenth centuries. Consult the Department concerning topic to be offered.
Three lectures; one term
Prerequisite: One of ITALIAN 1A06, 1AA3, 2Z06 or 2ZZ3
ITALIAN 4T03 may be repeated, if on a different topic, to a total of six units.
Offered in alternate years.

JAPANESE...

Japanese courses are administered within the Department of Modern Languages and Linguistics of the Faculty of Humanities. The Combined Honours in Japanese Studies and Another Subject Programme is coordinated by an Interdisciplinary Committee of Instruction. For Information and counselling, please contact the departmental office, Togo Salmon Hall, Room 611.

Committee of Instruction
Directors
David P. Barrett (History)
Eiko Virginia Ariga (Modern Languages and Linguistics)
Kenneth S. Chan (Economics)
J.S. Chang (Engineering Physics)
Phyllis Granoff (Religious Studies)
Tsuneo Iwai (Modern Languages and Linguistics)
K. L. Liaw (Geography and Geology)
Kohchi Shinohara (Religious Studies)
Richard Stubbs (Political Science)
Francoise Winnick (Chemistry)

Note:
Not all courses are offered on an annual basis. Students should consult the timetable for available courses.

Courses
If no prerequisite is listed, the course is open.

JAPANESE 1Z03 BEGINNER’S INTENSIVE JAPANESE I
This course provides students with an introductory knowledge of spoken and written Japanese. Acquisition of basic grammar, hieroglyph 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 1Z23.
Four hours; one term
Prerequisite: OAC Japanese (or Grade 12 U or U/C equivalent) or other equivalent, JAPANESE 1Z06
Not open to students with credit in JAPANESE 1ZZ3.
The Department reserves the right to place students in the course most appropriate to their abilities.
Enrolment is limited.

JAPANESE 1Z23 BEGINNER’S INTENSIVE JAPANESE II
This course focuses on developing proficiency in the four skills of listening, speaking, reading, and writing. Kanji (Chinese characters) will be introduced. Writing skill in hiragana and katakana script is required. The sequel to this course is JAPANESE 2Z03.
Four hours; one term
Prerequisite: JAPANESE 1Z03 or permission of the Department
Antirequisite: OAC Japanese (or Grade 12 U or U/C equivalent) or other equivalent, JAPANESE 1Z06
The Department reserves the right to place students in the course most appropriate to their abilities.
Enrolment is limited.
JAPANESE 2203 INTERMEDIATE INTENSIVE JAPANESE
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: A grade of at least B- in JAPANESE 1Z06 or 1Z23; or permission of the instructor
Antirequisite: JAPANESE 2206
Not open to students with credit in JAPANESE 2223.
The Department reserves the right to place students in the course most appropriate to their abilities.

JAPANESE 2223 INTERMEDIATE INTENSIVE JAPANESE II
This course aims to develop 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 or permission of the Instructor
Antirequisite: JAPANESE 2206
The Department reserves the right to place students in the course most appropriate to their abilities.

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 3A33.
Four hours; one term
Prerequisite: One of JAPANESE 2206, 2223 or permission of the instructor
Antirequisite: JAPANESE 3ZZ6
The Department reserves the right to place students in the course most appropriate to their abilities.

JAPANESE 3A33 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 4Z03.
Four hours; one term
Prerequisite: JAPANESE 3A03 or permission of the instructor
Antirequisite: JAPANESE 3ZZ6
The Department reserves the right to place students in the course most appropriate to their abilities.

JAPANESE 3B03 BUSINESS JAPANESE I
Three hours; one term
Prerequisite: One of JAPANESE 2206, 2223 or permission of the instructor
Enrolment is limited.

JAPANESE 3C03 BUSINESS JAPANESE II
A continuation of JAPANESE 3B03. This course focuses on a further study of Japanese language in a context of Japanese business practices, values and customs. Oral and aural proficiency are emphasized.
Three hours; one term
Prerequisite: JAPANESE 3B03 or permission of the instructor
Offered in alternate years.
Enrolment is limited.

JAPANESE 4L03 JAPANESE LITERATURE
Readings in the original of contemporary Japanese prose and poetry (Hakku and Tanke). Previous readings include: Haruki Murakami, Akutagawa, Hiyoyuki Itoku, Kenzaburo Oe, Toson, Shiki, Basho. Consult the Department for readings to be offered.
Three lectures; one term
Prerequisite: One of JAPANESE 3AA3, 3ZZ6 or permission of the instructor

JAPANESE 4Z03 ADVANCED PRACTICE IN JAPANESE
This course is designed to improve and increase the student's spoken and written proficiency through selected readings, exercises and class discussions.
Three hours; one term
Prerequisite: One of JAPANESE 3AA3, 3ZZ6 or permission of the instructor

JAPANESE STUDIES...

JAPAN ST 2A03 JAPANESE COMMUNICATION
This course looks at the Japanese language from sociolinguistic and pragmatic points of view identifying the unique characteristics of the target culture that lie behind its use. Such knowledge is invaluable in solving problems of intercultural communication.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: CMST 2A03

JAPAN ST 2C03 ASIA-PACIFIC ECONOMIES
Economic conditions and factors influencing economic growth in selected countries in the Asia-Pacific region. Topics include government policies related to exchange rates and trade and development, as well as the Japanese style of management, the bonus system and job tenure.
Three hours; one term
Prerequisite: ECON 1A06
Cross-list: ECON 2003
This course is administered by the Department of Economics.

JAPAN ST 2F03 THE CONTEMPORARY JAPANESE FILM
This course examines the development of Japanese films since the Second World War, including contemporary feature films and animations, exploring the rich legacy of directors such as Akira Kurosawa, Kon Ichikawa, Juzo Itami and Masayuki Suo, and animation directors such as Hayao Miyazaki and Isao Takahata.
Two lectures, plus one weekly film screening; one term
Prerequisite: Registration in Level II or above
Cross-list: THTR&FLM 2H03
Offered in alternate years.

JAPAN ST 2P06 JAPANESE CIVILIZATION
Introduction to Japanese history, society, and culture through a study of religious traditions, literature, art of Japan.
Two lectures, one tutorial; two terms
Prerequisite: Registration in Level II or above
Cross-list: RELIG ST 2P06
This course is administered by the Department of Religious Studies.

JAPAN ST 3B03 MODERN JAPAN
A survey of 19th- and 20th-century Japan, with emphasis on political developments, social change, and Japan's relations with East Asia and the West.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 3B03
This course is administered by the Department of History.

JAPAN ST 3E03 JAPANESE RELIGION
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above. One of RELIG ST 1B06, 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 III or above
Cross-list: ARTSSCI 3H03, RELIG ST 3H03
This course is administered by the Department of Religious Studies.

JAPAN ST 3P03 JAPANESE CIVILIZATION IN TRANSLATION
This is a survey course of major works in 20th-century Japanese literature with an emphasis on fiction published since the Second World War.
Readings include Soseki, Toson, Masaui Ibuske, Kenzaburo Oe and Haruki Murakami.
LINGUISTICS

Linguistics courses and programmes are administered within the Department of Modern Languages and Linguistics of the Faculty of Humanities. For information and counselling, please contact the departmental office, Togo Salmon Hall, Room 613.

Note:
Not all courses are offered on an annual basis. Students should consult the timetable for available courses.

Courses

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
Antirequisite: LINGUIST 1A06

LINGUIST 1A03 INTRODUCTION TO LINGUISTICS II
This course is a continuation of LINGUIST 1A03, and completes the introduction to linguistics. Emphasis will be placed on syntax, semantics, typology, historical linguistics and applied linguistics.
Two lectures, one tutorial; one term
Antirequisite: LINGUIST 1A06

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 2L03
Antirequisite: ANTHROP 2AL3
This course is administered by the Department of Modern Languages and Linguistics.

LINGUIST 2A03 HISTORICAL LINGUISTICS: THE DEVELOPMENT OF INDO-EUROPEAN LANGUAGES
The phonetic, morphological, syntactic and lexical structures of Indo-European languages and the role of these features in the genesis and development of the Indo-European-based languages of Europe.
Three lectures; one term
Prerequisite: LINGUIST 1A03 and 1A06 (or 1A05); or permission of the Department
Antirequisite: ANTHROP 2A03

LINGUIST 2E03 THE NATURE OF TEXTS: FROM SLANG TO FORMAL DISCOURSE
This course will investigate a variety of styles and registers from the conversational to the literary and academic.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: CMST 2E03
This course is administered by the Department of Modern Languages and Linguistics.

LINGUIST 2L03 PHONETICS
A study of the sounds of language and human articulatory capabilities.
Three lectures; one term
Prerequisite: LINGUIST 1A03 or permission of the instructor
Cross-list: ANTHROP 2L03
This course is administered by the Department of Modern Languages and Linguistics.

LINGUIST 2L3 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 1A05); or permission of the department
Cross-list: ANTHROP 2L3
This course is administered by the Department of Modern Languages and Linguistics.

LINGUIST 2M03 PHONOLOGY
A study of the patterns of distinctive sounds in the world's languages.
Three lectures; one term
Prerequisite: LINGUIST 1A03, 2L03
Cross-list: ANTHROP 2M03
This course is administered by the Department of Modern Languages and Linguistics.

LINGUIST 3B03 PSYCHOLINGUISTICS
The study of perception, production and acquisition of language. Special attention is paid to methods of psycho- and neurolinguistic research and to their connection with theoretical linguistics.
Three hours; one term
Prerequisite: LINGUIST 3L03 or 3M03; or LINGUIST 1A03 and 1A06 (or 1A05) and PSYCH 2H03; or permission of the Department
Cross-list: PSYCH 3B03
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

LINGUIST 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; one term
Prerequisite: One of ANTHROP 2L3, 2L3 or permission of the Department
Cross-list: ANTHROP 3I03
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

LINGUIST 3I13 SEMANTICS
The study of patterns of meaning in language; a critical survey of theories and issues.
Three hours; one term
Prerequisite: One of ANTHROP 3I03, 3M03, LINGUIST 3I03, 3M03 or permission of the Department
Cross-list: ANTHROP 3I3
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.
LINGUIST 3M03  **MORPHOLOGY**  
The study of word formation in the languages of the world; a critical survey of current theories and issues.  
Three lectures; one term.  
Prerequisite: One of LINGUIST 2LL3, ANTHROP 2LL3 or permission of the Department.  
Cross-list: ANTHROP 3M03  
Offered in alternate years.  
This course is administered by the Department of Modern Languages and Linguistics.  

LINGUIST 3P03  **PRAGMATICS AND DISCOURSE**  
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.  
Prerequisite: LINGUIST 1A03 and 1AA3 (or 1A06); or FRENCH 2H03; or permission of the Department.  
Cross-list: CMST 3P03  
Antirequisite: ANTHROP 3P03  
Offered in alternate years.  
This course is administered by the Department of Modern Languages and Linguistics.  

LINGUIST 3X03  **INTRODUCTION TO SOCIOLINGUISTICS**  
An introduction to sociolinguistics with particular emphasis on the social situation of the major European languages. Topics covered include linguistic variation (regional, social, situational), language and gender, language and disadvantage/power, language choice, language change, pidgin and creole languages.  
Three lectures; one term.  
Prerequisite: LINGUIST 1A03 and 1AA3 (or 1A06); or permission of the Department.  
Cross-list: CMST 3X03  
Antirequisite: ANTHROP 3X03  
This course is administered by the Department of Modern Languages and Linguistics.  

LINGUIST 4B03  **APPLIED LINGUISTICS**  
The course is designed to acquaint the student with the contributions that the linguist, psycholinguist, sociolinguist can make to second language learning and teaching.  
Three lectures; one term.  
Prerequisite: Registration in Level III or IV of a Linguistics programme or permission of the Department.  
Cross-list: CMST 4B03  
Antirequisite: ANTHROP 4B03  
Alternates with LINGUIST 4B83.  
This course is administered by the Department of Modern Languages and Linguistics.  

LINGUIST 4B83  **TOPICS IN THE APPLICATION OF LINGUISTICS**  
This seminar course looks at how linguistics is applied in fields other than language learning. Topics include: translation theory; forensic linguistics; ecolinguistics. Consult the Department for the topic to be offered.  
Seminar (two hours); one practicum per week; one term.  
Prerequisite: Registration in Level III or IV of a programme in Linguistics, or permission of the Department.  
Cross-list: CMST 4B83  
Alternates with LINGUIST 4B03.  
LINGUIST 4B83 may be repeated, if on a different topic, to a total of six units.  
This course is administered by the Department of Modern Languages and Linguistics.  

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: Registration in Level III or IV of a Linguistics programme or permission of the Department.  
Cross-list: CMST 4D03  
Offered in alternate years.  
This course is administered by the Department of Modern Languages and Linguistics.  

LINGUIST 4D13  **INDEPENDENT STUDY**  
The student will prepare, under the supervision of a faculty member, a research paper involving independent study in an area where the student has already demonstrated competence.  
Prerequisite: 18 units of Linguistics above Level I and permission of the Department.  

LINGUIST 4L03  **STRUCTURE OF A LANGUAGE I**  
An in-depth examination of a language, usually one from the Caucasus, such as Circassian, Georgian, or Chechen. The phonetics, phonology, and morphology will be emphasized.  
Three lectures; one term.  
Prerequisite: Nine units of Linguistics or Linguistic Anthropology courses above Level I.  
Cross-list: ANTHROP 4L03  
Antirequisite: ANTHROP 4L03, LINGUIST 4L03  
This course is administered by the Department of Modern Languages and Linguistics.  

LINGUIST 4L04  **STRUCTURE OF A LANGUAGE II**  
An in-depth examination of a language, usually one from the Caucasus, such as Circassian, Georgian, or Chechen. The syntax, semantics, and discourse structure will be emphasized.  
Three lectures; one term.  
Prerequisite: Nine units of Linguistics or Linguistic Anthropology courses above Level I.  
Cross-list: ANTHROP 4L04  
Antirequisite: ANTHROP 4L04, LINGUIST 4L04  
This course is administered by the Department of Modern Languages and Linguistics.  

LINGUIST 4X03  **TOPICS IN SOCIOLINGUISTICS**  
Topics include: Languages in Contact; Standard Languages; Gender and Language. Consult the Department for the topic to be offered.  
Seminar (two hours); one term.  
Prerequisite: LINGUIST 3X03  
Cross-list: CMST 4X03  
LINGUIST 4X03 may be repeated, if on a different topic, to a total of six units.  
Offered in alternate years.  
This course is administered by the Department of Modern Languages and Linguistics.  

LINGUIST 4X03  **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 3X03 or 3M03  
Cross-list: ANTHROP 4X03  
LINGUIST 4X03 may be repeated, if on a different topic, to a total of six units.  
Offered in alternate years.  
This course is administered by the Department of Modern Languages and Linguistics.  

LINGUIST 4XX3  **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 3B03 or PSYCH 3B83  
Cross-list: PSYCH 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 Modern Languages and Linguistics.  

POLISH ...  

Courses in Polish are administered within the Department of Modern Languages and Linguistics of the Faculty of Humanities. For information and counselling, please contact the departmental office, Togo Salmon Hall, Room 613.  

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 POLISH 4A03 or 4AA3.

3. Courses are offered on a three-year rotation basis. Students should consult the timetable for available courses.

Courses
If no prerequisite is listed, the course is open.

POLISH 2A03 BEGINNER’S POLISH I
An introduction to basic conversational and written Polish, teaching the skills of listening, speaking, and writing. The sequel to this course is POLISH 2AA3.

Four hours; one term
Prerequisite: POLISH 1Z03, 1Z06
Not open to students with a prior knowledge of Polish.

The Department reserves the right to place students in the course most appropriate to their abilities.

Enrolment is limited.

POLISH 2AA3 BEGINNER’S POLISH II
A course designed to further the student’s command of oral and written Polish. The sequel to this course is POLISH 3A03.

Four hours; one term
Prerequisite: One of POLISH 1Z03, 2A03 or permission of the Department
Antirequisite: POLISH 1Z23, 1Z06

The Department reserves the right to place students in the course most appropriate to their abilities.

Enrolment is limited.

POLISH 3A03 INTERMEDIATE POLISH I
This course concentrates on the study of Polish grammar and develops skills for conversation, reading and writing. The sequel to this course is POLISH 3AA3.

Four hours; one term
Prerequisite: One of POLISH 1Z03, 2A03 or permission of the Department
Antirequisite: POLISH 1Z23, 1Z06

The Department reserves the right to place students in the course most appropriate to their abilities.

Enrolment is limited.

POLISH 3AA3 INTERMEDIATE POLISH II
This course concentrates on the study of grammatical structures and rules of composition. It develops written and oral skills. The sequel to this course is POLISH 4A03.

Four hours; one term
Prerequisite: POLISH 3A03 or permission of the Department
Antirequisite: POLISH 2Z06

The Department reserves the right to place students in the course most appropriate to their abilities.

Enrolment is limited.

POLISH 4A03 ADVANCED POLISH I
This course focuses on the study of more advanced syntax, composition and conversation, using short modern texts and films.

Three hours; one term
Prerequisite: POLISH 3A03 or permission of the Department

The Department reserves the right to place students in the course most appropriate to their abilities.

Offered on a three-year rotation basis. Offered in 2002-2003.
Enrolment is limited.

POLISH 4AA3 ADVANCED POLISH II
This course focuses on the study of stylistic variation of different text types and on translation practice to and from Polish.

Three hours; one term
Prerequisite: POLISH 4A03 or permission of the Department

The Department reserves the right to place students in the course most appropriate to their abilities.

Offered on a three-year rotation basis. Offered in 2002-2003.
Enrolment is limited.

Notes:
1. 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

   Not all courses are offered on an annual basis. Students should consult the timetable for available courses.

   Courses
If no prerequisite is listed, the course is open.

RUSSIAN 2A03 INTENSIVE BEGINNER’S RUSSIAN I
Formerly: RUSSIAN 1Z03

This course consists of an intensive study of Russian vocabulary and grammar, with further emphasis on spoken Russian. The course is enhanced by CALL (Computer-Loaded Language Learning) module. The sequel to this course is RUSSIAN 2AA3.

Four hours; one term
Prerequisite: OAC Russian (or Grade 12 U or UC equivalent), RUSSIAN 1Z03, 1Z06

Not open to students with credit or registration in RUSSIAN 2A03 or credit in RUSSIAN 1Z23. The Department reserves the right to place students in the course most appropriate to their abilities.

RUSSIAN 2AA3 INTENSIVE BEGINNER’S RUSSIAN II
Formerly: RUSSIAN 1Z23

This course continues the study of Russian grammar with further emphasis on spoken Russian and enhancement by CALL (Computer-Loaded Language Learning) module. The sequel to this course is RUSSIAN 3AA3.

Four hours; one term
Prerequisite: RUSSIAN 1Z03 or 2A03
Antirequisite: OAC Russian (or Grade 12 U or UC equivalent), RUSSIAN 1Z03, 1Z23

The Department reserves the right to place students in the course most appropriate to their abilities.

RUSSIAN 3A03 INTERMEDIATE RUSSIAN I
Formerly: RUSSIAN 2203

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 3AA3.

Four hours; one term
Prerequisite: One of RUSSIAN 1Z06, 1Z23, 2AA3
Antirequisite: RUSSIAN 2C06, 2Z03

Not open to students with credit or registration in RUSSIAN 3AA3 or credit in RUSSIAN 2Z23. The Department reserves the right to place students in the course most appropriate to their abilities.


RUSSIAN 3AA3 INTERMEDIATE RUSSIAN II
Formerly: RUSSIAN 22Z3

Emphasis will be 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 3A03
Antirequisite: RUSSIAN 2C06, 2ZZ3

The Department reserves the right to place students in the course most appropriate to their abilities.

RUSSIAN 4B03  ADVANCED LANGUAGE PRACTICE I
Formerly: RUSSIAN 3G03
The course focuses on the structure of a simple sentence. Reading, writing and conversational skills are developed through the reading and discussion of narrative texts and the writing of short composition. The sequel to this course is RUSSIAN 4BB3 (formerly RUSSIAN 3H03).
Three hours; one term
Prerequisite: One of RUSSIAN 2C06, 2ZZ3, 3AA3 or permission of the Department
Antirequisite: RUSSIAN 3C06, 3G03
The Department reserves the right to place students in the course most appropriate to their abilities.

RUSSIAN 4BB3  ADVANCED RUSSIAN GRAMMAR AND STYLISTICS
Formerly: RUSSIAN 3H03
This course focuses on the study of the compound and complex sentences. Emphasis will be on the reading of selected texts, advanced composition, and stylistics.
Three hours; one term
Prerequisite: RUSSIAN 3G03, 4B03; or permission of the Department
Antirequisite: RUSSIAN 3C06, 3G03, 3H03
The Department reserves the right to place students in the course most appropriate to their abilities.

RUSSIAN 4113  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 Russian above Level I and permission of the Department

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 Biochemistry, Biology and Pathology and the McMaster Institute for Molecular Biology and Biotechnology. Information and counselling may be obtained from the Programme Coordinator in Life Sciences Building, Room 119.

Courses  If no prerequisite is listed, the course is open.

MOL BIOL 4F03  MOLECULAR INVESTIGATIONS IN DEVELOPMENT
Students will investigate a topical problem in developmental biology, make two presentations, and write a research proposal. The research is self- and group-directed.
Three lectures; one term
Prerequisite: One of BIOLOGY 3M03, 3N33 or permission of the instructor
Application for permission must be received by March 31st of the academic year prior to registration.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

MOL BIOL 4J03  MOLECULAR BIOLOGY OF CANCER
Cancer at the cellular and molecular level. Topics include: properties of cancer cells, activation of proto-oncogenes, function of oncogenes, transgenic mouse models, and tumour viruses.
Two lectures; one tutorial; one term
Prerequisite: One of BIOCHEM 3B03, 3BT3, 3D03, 3G03, BIOLOGY 3H03, 3HH3 or permission of the instructor

MOL BIOL 4R09  SENIOR THESIS
A thesis based on a research project in molecular biology supervised or co-supervised by a member of the Department of Biology or the Department of Biochemistry.
Prerequisite: Registration in Level IV Honours Molecular Biology and permission of the Course Coordinator. Application for permission should be made through the Office of the Associate Dean of Science (Studies) by the end of March in Level III. Normally, a CA of at least 8.5 is required.
Antirequisite: BIOCHEM 4L03, 4P03, BIOLOGY 4F06, HTH SCI 3H03, 4A09, 4B09
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

MULTIMEDIA
WEB ADDRESS: http://www humansities.mcmaster.ca/-mcmmedia/
Togo Salmon Hall, Room 414
Ext. 27671
Multimedia is administered within the School of the Arts in the Faculty of Humanities.

Courses  If no prerequisite is listed, the course is open.

MMEDIA 1A03  INTRODUCTION TO COMPUTERS IN THE HUMANITIES
Students will study the history and present state of computing and information technology with particular attention given to issues around communication and electronic texts. Students will also learn skills such as word processing, electronic mail, electronic textbases, how to browse the Internet and how to create a WWW page.
One lecture (two hours), one tutorial; one term
Antirequisite: COMP SCI 1B23, 1S03, 1T03
Enrolment is limited.

MMEDIA 1B03  THE DIGITAL IMAGE
An introduction to the critique and creation of digital images. Readings will explore issues concerning the digital image and graphic design for the Internet. Students will be expected to use graphics software and create WWW pages in order to complete design assignments.
One lecture (two hours), one tutorial; one term
Enrolment is limited.

MMEDIA 1C03  WRITING IN THE ELECTRONICAGE
An introduction to grammar and essay composition in the context of new writing technologies. Students will use supplementary writing software, WWW materials, e-mail discussion lists and readings to explore the effects of information technology on communication.
One lecture, one tutorial, one lab; one term
Enrolment is limited.

MMEDIA 2A03  INTRODUCTION TO MULTIMEDIA
This course presents arts students with the fundamentals of computer-based multimedia. Students will read about and discuss how to critique multimedia works, create such works, and consider the application of multimedia technology.
One lecture (two hours), one tutorial; one term
Prerequisite: Registration in the Combined Honours in Multimedia programme
Enrolment is limited.

MMEDIA 2B03  DIGITAL MEDIA (AUDIO AND VIDEO)
A study of digital media where students will create and critique digital audio and video. Readings will explore the evolution of digital media and the technical and social aspects of digital audio and video.
One lecture (two hours), one tutorial; one term
Prerequisite: Registration in the Combined Honours in Multimedia Programme
Enrolment is limited.

MMEDIA 2C03  COMPUTER ARCHITECTURE FOR MULTIMEDIA
Students will study the fundamentals of microcomputers, operating systems, and multimedia peripherals with emphasis on diagnostic knowledge of the hardware and operating system used for multimedia development. Special attention will be paid to the media acquisition hardware and emerging standards for connecting media devices. Critical readings will cover the history of computing.
One lecture (two hours), one tutorial; one term
Prerequisite: Registration in the Combined Honours in Multimedia Programme
Enrolment is limited.
MMEDIA 2D03  ELECTRONIC TEXTS AND THEIR STUDY
An introduction to the fundamentals of computer-assisted text-analysis in the humanities. In the context of humanities research, students will create encoded electronic texts and learn to use text-analysis tools. Students will be expected to work on projects related to another subject. One lecture (two hours), one tutorial; one term
Prerequisite: One of MMEDIA 1A03, 1B03, 1C03, 2D03
Enrolment is limited.

MMEDIA 2E03  COMPUTER GRAPHICS
This course develops both technical and conceptual aspects of computer drawing using advanced 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
Enrolment is limited.

MMEDIA 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 in forms 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 programme in Art History, Communication Studies or Multimedia. Prior completion of ART HIST 1A03 and 1A03 is recommended.
Cross-list: ART HIST 2F03, CMST 2G03

MMEDIA 2G03  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 Programme or registration in Level II or above of a Music programme
Cross-list: MUSIC 2G03
Enrolment is limited.

MMEDIA 2H03  INTRODUCTION TO ANIMATION
This class will begin with an introduction to the history and basic principles of animation. Students will be expected to create a significant work of computer animation in which they display 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 programme
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 will analyze the persuasive technique of examples of oral communication collected from print and electronic media. There will be a practicum where students deliver an expository speech with multimedia support.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above
Enrolment is limited.

MMEDIA 2A03  ADVANCED MULTIMEDIA
A study of multimedia programming, this course expands 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 programme
Enrolment is limited.

MMEDIA 2B03  TOPICS IN THE PHILOSOPHY AND HISTORY OF COMPUTING
The history and philosophy of computing and communications technology; topics may include: Computers and Culture, The History of Computers and Communications Technology, Computers and Education, and Privacy and the Freedom of Speech in the Electronic Age. Three hours; one term
Prerequisite: Registration in Level III or IV of the Combined Honours in Multimedia programme

MMEDIA 3C03  ADVANCED MIDI AND DIGITAL AUDIO FOR MULTIMEDIA
The creation of digital music and audio. Students work individually and in teams to develop skills for multimedia audio production. Topics include: advanced MIDI, mixing, audio processing, and frequency equalization.
Two lectures, one tutorial; one term
Prerequisite: MMEDIA 2G03 or MUSIC 2Z03
Cross-list: MUSIC 3Z03
Enrolment is limited.

MMEDIA 3D03  TECHNICAL WRITING AND COMMUNICATION
Students will explore issues such as audience analysis, the role of jargon and the conventions of report writing. Students will be introduced to XML and use it to complete a project of their own devising, from proposal to final report and presentation.
One lecture (two hours), one tutorial; one term
Prerequisite: Registration in Level II or above
Enrolment is limited.

MMEDIA 3E03  HYPERTEXT THEORY
This class considers the history of hypertext systems and key theoretical issues in the area of hypertext and hypermedia. Students will try significant hypertext systems and read current theories of hypertext. Assignments will include reviews of hypertexts, presentations, and the creation of a hypertext essay.
One lecture (two hours), one tutorial; one term
Prerequisite: MMEDIA 1A03 or 1C03

MMEDIA 3F03  HUMAN COMPUTER INTERFACE DESIGN
This course explores the history and design of computer interfaces. A variety of design approaches and techniques will be surveyed to understand the relationship between computers and people. Topics such as usability and evaluation of computer interfaces; drama, narrative, and interface; interface and representation; and the politics of interface design will be covered.
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 Programme
Enrolment is limited.

MMEDIA 3G03  NETWORK SERVICES FOR MULTIMEDIA
The fundamentals of network systems and services for multimedia are studied with emphasis on diagnostic knowledge of networked systems and services as used for multimedia deployment. Special attention will be paid to WWW servers. Readings will cover the history of networking, the Internet and the World Wide Web.
One lecture (two hours), one tutorial; one term
Prerequisite: Registration in the Combined Honours in Multimedia Programme
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 in the field. Readings may cover theories and techniques of animation, performance, film and narrative. Students will be expected to 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 programme
Enrolment is limited.

MMEDIA 3I03  ADVANCED DIGITAL VIDEO
Students will explore advanced techniques in digital video production, post-production and delivery. Topics will also cover interactive video, streaming media technologies and integration of digital video within works of multimedia. Students will both create and critique works of digital video. Readings may cover theories of digital culture, visual culture and film.
One lecture (two hours), one lab (one hour every week); one term
Prerequisite: MMEDIA 2I03 and registration in the Combined Honours in Multimedia programme
Enrolment is limited.
MUSIC 3J03 PROGRAMMING FOR THE WEB
In this course, students will learn to build dynamic web sites driven by databases and programmed with server-side and client-side scripting languages. This course is for students with some programming experience. Students will examine operational database-driven sites and work on projects to create new ones. User interface design and documentation for such sites will also be discussed.
One lecture (two hours), one lab (one hour every week); one term
Prerequisite: MMEDIA 3A03 and registration in the Combined Honours in Multimedia programme
Enrolment is limited.

MMEDIA 4A03 THE MANAGEMENT OF MULTIMEDIA
Multimedia development requires knowledge of media and teams of developers. Students will study case histories, learn how to build and manage content collections, and learn how to lead and participate in team-based multimedia production. Readings will 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 Programme (See Programme Note under the heading Multimedia in the Faculty of Humanities section of the Calendar.)

MMEDIA 4B03 SENIOR THESIS PROJECT
The Senior Thesis Project provides students with an opportunity to pursue individual advanced multimedia projects under the supervision of a Thesis Committee. Students will propose a multimedia project and have it approved by the Multimedia Programme Committee. Students will be expected to present their completed project publicly.
One term
Prerequisite: Credit or registration in MMEDIA 4A03 and registration in Level IV of the Combined Honours in Multimedia Programme (See Programme Note under the heading Multimedia in the Faculty of Humanities section of the Calendar.)

MMEDIA 4C03 COMPUTERS AND EDUCATION
This class will survey the history of instructional technology and uses of computers in education. Students will be expected to review instructional materials in their field, and to create, evaluate, and present an instructional application. Students will also be expected to read critiques of technology and discuss the effects of technology on education.
One lecture (two hours), one tutorial; one term
Prerequisite: MMEDIA 3A03

MMEDIA 4D03 VIRTUAL REALITY AND THE DESIGN OF SPACE
This course will introduce students to the design of three-dimensional spaces and to theories of architecture as applied to virtual reality. Computer-Aided Design (CAD) software will be used in order to create projects related to other subjects. Projects might include the design of fictional spaces, sculptural objects, dramatic settings, or archaeological re-creations.
One lecture (two hours), one tutorial; one term
Prerequisite: Registration in Level IV of the Combined Honours in Multimedia Programme
Enrolment is limited.

MUSIC
WEB ADDRESS: http://www.humanities.mcmaster.ca/~soto/
Togo Salmon Hall, Room 414
Ext. 27671

Courses and programmes in Music are administered within the School of the Arts of the Faculty of Humanities.

Courses
If no prerequisite is listed, the course is open.

MUSIC 1A03 INTRODUCTION TO THE HISTORY OF MUSIC I
An introductory survey of Western music, from the time of Bach and Handel. Emphasis is on important composers and their works in relation to their society and culture. No previous knowledge of music required.
Three lectures; one term
Prerequisite: MUSIC 1A06
Not open to students registered in Honours Music.

MUSIC 1A04 INTRODUCTION TO THE HISTORY OF MUSIC II
A survey of Western music, from the time of Mozart to the present. Composers studied include Beethoven, Schubert, Chopin, Verdi, Wagner, Debussy, and Stravinsky. No previous knowledge of music required.
Three lectures; one term
Prerequisite: MUSIC 1A06
Not open to students registered in Honours Music.

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 pitch, rhythm, 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 a Music programme.

MUSIC 1CC3 HARMONY
The analysis and writing of functional harmony. Includes study of music by J.S. Bach and others.
One lecture, two tutorials; two terms
Prerequisite: Registration in a Music programme, or a grade of at least B in MUSIC 1C03; or qualifying tests and permission of the School of the Arts.

MUSIC 1D03 AURAL SKILLS
Sight-singing and dictation.
Two lectures, one lab; two terms
Prerequisite: Registration in a Music programme, or qualifying tests.

MUSIC 1E06 SOLO PERFORMANCE
Intensive study of the technique and repertoire of any orchestral instrument, piano, organ, harpsichord, voice, recorder, saxophone, or guitar.
12 one-hour meetings per term; two terms
Prerequisite: Registration in a Music programme or 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 programme.

MUSIC 1G03 ENSEMBLE PERFORMANCE
McMaster Chamber Orchestra, McMaster University Choir, McMaster Concert Band, McMaster Jazz Band, or any other ensemble approved by the School of the Arts.
Prerequisite: Successful audition required

MUSIC 1Y03 MUSIC AND CULTURE
An introduction to the study of music as a cultural practice, including the exploration of issues such as gender in composition and performance, the relationship of music to cultural practices, the body in performance, and the roles musicians have in society. Both contemporary and historical musical examples will be drawn from various cultures. Competence in reading music is required.
Three lectures, one tutorial; one term
Prerequisite: Registration in a Music programme or permission of the School of the Arts.

Antirequisite: MUSIC 1B06

MUSIC 1YY3 HISTORY OF WESTERN MUSIC: BAROQUE AND CLASSICAL
A survey of Baroque and Classical music. Includes consideration of performance practices, influences of the other arts and socio-political developments.
Three lectures; one term
Prerequisite: MUSIC 1Y03
Antirequisite: MUSIC 1B06

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: Registration in Level II or above
Cross-list: CMST 2G03
Antirequisite: MUSIC 4X03
Offered in alternate years.

MUSIC 2AA3 POPULAR MUSIC
A study of 20th-century popular music from the late 1940's to the present. Topics include: rhythm and blues (Chuck Berry), hard rock (Led Zeppelin), and punk (Sex Pistols).
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: CMST 2R03
MUSIC 2C03  HARMONY  
A continuation of MUSIC 1C03. Chromatic harmony and the completed major-minor system.  
One lecture, term one; two lectures, term two  
Prerequisite: MUSIC 1C03

MUSIC 2D03  KEYBOARD HARMONY  
Keyboard Harmony. Two lectures; two terms  
Prerequisite: Registration in a Music programme or qualifying tests

MUSIC 2E06  SOLO PERFORMANCE  
A continuation of MUSIC 1E06.  
12 one-hour meetings per term; two terms  
Prerequisite: MUSIC 1E06; and registration in a Music programme 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 programme.

MUSIC 2F03  MUSIC FOR FILM AND TELEVISION  
An examination of how music functions to help create meanings in film and television programmes. 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  
Antirequisite: SADM 3A03

MUSIC 2G03  ENSEMBLE PERFORMANCE  
McMaster Chamber Orchestra, McMaster University Choir, McMaster Concert Band, McMaster Jazz Band, 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 2Y03  HISTORY OF WESTERN MUSIC: ROMANTIC TO THE PRESENT  
A survey of 19th, 20th and 21st century music. Includes consideration of performance practices, influences of the other arts and socio-political developments. Three lectures; one term  
Prerequisite: MUSIC 1Y03  
Antirequisite: MUSIC 2B03, 2B03

MUSIC 2Y03  HISTORY OF WESTERN MUSIC: MEDIEVAL AND RENAISSANCE  
A survey of Medieval and Renaissance music. Includes consideration of performance practices, influences of the other arts and socio-political developments. Three lectures; one term  
Prerequisite: MUSIC 1Y03  
Antirequisite: MUSIC 1E06

MUSIC 2Z03  INTRODUCTION TO MIDLAND 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 Programme or registration in Level II or above of a Music programme.  
Cross-list: MMEDIA 2G03  
Enrolment is limited.

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 1A0A (or 1A0B); 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. Three lectures; 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 18th centuries. Seminar (two hours); one term  
Prerequisite: MUSIC 2C03 or 2CC3; and registration in Honours Music  
Antirequisite: MUSIC 3C03  
Offered in alternate years. Enrolment is limited.

MUSIC 3E03  SOLO PERFORMANCE  
The technique and repertoire of any orchestral instrument, piano, organ, harpsichord, voice, recorder, saxophone or guitar.  
12 one-hour meetings; one term  
Prerequisite: MUSIC 2E06  
Antirequisite: MUSIC 3E06  
Lesson fees are charged to students taking MUSIC 3E03 if the course is not a specific requirement for their music degree programme.

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 programme.

MUSIC 3G03  ENSEMBLE PERFORMANCE  
McMaster Chamber Orchestra, McMaster University Choir, McMaster Concert Band, McMaster Jazz Band, 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 instruments; scoring of music for various ensembles. Two lectures; two terms  
Prerequisite: MUSIC 2C03, 2D03 and registration in a Music programme

MUSIC 3K03  BRASS METHODS  
A study of the basic techniques of playing brass instruments. Brass literature for various educational levels. No previous study of brass required. The instruments studied differ from those studied in MUSIC 4K03. Two lectures, one lab; one term  
Prerequisite: Registration in Honours Music or permission of the School of the Arts  
Alternates with MUSIC 4K03. Enrolment is limited.

MUSIC 3L03  WOODWIND METHODS  
A study of the basic techniques of playing woodwind instruments. Woodwind literature for various educational levels. No previous study of woodwinds required. The instruments studied differ from those studied in MUSIC 4L03. Two lectures; one lab; one term  
Prerequisite: Registration in Honours Music or permission of the School of the Arts  
Alternates with MUSIC 4L03. Enrolment is limited.

MUSIC 3M03  STRING METHODS  
A study of the basic techniques of playing string instruments. String literature for various educational levels. No previous study of strings required. The instruments studied differ from those studied in MUSIC 4M03. Two lectures; two terms  
Prerequisite: Registration in Honours Music or permission of the School of the Arts  
Alternates with MUSIC 4M03. Enrolment is limited.

MUSIC 3N03  VOCAL METHODS  
A study of the basic techniques of singing. The organization, conducting, and rehearsing of a choir. Choral Literature. No previous study of voice required. Techniques and materials focus on the primary and junior levels. Two lectures; one term  
Prerequisite: Registration in Honours Music or permission of the School of the Arts  
Alternates with MUSIC 4N03. Enrolment is limited.
MUSIC 3003 CONDUCTING
Fundamental conducting techniques applied to works selected from the standard repertoire.
Three lectures; one term
Prerequisite: MUSIC 2D03 and registration in Honours Music; or permission of the School of the Arts
Enrolment is limited.

MUSIC 3P03 PERCUSSION METHODS
A study of the basic techniques of playing percussion instruments. Percussion literature for various educational levels. No previous study of percussion required.
Two lectures; one term
Prerequisite: Registration in Honours Music or permission of the School of the Arts
Antirequisite: MUSIC 4P03
Enrolment is limited.

MUSIC 3S03 SPECIAL STUDIES IN CHAMBER MUSIC FOR 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 2E06; and registration in Level III or IV of a Music programme; 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. Fees are charged to students taking MUSIC 3S03.

MUSIC 3T03 CANADIAN MUSIC
A historical survey of music in Canada, in the context of social and political developments, from c. 1600 to the present.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above
Offered in alternate years.

MUSIC 3U03 JAZZ
An historical survey of jazz, focusing on selected performers and 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 programme or permission of the School of the Arts
Enrolment is limited.

MUSIC 3Y03 TOPICS IN MUSIC HISTORY: MUSIC FOR THE ORCHESTRA
A study of selected orchestral music in its historical, socio-political and artistic contexts. Possible topics include: the concerto, the symphonic poem, orchestral music from Debussy to the present.
Two lectures, one tutorial; one term
Prerequisite: MUSIC 2B03 or all of MUSIC 1Y03, 1Y03, 2Y03, 2Y03; and registration in Level III or IV of an Honours Music programme or permission of the School of the Arts
Alternates with MUSIC 3Y03

MUSIC 3Y03 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: the operas of Mozart, Wagner’s Ring, American musical theatre.
Two lectures, one tutorial; one term
Prerequisite: One of DRAMA 2D03, MUSIC 2B03, THTRAFLM 2C03, or all of MUSIC 1Y03, 1Y03, 2Y03, 2Y03; and registration in Level III or IV of an Honours Music programme or permission of the School of the Arts
Alternates with MUSIC 3Y03

MUSIC 3Y03 TOPICS IN MUSIC HISTORY: ADVANCED MIDI AND DIGITAL AUDIO FOR MULTIMEDIA
The creation of digital music and audio. Students work individually and in teams to develop skills for multimedia audio production. Topics include: advanced MIDI, mixing, audio processing and frequency equalization.
Two lectures, one tutorial; one term
Prerequisite: MMEDIA 2G03 or MUSIC 2203
Cross-list: MMEDIA 3C03
Enrolment is limited.

MUSIC 4AA3 TOPICS IN POPULAR MUSIC
In-depth examination of a particular artist, genre or issue in western popular music. Possible topics include: Madonna, heavy metal, popular music and corporate culture.
Seminar (two hours); one term
Prerequisite: MUSIC 3A03
MUSIC 4AA3 may be repeated, if on a different topic, to a total of six units.
Enrolment is limited.

MUSIC 4C03 TOPICS IN HARMONY AND COUNTERPOINT
Advanced studies in writing an analysis. Possible topics include: sonatas, songs, jazz arranging and scoring.
Seminar (two hours); one term
Prerequisite: MUSIC 2CC3; and MUSIC 2C03 or 3CM3; and registration in Honours Music
Offered in alternate years.
MUSIC 4C03 may be repeated, if on a different topic, to a total of six units.
Enrolment is limited.

MUSIC 4E03 SOLO PERFORMANCE
A continuation of MUSIC 3E03 or 3E06.
12 one-hour meetings; one term
Prerequisite: MUSIC 3E03 or 3E06
Antirequisite: MUSIC 4E03, 4E09
Lesson fees are charged to students taking MUSIC 4E03 if the course is not a specific requirement for their music degree programme.

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 programme.

MUSIC 4E09 SOLO PERFORMANCE, DIPLOMA
Intensive advanced study in the technique and repertoire of any orchestral instrument, piano, organ, harpsichord, voice, recorder, saxophone, or guitar; or other instrument approved by the School. The final examination is a solo recital presented of approximately 40 minutes.
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 4E09
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.

MUSIC 4G03 ENSEMBLE PERFORMANCE
McMaster Chamber Orchestra, McMaster University Choir, McMaster Concert Band, McMaster Jazz Band, 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 programme
Those students registered in the diploma programme 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: Schoenbergian analysis, song cycles of Schubert, advanced set theory.
Seminar (two hours); one term
Prerequisite: MUSIC 2H03; and MUSIC 2B03 or 2CC3; and registration in Honours Music
Offered in alternate years.
MUSIC 4H03 may be repeated, if on a different topic, to a total of six units.
Enrolment is limited.

MUSIC 4K03 BRASS METHODS
A study of the basic techniques of playing brass instruments. Brass literature for various educational levels. No previous study of brass required. The instruments studied differ from those studied in MUSIC 3K03.
Two lectures, one lab; one term
Prerequisite: Registration in Honours Music or permission of the School of the Arts
Alternates with MUSIC 3K03.
Enrolment is limited.
MUSIC 4L03 WOODWIND METHODS
A study of the basic techniques of playing woodwind instruments. Woodwind literature for various educational levels. No previous study of woodwinds required. The instruments studied differ from those studied in MUSIC 3L03.
Two lectures, one lab; one term
Prerequisite: Registration in Honours Music or permission of the School of the Arts
Alternates with MUSIC 3L03. Enrolment is limited.

MUSIC 4M03 STRING METHODS
A study of the basic techniques of playing string instruments. String literature for various educational levels. No previous study of strings required. The instruments studied differ from those studied in MUSIC 3M03.
Two lectures; two terms
Prerequisite: Registration in Honours Music or permission of the School of the Arts
Alternates with MUSIC 3M03. Enrolment is limited.

MUSIC 4N03 VOCAL METHODS
A study of the basic techniques of singing. The organization, conducting, and rehearsing of a choir. Choral literature. No previous study of voice required. Techniques and materials focus on the intermediate and senior levels and beyond.
Two lectures; one term
Prerequisite: Registration in Honours Music or permission of the School of the Arts
Alternates with MUSIC 3N03. Enrolment is limited.

MUSIC 4O03 ADVANCED CONDUCTING: CHORAL
A continuation of MUSIC 3O03. Rehearsal and conducting techniques specific to choral ensembles: warm-up exercises, tone, intonation, balance, pronunciation, attack, sustain, and cueing, as well as music selection and score reading and preparation.
Three lectures; one term
Prerequisite: MUSIC 3O03; and registration in Honours Music or permission of the School of the Arts
Alternates with MUSIC 4O03. Enrolment is limited.

MUSIC 4P03 ADVANCED CONDUCTING: INSTRUMENTAL
A continuation of MUSIC 3P03. Refinement and development of conducting techniques. Exploration of in-depth score preparation, rehearsal techniques, and shifting meters, subdivision.
Three lectures; one term
Prerequisite: MUSIC 3P03; and registration in Honours Music or permission of the School of the Arts
Alternates with MUSIC 4P03. Enrolment is limited.

MUSIC 4Q03 PERCUSSION METHODS
A continuation of MUSIC 3Q03. 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 programme
Enrolment is limited. Offered in alternate years.

MUSIC 4R03 ISSUES AND METHODS IN CURRENT MUSICOLOGY
An exploration of historical, analytical and critical methods of research in music, including models of analysis derived from cultural studies, gender studies, literary theory, etc.
Seminar (two hours); one term
Prerequisite: MUSIC 2B83 and registration in Honours Music
Alternates with MUSIC 3R03, 4R03
Enrolment is limited. Offered in alternate years.

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 programme 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 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 Music programme
Alternates with MUSIC 3V03. Enrolment is limited.

MUSIC 4W03 TOPICS IN MUSIC HISTORY
An intensive examination of an issue, period, genre, style or movement, including music of a composer or geographical area, music for certain instruments, and music and other arts of a particular time or place. Possible topics include: pianists, music and religion, jazz vocalists, music of Stravinsky.
Seminar (two hours); one term
Prerequisite: MUSIC 2B83 or all of MUSIC 1Y03, 1Y3, 2Y03, 2Y3; and registration in Level III or IV of an Honours Music programme or permission of the School of the Arts
MUSIC 4W03 may be repeated, if on a different topic, to a total of six units. Enrolment is limited.

MUSIC 4Z03 COMPOSITION
The composition of various instrumental or vocal works.
Times to be arranged between the student and instructor; one term
Prerequisite: Registration in Level III or IV of an Honours Music programme and permission of the instructor

MUSIC 4ZZ3 ADVANCED COMPOSITION
The composition of various instrumental or vocal works.
Times to be arranged between the student and instructor; one term
Prerequisite: MUSIC 4Z03; and registration in an Honours Music programme; and permission of the instructor

NEURAL COMPUTATION
WEB ADDRESS: http://www.psychology.mcmaster.ca/NeuralComp

The Neural Computation Programme is administered within the Faculty of Science through a committee of instruction consisting of Dr. S. Haykin (Electrical and Computer Engineering), Dr. R. Racine (Psychology), Dr. S. Becker (Psychology), Dr. N. Balakrishnan (Mathematics and Statistics) and Dr. D. Jones (Computing and Software) and draws on the Departments of Psychology, Mathematics and Statistics and Computing and Software.

Courses
If no prerequisite is listed, the course is open.

NEURCOMP 3W03 NEURAL COMPUTATION
An introduction to the use of neural network computational models for understanding the neural bases of psychological processes, and for solving real-world problems.
Three lectures; one term
Prerequisite: One of COMP SCI 1MC3, 1SA3 or permission of the instructor; and one of MATH 1A03, 1N03, ARTS&SCI 1D06; and registration in an Engineering programme or an Honours programme in the Faculty of Science. MATH 1B03 is strongly recommended.

NEURCOMP 4D09 NEURAL COMPUTATION THESIS
Students conduct research projects with individual faculty members.
Prerequisite: Registration in Level IV of Honours Neural Computation
related Courses

Biochem 2EE3 Metabolism and Physiological Chemistry
Biology 2B03 Cell Biology
2C03 Genetics
4T03 Neurobiology
Chem 2EE3 Introductory Organic Chemistry
Comp Sci 3GA3 Introduction to Computer Graphics
Int, Automata, Control and Languages
4I13 Artificial Intelligence and Knowledge-Based System
Mathe 2EE3 Introduction to Modelling
2P04 Differential Equations for Engineering
3N03 Mathematical Biology
4S03 The Theory of Computation
Psych 2EE3 Sensory Processes
2F03 Fundamentals of Neuroscience
2H03 Human Learning and Cognition
3B03 Psycholinguistics
3B03 Laboratory in Human Electrophysiology
38N3 Behavioural Neuroscience I: Survey
3EE3 Perception Laboratory
3FA3 The Neurobiology of Learning and Memory
3J03 Visual Neuroscience
3L03 Neuroscience Laboratory
3W03 Measuring the Mind
4SN3 Behavioural Neuroscience II: Special Topics
Stats 3DG3 Mathematical Statistics I
3DD3 Mathematical Statistics II

Nurse Practitioner

(See Nursing, Nurse Practitioner C Stream)

Nursing

WEB ADDRESS: http://www.fhs.mcmaster.ca/nursing
Health Sciences Centre, Room 2200
Ext. 22401

Faculty as of January 15, 2002

Associate Dean of Health Sciences (Nursing) and Director of the School of Nursing
Andrea Baumann

Professors

Andrea Baumann/B.Sc.N. (Windsor), M.Sc.N. (Western Ontario), Ph.D. (Toronto), R.N.
Donna Ciliska/B.Sc.N., M.Sc.N. (Western Ontario), Ph.D. (Toronto), R.N.
Gina Browne/B.Sc.N., Catherine Spaulding, M.S. (Boston), M.Ed., Ph.D. (Toronto), R.N.
Joan Crook/B.S. (Niagara), M.A. (Dalhousie), M.Sc. (McMaster), Ph.D. (Toronto), R.N.
Alba DiCenzo/B.Sc.N., M.Sc. (McMaster), Ph.D. (Waterloo), R.N.
Jo-Ann Fox-Threlkeld/B.Sc.N. (New Brunswick), M.Sc., Ph.D. (Queen's), R.N.
Basanti Majumdar/B.Sc.(N.), M.Sc.N. (Delhi), M.Ed. (Columbia), Ph.D. (Michigan), R.N.
Jackie Roberts/B.Sc.N., M.Sc. (McMaster), R.N.
John Vickers/B.Sc. (McMaster), Ph.D. (York)
Robin Weir/B.Sc.N. (Western Ontario), M.Sc. (Boston), M.Ed., Ph.D. (Toronto), R.N.

Associate Professors

Heather Arthur/B.Sc.N. (McMaster), M.Sc.N., Ph.D. (Toronto), R.N.
Margaret Black/B.Sc.N. (McGill), M.Sc.N. (Case Western Reserve), Ph.D. (Michigan), R.N.
Jennifer Blythe/B.A. (Hull), M.A., Ph.D. (McMaster), M.L.S. (Toronto)
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Dauna Crooks/B.Sc.N. (Toronto), M.Sc.N. (Western Ontario), D.N.S. (SUNY), R.N.

Petronella Ellis/B.Sc.N. (Wagner), M.Sc. (Maryland), R.N.
Mabel Hunsberger/B.S. (Goshen), M.Sc.N. (Pennsylvania), Ph.D. (Waterloo), R.N.
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Jennifer Skelly/M.H.Sc., M.Sc. (McMaster), Ph.D. (Toronto), R.N.
Helen Thomas/B.Sc.N. (Queen's), M.Sc. (Waterloo), R.N.
Catherine Tomkins/B.Sc.N. (Western Ontario), M.Ed. (Toronto), Ph.D. (California), R.N.

Assistant Professors

Pamela Baxter/B.Sc.N. (McMaster), R.N.
Gertrude Benson/B.N. (McGill), M.Sc.N. (Boston), R.N.
Sherry Boblin/B.Sc.N. (Alberta), M.Ed. (Alberta), Ph.D. (Toronto), R.N.
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Joanna Piazza/B.Sc.N., M.Sc.N. (Western Ontario), R.N.
Jenny Ploeg/B.Sc.N., M.Sc.N. (Western Ontario), Ph.D. (Toronto), R.N.
Ota Sanchez/M.Sc. (Toronto), Ph.D. (McMaster) Dyanne Semoga/B.Sc.N. (McGill), M.N. (Washington), R.N.
Eric Staples/B.A.A. (N.) (Peyson), M.N. (D'Youville), R.N.
Wendy Sword/B.Sc.N., M.Sc.T. (McMaster), Ph.D. (Guelph), R.N.
Ruta Valaitis/B.A., B.Sc.N. (Waterloo), M.H.Sc. (McMaster), R.N.

Lecturers

Kathy Genge/B.Sc.N., M.Sc.T (McMaster), R.N.
Yvonne Lawlor/B.N. (New Brunswick), M.Ed. (Brock), R.N.

Note:
The School of Nursing has a large number of part-time faculty appointed from community health-care agencies. A complete list is available from the office of the Associate Dean of Health Sciences (Nursing).

School Notes:
1. Normally, registration in all courses above Level I will require satisfactory completion of the prerequisite Nursing courses with a grade of at least C in graded courses or a pass in clinical practice courses. (See the Faculty of Health Sciences, School of Nursing, Academic Regulations section in this Calendar.)
2. Normally, Level I, II, III and IV Nursing courses are available only to students registered in the B.Sc.N. Program.
3. Students in any stream who register for a clinical lab course in Level III or above must also submit a Placement Preference form to the Placement Coordinator. The Student Placement Information System (SPIS) at www.fhs.mcmaster.ca/nursing/placements features detailed information about the selection of placement settings and the deadlines for submission of Placement Preferences. Students who fail to meet the published deadline but who register for the course at least two months prior to the date it is to commence will be assigned a placement setting without consideration of their preferences. Students who do not register two months in advance and who fail to meet the submission deadline will normally be required to defer their placement until the next term in which the course is offered.
4. 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.

5. 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.

Courses

**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 skills in assessment, including physical assessment, and communication are stressed. A clinical practice component includes laboratory and community experience.  
Two and one half hours (lecture/problem-based tutorials); four hours (clinical lab); one term  
Prerequisite: Registration in Level I of the B.Sc.N. (A) Stream

**NURSING 1G04**  
**INTRODUCTION TO NURSING AND HEALTH II**  
A continuation of NURSING 1F04. An introduction to reflective practice. Concepts and theories related to specific priority health issues are studied. There is continued development of skills in health assessment and an introduction to health education. A clinical practice component includes laboratory and community experience.  
Two and one half hours (lecture/problem-based tutorials); four hours (clinical lab); one term  
Prerequisite: NURSING 1F04

**NURSING 2L02**  
**GUIDED NURSING PRACTICE I**  
Nursing concepts basic to health and illness are examined across the continuum of individual and family growth and development. Planned and guided experiences are provided in acute care institutions, including adult medical and surgical and paediatric settings. This course is evaluated on a Pass/Fail basis.  
Nine hours (clinical lab); one term  
Prerequisite: NURSING 1F04, 1G04  
Normally to be taken concurrently with NURSING 2M03.

**NURSING 2M03**  
**NURSING CONCEPTS IN HEALTH AND ILLNESS 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 2N02**  
**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 also provides experience in conducting a community assessment.  
Three hours (clinical lab) and one hour (lecture); one term  
Prerequisite: NURSING 1G04

**NURSING 2Q02**  
**ONCOLOGY HEALTH ASSESSMENT**  
This course assists the oncology nurse to refine advanced history taking and physical assessment skills specific to the individual and family experiencing the cancer continuum. This course is evaluated on a Pass/Fail basis.  
Three hours (problem-based tutorial, clinical lab); one term  
Prerequisite: Registration in Oncology Programme or permission of the instructor  
Antirequisite: NURSING 3AA2, 3GG5, 3L05, 3V06

**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 programme; or registration in Level III of the B.Sc.N. (B) Stream and permission of the instructor  
Antirequisite: NURSING 3803

**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 3CC3; and either registration in the Adult Oncology programme, or registration in Level III of the B.Sc.N. (B) Stream and permission of the instructor  
Antirequisite: NURSING 3703

**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. This course is evaluated on a Pass/Fail basis.  
Three hours (problem-based tutorials, clinical lab, self-study); one term  
Prerequisite: Registration in Level III of the B.Sc.N. (B) Stream or permission of the instructor  
Antirequisite: NURSING 3G05, 3L04, 3L05, 3L2, 3V05

**NURSING 3M03**  
**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 Programme  
Antirequisite: NURSING 3G05, 3L04, 3L05, 3V05  
Normally to be taken concurrently with NURSING 3CC3 or 3S03.

**NURSING 3P03**  
**NURSING CONCEPTS IN HEALTH AND ILLNESS III**  
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 programme; or registration in Level III of the B.Sc.N. (B) Stream and permission of the instructor  
Antirequisite: NURSING 3S03

**NURSING 3Q03**  
**NURSING CONCEPTS IN HEALTH AND ILLNESS IV**  
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 programme, or registration in Level III of the B.Sc.N. (B) Stream and permission of the instructor  
Antirequisite: NURSING 3703

**NURSING 3S03**  
**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: NURSING 2N02 and 2P03 for B.Sc.N. (A) Stream students; or registration in Level III of the B.Sc.N. (B) or Nurse Practitioner (C) Stream  
Normally to be taken concurrently with NURSING 3X04(for (A) Stream students).
NURSING 3T03  NURSING CONCEPTS IN HEALTH AND ILLNESS IV
A continuation of Nursing 3S03. A problem-based course in which students integrate theories from biological, physical, psychological, social, and nursing sciences and apply them to health care situations. Three hours (lecture/problem-based tutorials); one term
Prerequisite: NURSING 3S03; and registration in Level III of B.Sc.N. (B) or Nurse Practitioner (C) Stream
Normally to be taken concurrently with NURSING 3V04 (for (A) Stream students).

NURSING 3J02  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: HTH SCI 2B03 (or 2AA2, 2BB2, 2CC2, 2DD2), NURSING 2P03
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/probem-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 3WV3  GUIDED NURSING PRACTICE I - COMMUNITY-BASED CARE
An applied nursing practice experience in a community-based health care setting with emphasis on skill development in health promotion, health education and community assessment. This course is evaluated on a Pass/Fail basis.
Eight hours (clinical lab) and one hour (independent study); one term
Prerequisite: NURSING 3V02
Antirequisite: NURSING 3M05

NURSING 3X04  GUIDED NURSING PRACTICE II
Practical and guided clinical practice in a variety of institutional and community settings emphasizing that nursing is contextual and relational. Nursing practice roles and selected theories/models are tested with individuals and groups. Emphasis is given to formulating nursing interventions. This course is evaluated on a Pass/Fail basis.
Twelve hours (clinical lab); one term
Prerequisite: NURSING 3X04
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 and NURSING 3J02.

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) or (B) Stream; or Level III of the B.Sc.N. N.P. (C) Stream; or permission of the instructor
Antirequisite: HTH SCI 4E06

NURSING 4B06  INTRODUCTION TO NURSING LEADERSHIP/MANAGEMENT
Introduction to theories and methods of leadership and management integrating the nursing and management disciplines. Given in both distance education and problem-based tutorial formats. A document of recognition is granted on course completion. Enrolment in tutorial format is limited.
Four hours (problem-based tutorial or equivalent); six hours (independent study at a clinical site); one term
Prerequisite: Registered Nurse with a minimum of one year clinical experience or permission of the instructor
Antirequisite: HTH SCI 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 4E03  ADVANCED NURSING CONCEPTS I
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
Normally to be taken concurrently with NURSING 4J07 (for (A) Stream) or NURSING 4G06 (for (B) Stream).

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
Normally to be taken concurrently with NURSING 4K07 (for (A) Stream) or NURSING 4T06 (for (B) Stream).

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/probem-based tutorial); one term
Prerequisite: HTH SCI 3B03; and registration in Level III or IV of the B.Sc.N. Programme; and permission of the instructor
Antirequisite: 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 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  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 3Y04, 3Y07
Normally to be taken concurrently with NURSING 4E03.

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 4J07
Normally to be taken concurrently with NURSING 4E03.

NURSING 4L06  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 3V03 and registration in Level IV of the B.Sc.N. (B) Stream
Normally to be taken concurrently with NURSING 4E03.
NURSING 4T06  GUIDED NURSING PRACTICE IV  
An applied nursing practice course which emphasizes integration of theory and development of independent decision-making capacity in a selected area of clinical practice. This course is evaluated on a Pass/Fail basis.  
Twelve hours (clinical lab), two hours (tutorial); one term  
Prerequisite: Registration in Level IV of the B.Sc.N. (B) Stream  
Normally to be taken concurrently with NURSING 4P03 for B.Sc.N. (B) Stream.  

NURSE PRACTITIONER (C) STREAM ...  
Note:  
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 programme.  

Courses  

NURSPRAC 4A10  ADVANCED HEALTH ASSESSMENT AND DIAGNOSIS  
This course focuses on the development of clinical decision making and advanced health assessment knowledge and skills in providing primary health care to individuals, families and communities.  
Three hours (tutorial), three hours (clinical lab); two terms  
Prerequisite: Credit or registration in NURSPRAC 4P03 and registration in Level IV of the B.Sc.N. N.P. (C) Stream  
Antirequisite: NURSPRAC 4A05, 4AAS  

NURSPRAC 4C13  NURSE PRACTITIONER INTERVENTIVE PRACTICUM  
An intensive field study with a focus on assessment, diagnosis and management of the care of clients. Emphasis is on synthesizing advanced knowledge and applying evidence-based health care to clinical practice.  
29 hours (clinical lab; six hours tutorial); one term  
Prerequisite: NURSPRAC 4A10, 4P03, 4R03, 4T10; and registration in Level IV of the B.Sc.N. N.P. (C) Stream  
Antirequisite: NURSPRAC 4C10, 4S03  

NURSPRAC 4P03  PATHOPHYSIOLOGY FOR NURSE PRACTITIONERS  
This course uses a systems approach to examine concepts in pathophysiology as a basis for advanced nursing practice in primary health care. The course will provide a comprehensive overview of etiology, pathogenesis and clinical manifestation of diseases in adults and children found in primary care.  
Three hours (tutorial); two terms  
Prerequisite: HTH SCI 1C07, 2C07; and registration in Level IV of the B.Sc.N. N.P. (C) Stream  

NURSPRAC 4R03  NURSE PRACTITIONER ROLES AND RESPONSIBILITIES  
This course examines and analyzes the political, economic, social, ethical and legal issues related to the role and scope of practice of Nurse Practitioners.  
Three hours (tutorial); two terms  
Prerequisite: Registration in Level III or IV of the B.Sc.N. N.P. (C) Stream  

NURSPRAC 4T10  THERAPEUTICS IN PRIMARY HEALTH CARE  
The course is designed to develop the knowledge, skill and competencies required of a nurse practitioner in managing health and injury through a variety of clinical therapeutic strategies, including counselling, pharmacology and complementary modalities. The effectiveness and efficiency of these strategies are examined.  
Three hours (tutorial), three hours (clinical lab); two terms  
Prerequisite: HTH SCI 1C07, 2C07; and credit or registration in NURSPRAC 4A10, 4P03; and registration in Level IV of the B.Sc.N. N.P. (C) Stream  
Antirequisite: NURSPRAC 4T05, 4T15  

NURSING CONSORTIUM (D) STREAM ...  
Note:  
The following courses are open only to those students at the Mohawk College or Conestoga College sites who are registered in the McMaster/Mohawk/Conestoga Collaborative B.Sc.N programme.  

Courses  

NURSECON 1A03  INTRODUCTION TO PSYCHOLOGY  
An introduction to the basic principles of scientific psychology related to the understanding of "normal" human behaviour.  
Three hours; one term  
Prerequisite: Registration in McMaster/Mohawk/Conestoga Collaborative B.Sc.N programme (Mohawk College site)  

NURSECON 1B03  DEVELOPMENTAL PSYCHOLOGY  
The study of human psychological development from the pre-natal period to old age.  
Three hours; one term  
Prerequisite: Registration in McMaster/Mohawk/Conestoga Collaborative B.Sc.N programme (Mohawk College site)  

NURSECON 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 McMaster/Mohawk/Conestoga Collaborative B.Sc.N programme (Conestoga College site)  

NURSECON 1D03  PSYCHOLOGY: DYNAMICS OF HUMAN BEHAVIOUR  
Stress and stress management, thinking and intelligence, the biological basis of behaviour, social psychology, personality theory and measurement, abnormal behaviour and therapies.  
Three hours; one term  
Prerequisite: Registration in McMaster/Mohawk/Conestoga Collaborative B.Sc.N programme (Conestoga College site)  

NURSECON 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 McMaster/Mohawk/Conestoga Collaborative B.Sc.N programme (Conestoga College site)  
Antirequisite: HISTORY 2J06  

NURSECON 1F03  POLITICAL STRUCTURES AND ISSUES  
Introduction to the study of politics within the Canadian context.  
Three hours; one term  
Prerequisite: Registration in McMaster/Mohawk/Conestoga Collaborative B.Sc.N programme (Conestoga College site)  

NURSECON 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 McMaster/Mohawk/Conestoga Collaborative B.Sc.N programme (Conestoga College site)  

NURSECON 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 inequality in contemporary Canadian society.  
Three hours; one term  
Prerequisite: Registration in McMaster/Mohawk/Conestoga Collaborative B.Sc.N programme (Conestoga College site)  

NURSECON 1I03  SOCIOLOGY I  
An analysis of Canadian social institutions and social processes.  
Three hours; one term  
Prerequisite: Registration in McMaster/Mohawk/Conestoga Collaborative B.Sc.N programme (Conestoga College site)  

NURSECON 1J03  POPULAR CULTURE  
An examination of the impact of mass communication techniques on our culture.  
Three hours; one term  
Prerequisite: Registration in McMaster/Mohawk/Conestoga Collaborative B.Sc.N programme (Conestoga College site)  

NURSECON 2A03  ABNORMAL PSYCHOLOGY  
Applied principles and related theories of normal and abnormal personality development.  
Three hours; one term  
Prerequisite: Registration in McMaster/Mohawk/Conestoga Collaborative B.Sc.N programme (Mohawk College site)
NURSECON 2B03 FRENCH IN A CANADIAN CONTEXT
An introduction to French culture in a Canadian context.
Three hours; one term
Prerequisite: Registration in McMaster/Mohawk/Conestoga Collaborative B.Sc.N programme (Mohawk College site)

NURSECON 2C03 SOCIOLOGY I
The study of various aspects of Canadian society including social class, gender, religion, education, health care and family.
Three hours; one term
Prerequisite: Registration in McMaster/Mohawk/Conestoga Collaborative B.Sc.N programme (Mohawk College site)

NURSECON 2D03 HUMAN SEXUALITY
An introduction to biological, behavioural and cultural aspects of human sexuality.
Three hours; one term
Prerequisite: Registration in McMaster/Mohawk/Conestoga Collaborative B.Sc.N programme (Mohawk College site)

NURSING CONSORTIUM

(SEE NURSING, NURSING CONSORTIUM (D) STREAM)

OJIBWE

(SEE INDIGENOUS STUDIES, OJIBWE)

ONCOLOGY

(SEE NURSING)

PEACE STUDIES

WEB ADDRESS: http://www.humanities.mcmaster.ca/-peace
Togo Salmon Hall, Room 726
Ext. 24265

Director

Associate Director
Jean Wilson/(Modern Languages and Linguistics and Comparative Literature) B.A. (McMaster), B.Ed., M.A., Ph.D. (Toronto)

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 (lectures and discussion); 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 (lectures and discussion); one term

PEACE ST 2A03 CONFLICT TRANSFORMATION: THEORY AND PRACTICE
An examination of ways of preventing, resolving and transforming conflicts in everyday life, in our own culture and others, and in the arenas of family, business, the law, schools and large-scale political conflicts.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above or permission of the Director of Peace Studies
Cross-list: CMST 2V03

PEACE ST 2K03 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 2S03 WAR IN THE WEST, 1789-1945
A survey of the development of warfare in the Western world from 1789 to 1945. Particular attention is paid to the French Revolutionary and Napoleonic Wars, and the two World Wars in the twentieth century.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: 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 programme in Comparative Literature, English, Peace Studies, Women's Studies or permission of the Departmental Counsellor in the Department of English
Cross-list: COMP LIT 3R03, ENGLISH 3A03, WOMEN ST 3H03
This course is administered by the Department of English.

PEACE ST 3E06 POSTCOLONIAL LITERATURES: THEORY AND PRACTICE
A study of postcolonial literary theory and practice. Texts written in English from a variety of formerly colonized regions will be studied; including Africa, the Caribbean, South and Southeast Asia, Australia and New Zealand. The focus will be on such topics as imperialism, race, gender, ethnicity, nation, language and representation.
Three hours; two terms
Prerequisite: Registration in the Combined Honours in Peace Studies Programme or permission of the Departmental Counsellor in the English Department
Cross-list: COMP LIT 3R06, ENGLISH 3R06
This course is administered by the Department of English.

PEACE ST 3F03 THE MODERN MIDDLE EAST
A survey of the political and social history of the Middle East from 1800 to the present, with an emphasis on contemporary issues, such as the Islamic impulsion and the Arab-Israeli conflict.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 3A03
This course is administered by the Department of History.

PEACE ST 3G03 HISTORY OF MODERN GERMANY
This course examines the complexities of German social and political history since 1890, including World War One, Third Reich, cold war division, questions of national identity, and the peaceful revolution of 1989.
Three hours (lectures and discussion groups); one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 3G03
This course is administered by the Department of History.

PEACE ST 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: HISTORY 3J03
This course is administered by the Department of History.

PEACE ST 3K03 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 3K03
This course is administered by the Department of History.

PEACE ST 3K43 HISTORY OF THE VIETNAM WAR
The history of the First and Second Indochina Wars (1945-1973) is examined from multiple perspectives. Explores how and why the war was fought, as well as its global legacy.
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 3K43
Antirequisite: GSCHE 4H03
This course is administered by the Department of History.
### COURSE LIST

#### PEACE ST 3L03
**The History of Social Activism, 1500-2000**
A thematic study of community activism in Europe and North America. Students will be exposed to the religious, socio-economic and political contexts of social activism, and the historical theory and practice of community-based actions.

Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 3L03
This course is administered by the Department of History.

#### 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 programme, or registration in Level III or IV of the Combined Honours in Peace Studies Programme
Cross-list: PHILOS 3M03
Offered in alternate years.
This course is administered by the Department of Philosophy.

#### PEACE ST 3N03
**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: INDIG ST 1A03 and 1A03 (or 1A06); or six units of Level I English; or permission of the instructor.
Cross-list: ENGLISH 3N03, INDIG ST 3D03
This course is administered by Indigenous Studies.

#### 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 Programme
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 Programme with a Cumulative Average of at least 8.5, and permission of the Director of Peace Studies

#### PEACE ST 4C03
**Theory of Value**
A study of human practices of evaluation in morality, politics, art, religion, and economics.
Seminar (two hours); one term
Prerequisite: PHILOS 3G03 and registration in Level III or above
Cross-list: PHILOS 4B03
Offered in alternate years.
This course is administered by the Department of Philosophy.

### Note:
The following courses may be used to meet some of the requirements of Peace Studies Courses Lists 1 or 2, provided the prerequisite requirements of the home department are fulfilled:

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<tr>
<td><strong>BIOLOGY 4EE3</strong></td>
<td><strong>POL SCI 4D06</strong></td>
</tr>
<tr>
<td>Human Diversity and Human Nature</td>
<td>Human Rights and International Politics</td>
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### PHARMACOLOGY

**Web Address:** [http://www.science.mcmaster.ca/biopharm](http://www.science.mcmaster.ca/biopharm)

With the exception of PHARMAC 4B03, these courses are available only to those students registered in Honours Biology and Pharmacology.

**Note:**
PHARMAC 3A06, 3B06, 4A03, 4A03, 4C03, 4D03 and 4E03 will be based on self-directed problem based learning.

#### Courses

**PHARMAC 3A06 Introduction to Pharmacology**
Receptor theory and classification, receptor response coupling, mechanisms of drug absorption, distribution, metabolism and excretion and their roles in drug selectivity.
One tutorial (one hour), one tutorial (two hours); two terms
Prerequisite: Registration in the Honours Biology and Pharmacology programme

**PHARMAC 3B06 Methods in Pharmacology**
Methods to study effects of drugs in vitro (such as organ baths, ligand binding, and electrophysiological actions) and analysis of pharmacological data.
One lab (six hours); two terms
Prerequisite: Credit or registration in PHARMAC 3A06

**PHARMAC 4A03 Receptor-Drug Interactions**
Introduction to the effects of drugs on communication by chemical signals in biological systems.
One tutorial (one hour), one tutorial (two hours); one term
Prerequisite: PHARMAC 3A06

**PHARMAC 4A03 Advanced Topics in Pharmacology**
The continuation of Pharmacology 4A03.
One tutorial (three hours); one term
Prerequisite: PHARMAC 4A03

**PHARMAC 4B03 Drugs and Behaviour**
Behavioural measures to study drug action and the use of drugs to study the organization and physiochemical mechanisms in normal and abnormal behaviour.
One tutorial (three hours); one term
Prerequisite: BIOLOGY 3AA3 or PHARMAC 3A06; and permission of the instructor. Application for permission must be received by March 31st of the academic year prior to registration.
Cross-list: HTH SCI 4Q03
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar. Not offered in 2002-2003.

**PHARMAC 4C03 Principles of Toxicology**
General principles of toxicology, adverse effects of selected agents on man and other organisms.
One tutorial (one hour), one tutorial (two hours); one term
Prerequisite: PHARMAC 3A06

**PHARMAC 4D03 Drug Design**
Principles of drug design based on drug transport, metabolism and selectivity of action at the target sites with emphasis on quantitative structure-activity relationships.
One tutorial (one hour), one tutorial (two hours); one term
Prerequisite: PHARMAC 3A06, 4A03

**PHARMAC 4E03 Social Pharmacology**
Epidemiological analysis of drug use in humans; adverse drug reactions; legal and economic aspects of drug utilization, prescribing patterns in national and international contexts.
One tutorial (one hour), one tutorial (two hours); one term
Prerequisite: PHARMAC 3A06

**PHARMAC 4F09 Senior Thesis**
A thesis based upon a research project carried out under the direction of a member of the Faculty.
Prerequisite: PHARMAC 3A06

Antirequisite: BIOLOGY 4C09, 4F06, HTH SCI 3H03, 4A09, 4B06, MOL BIOL 4F09
PHILOSOPHY

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

University Hall, Room 209
Ext. 24725

Faculty as of January 15, 2002

Acting Chair
Wilfrid Waluchow

Professors
Barry Allen/B.A., (Lethbridge), Ph.D. (Princeton)
Nicholas Griffin/B.A., (Leicester), Ph.D. (Australian National)
David L. Hitchcock/B.A. (McMaster), Ph.D. (Claremont)
Wilfrid Waluchow/B.A., M.A. (Western Ontario), D.Phil. (Oxford)

Associate Professors
Samuel Aganastro/B.A., M.A. (Toronto), Ph.D. (Pennsylvania)
Elisabeth Boettke/B.A., M.A. (Alberta), Ph.D. (Calgary), MTh. (Newman Theological College)
Philip Kremers/B.Sc., (Toronto), Ph.D. (Pittsburgh)
Jill LeBlanc/B.A. (McMaster), M.A., Ph.D. (Toronto)
Sam M. Najm/A.A. (Beirut), B.A. (Wesleyan), M.A., Ph.D. (Yale)
Spro Panagioutou/B.Sc., M.A. (Guelph), Ph.D. (St. Andrews)
Brigitte Sussen/B.A. (Toronto), M.A., Ph.D. (Pennsylvania State)
Mark Vorobej/B.A. (Carleton), M.A., Ph.D. (Toronto)

Associate Members
Caroline Bayard/French) L as L, M. es L. (Toulouse), M.A., Ph.D. (Toronto)
Kenneth M. Blackwell/Russell Archivist, Mills Library), B.A. (Victoria), M.L.S. (Western Ontario), M.A. (McMaster), Ph.D. (Guelph)
Howard Jones/Classics), B.A. (London), M.A., Ph.D. (Indiana)

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 program.
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 Departmental 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.

PHILOSOPHY THROUGH THE CLOSE READING OF SELECTED CLASSICAL 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; two terms
Prerequisite: PHILOS 1B06, 1D06

PHILOSOPHY, LAW AND SOCIETY

An introduction to social, legal, and moral philosophy. Topics to be discussed may include economics, healthcare ethics, civil rights, and alternative views of human nature, the state, social conflict, inequality and justice.
Two lectures, one tutorial; one term
Prerequisite: PHILOS 1B06, 1D06
Alternates with 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
Prerequisite: PHILOS 1B06, 1D06
Alternates with PHILOS 1B03.

PHILOSOPHY AND THE SCIENCES

An introduction to philosophical issues arising from modern science and technology. Topics to be discussed may include science versus pseudoscience, the nature of scientific explanation, the impact of science on society, and the contribution of science to the development of science.
Two lectures, one tutorial; one term
Prerequisite: PHILOS 1B06, 1D06
Not open to students with credit or registration in PHILOS 2D03.

PHILOSOPHY AND THE SCIENCES

A critical investigation of philosophical arguments concerning such topics as God, politics, morality, human nature, knowledge, and art.
Two lectures, one tutorial; one term
Prerequisite: PHILOS 1B06, 1D06

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
Prerequisites: Registration in Level II or above
Cross-list: CLASSICS 2P06

INTRODUCTORY LOGIC

Sentential and quantificational logics are introduced and applied to arguments in English.
Three lectures; one term
Prerequisite: Registration in Level II or above

DESCARTES TO HUME

A comprehensive survey of early modern philosophy, concentrating on the metaphysical and epistemological views of the period.
Three lectures; two terms
Prerequisite: Registration in Level II or above

MORAL ISSUES

An introduction to moral philosophy, through a consideration of issues in health care ethics. Topics such as abortion, human experimentation, euthanasia, and genetic screening will be investigated.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above
Cross-list: RELIG ST 2C03
Enrolment limited to 475 students.

PHILOSOPHY AND THE SCIENCES

A comprehensive 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

PHILOSOPHY AND THE SCIENCES

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

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 term
Prerequisite: Registration in Level II or above
Cross-list: ART HIST 2H03, CMST 2N03
Offered in alternate years.

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

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, 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 programme in Philosophy.
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 2E03
Offered in alternate years.

PHILOS 3G03
ETHICS
An introduction to the major types of ethical theory and the problems of their justification.
Three lectures; one term
Prerequisite: At least six units of Philosophy and registration in Level III or above

PHILOS 3H03
PHILOSOPHY OF RELIGION
An analysis of the concept of religion in light of the philosophical claims of religious experience, practice, and belief.
Three lectures; one term
Prerequisite: Six units of Philosophy or WOMEN ST 1A06; and registration in Level III or above
Offered in alternate years.

PHILOS 3I03
PHILOSOPHY AND FEMINISM
A study of philosophical issues in feminist thought.
Three lectures; one term
Prerequisite: Six units of Philosophy or WOMEN ST 1A06; and registration in Level III or above
Cross-list: WOMEN ST 3C03
Offered in alternate years.

PHILOS 3K03
PHILOSOPHY OF EDUCATION
A systematic account of education through a critical analysis of the concepts of teaching, learning, and subject matter.
Two lectures, one tutorial; one term
Prerequisite: At least six units of Philosophy
Offered in alternate years.

PHILOS 3L03
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 3M03
THEORY OF KNOWLEDGE
A study of scepticism and certainty, knowledge and belief, perception, memory, and truth.
Three lectures; one term
Prerequisite: PHILOS 2C06

PHILOS 3P03
PHILOSOPHIES OF WAR AND PEACE
A philosophical appraisal of the rationality and morality of the conduct of war and proposals for fostering peace among nations.
Three lectures; one term
Prerequisite: At least six units of Philosophy and registration in Level III or above; or registration in Level III or IV of the Combined Honours in Peace Studies Programme
Cross-list: PEACE ST 3M03
Offered in alternate years.

PHILOS 3Q03
PHILOSOPHY OF LAW
An investigation of the nature of law and of issues arising within legal systems. These issues include legal reasoning, equality, legal insanity, punishment, and the Charter of Rights and Freedoms.
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 programme 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 2C06 and registration in Level III or above
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 4D03
20TH-CENTURY ANALYTIC PHILOSOPHY
A study of some main currents of 20th-Century philosophy, including the work of such figures as Russell, Wittgenstein, Quine, and Davidson.
Seminar (Two hours); one term
Prerequisite: At least six units of Philosophy and registration in Level III or above
Offered in alternate years.

PHILOS 4E03
EXISTENTIALISM AND PHENOMENOLOGY
A study of selected texts of major existential and phenomenological philosophers in the 20th-century, such as Camus, Heidegger, Jaspers, Marcel.
Seminar (Two hours); one term
Prerequisite: At least six units of Philosophy and registration in Level III or above

PHILOS 4F03
RECENT EUROPEAN PHILOSOPHY
Contemporary trends in European Philosophy as represented by such writers as Derrida, Foucault and Habermas.
Seminar (Two hours); one term
Prerequisite: At least six units of Philosophy and registration in Level III or above
Offered in alternate years.

PHILOS 4G03
BERTRAND RUSSELL
An introduction to various aspects of Russell's philosophical thought.
Each year two or three topics in his theory of knowledge, metaphysics, philosophy of language and social philosophy will be selected for special attention.
One lecture (Two hours); one seminar (One hour); one term
Prerequisite: PHILOS 2E03 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, 2C06 and registration in Level III or above of a programme in Philosophy

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.
PHYSICS AND ASTRONOMY

WEB ADDRESS: http://www.physics.mcmaster.ca/
A.N. Boums Science Building, Room 241
Ext: 24559

Faculty as of January 15, 2002

Chair
A.J. Berlinsky
University Professor

Jules P. Carbotte/B.Sc. (Manitoba), M.Sc., Ph.D. (McGill), D.Sc. (Water-
loo); F.R.S.C.

Associate Chair
C.D. Wilson

Professors
A. John Berlinsky/B.Sc. (Fordham), M.Sc., Ph.D. (Pennsylvania)
David R. Chettri/B.Sc., M.Sc., Ph.D. (Birmingham)
Hugh M. Coughman/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)
Catherine Kallin/B.Sc. (British Columbia), A.M., Ph.D. (Harvard)
William V. Prestwich/B.Sc., Ph.D. (McMaster)
Ralph E. Pudritz/B.Sc. (British Columbia), M.Sc. (Toronto), Ph.D. (Brit-
ish Columbia)
Peter G. Sutherland/B.Sc. (McGill), M.S., Ph.D. (Illinois)
David W. Taylor/B.A., D.PhiL (Oxford)
David E. Venius/B.Sc. (Queen's); Ph.D. (Toronto)
James C. Waddington/B.Sc. (Queen's); Ph.D. (McMaster)
Douglas L. Welch/B.Sc., Ph.D. (Toronto)
Christina D. Wilson/B.Sc. (Toronto), Ph.D. (California Institute of
Technology)

Associate Professors
Graeme M. Luke/B.Sc., Ph.D. (British Columbia)
An-Chang Shi/B.Sc. (Fudan); M.Sc., Ph.D. (Illinois)

Assistant Professors
Kari Reinikcz/Veress/B.Sc., M.Sc., Ph.D. (Guelph)
Cécile Fradin/B.Sc., M.Sc. (École Normale Supérieure), Ph.D. (Paris VI),
Canada Research Chair

Karén 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)
Florian E. McNally/B.Sc. (Edinburgh), Ph.D. (Birmingham)
Neza Reja/B.Sc. (Tehran), M.Sc., Ph.D. (Missouri-Rolla)
Eric Sorrenson/B.Sc., M.Sc. (Aarhus), Ph.D. (California-Santa Cruz)

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 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 Geology.

PHYSICS AND ASTRONOMY

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; one term
Prerequisite: Either PHYSICS 1P03 or at least 60% in OAC Physics (or
Physics U); and credit in registration in SCIENCE 1A00 and both MATH
1A03 or 1A04
Antirequisite: PHYSICS 1C03

PHYSICS 1B13  INTRODUCTION TO MODERN PHYSICS
A course for students intending to proceed in the physical sciences.
Linear and angular momentum, Atomic and quantum physics, Nuclear
and Particle Physics, Cosmology.

Three lectures, one lab (three hours) every other week; one term
Prerequisite: PHYSICS 1B03 or 1C03
Antirequisite: PHYSICS 1B13

ASTRONOMY...

Courses if no prerequisite is listed, the course is open.
PHYSICS 1B93  INTRODUCTION TO MODERN PHYSICS B
Nuclear Physics. Applications directed to topics in the life sciences.
Three lectures, one lab (three hours) every other week; one term
Prerequisite: PHYSICS 1B03 or 1C03
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 I

PHYSICS 1E03  WAVES, ELECTRICITY AND MAGNETIC FIELDS
A course for engineering students. Oscillations and waves, interference; electrostatics, electric potential, circuit elements; magnetic fields.
Three lectures; one lab (three hours) every other week; one term
Prerequisite: Registration in Engineering I

PHYSICS 1F03  INTRODUCTORY PHYSICS
Classical mechanics and waves for students without OAC Physics (or Physics U). Topics include kinematics, Newton’s Laws, work, energy, momentum, interference and diffraction. Some topics in modern physics will be discussed.
Three lectures; one term
Prerequisite: OAC Mathematics (or Grade 12 U or UC equivalent).
Not open to students with 60% or higher in OAC Physics (or 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 or 1C03; and ARTS & SCI 1D06 or MATH 1A03
Antirequisite: PHYSICS 2B06

PHYSICS 2B06  ELECTRICITY AND MAGNETISM
Electrostatics, D.C. and A.C. circuits, the magnetic field; Faraday’s law of induction; Maxwell’s equations.
Three lectures, first term; two lectures, second term; one lab (three hours) every other week; two terms
Prerequisite: PHYSICS 1B03 or 1C03
Corequisite: MATH 2A03, 2C03
Antirequisite: PHYSICS 2A03

PHYSICS 2C03  MODERN PHYSICS
Special Relativity. Introductory quantum physics.
Three lectures; first term
Prerequisite: PHYSICS 1B03 or 1B3
Antirequisite: PHYSICS 2K03, 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 programme in Physics, Medical and Health Physics or Engineering Physics
Antirequisite: PHYSICS 2K03

PHYSICS 2H04  THERMODYNAMICS
An introduction to thermodynamics and its statistical basis at the microscopic level, with applications.
Three lectures, one lab (three hours), tutorial every other week; second term
Prerequisite: MATH 2A03; and credit or registration in MATH 2C03; and PHYSICS 1B03 (or 1C03); and credit or registration in PHYSICS 1B03 (or 1B3)
Antirequisite: CHEM 2PA3, 2P03, ENGINEER 2H03
Cross-list: ENG PHYS 2H04

PHYSICS 3A03  RELATIVITY
An introduction to general relativity.
Three lectures; one term
Prerequisite: PHYSICS 2C03 or 2K03; and registration in any Honours programme in Science or any programme in the Faculty of Engineering

PHYSICS 3B06  ELECTRONICS
Circuit theorems, principles of semiconductors and devices; bipolar junction transistor (DC biasing and AC model); amplifier circuits (single and multi-stage); field effect transistors and circuits, difference amplifier, feedback, oscillators, operational amplifier and applications.
Two lectures, both terms; one lab (two hours); two terms
Prerequisite: ENG PHYS 2A03, 2E04; or PHYSICS 2B06
Antirequisite: PHYSICS 3B03, 3BB3

PHYSICS 3B03  ELECTRONICS I
Circuit theorems, principles of semiconductors and devices; bipolar junction transistor (DC biasing and AC model); amplifier circuits (single and multi-stage).
Two lectures, one lab (two hours); first term
Prerequisite: ENG PHYS 2A03, 2E04; or PHYSICS 2B06
Antirequisite: PHYSICS 3B06

PHYSICS 3B83  ELECTRONICS II
Field effect transistors and circuits, difference amplifier, feedback, oscillators, operational amplifier and applications.
Two lectures, one lab (two hours); second term
Prerequisite: PHYSICS 3B03
Antirequisite: PHYSICS 3B06

PHYSICS 3C03  ANALYTICAL MECHANICS
Stability theory; Lagrange’s equations, conservative Hamiltonian systems; transformation theory and action angle variables; perturbation theory, resonances, non-integrable systems and chaos.
Three lectures; one term
Prerequisite: Credit or registration in MATH 3C03 and registration in any Honours programme in Science or any programme in the Faculty of Engineering; or registration in Honours Mathematics and Physics; or permission of the instructor.
Offered in alternate years.

MATH 3C03  MATHEMATICAL PHYSICS I
Linear algebra and eigenvalue problems; partial differential equations, orthogonal functions, Fourier series, Legendre functions, spherical harmonics.
Three lectures; one term
Prerequisite: MATH 2A03 or 2C04; and one of MATH 2C03, 2P04. One of PHYSICS 2B06, 2P03 or 2K03 is recommended.
Not open to students with credit or registration in MATH 3F03, 3L04

MATH 3D03  MATHEMATICAL PHYSICS II
Functions of a complex variable, probability and statistics, boundary value problems, Bessel functions.
Three lectures; one term
Prerequisite: MATH 3C03
Antirequisite: MATH 3K03
Not open to students with credit or registration in MATH 3L04, 3K03.
Not open to students registered in Honours Mathematics and Physics.

PHYSICS 3H03  INTERMEDIATE LABORATORY
Experiments in atomic physics, neutron physics, optics, spectroscopy, mechanics.
One lecture, one term; one lab (three hours), two terms
Prerequisite: PHYSICS 2B06 and credit or registration in one of PHYSICS 2C03, 3M03, 3C03
Antirequisite: PHYSICS 3H04

PHYSICS 3K03  THERMODYNAMICS AND STATISTICAL MECHANICS
The laws of thermodynamics, with emphasis on the mathematical structure of the theory; classical and quantum statistical mechanics.
Three lectures; one term
Prerequisite: MATH 2A03, 2C03, PHYSICS 2H04
Antirequisite: CHEM 4Y03

PHYSICS 3M03  QUANTUM MECHANICS AND ITS APPLICATIONS I
Phenomenological basis for quantum physics; topics from atomic and photon physics; wave phenomena; Schrödinger equation for one dimensional systems, barriers, harmonic oscillator.
Three lectures; one term
Prerequisite: One of MATH 3C03 or 3L03, and either ENGINEER 2M03 or PHYSICS 2B06; or both ENG PHYS 2A03 and 2E04; or registration in Honours Mathematics and Physics. MATH 3C03 or 3L03 may be taken concurrently.
Antirequisite: PHYSICS 2C03

PHYSICS 3M33  QUANTUM MECHANICS AND ITS APPLICATIONS II
Schrödinger equation for 3D systems with applications to atomic and modern physics.
Three lectures; one term
Prerequisite: MATH 3C03; and PHYSICS 2C03 or 3M03
PHYSICS 3N03

PHYSICAL OPTICS

Interference; Fraunhofer and Fresnel diffraction; Maxwell's equations and the electromagnetic theory of light; polarization and double refraction; interference of polarized light; selected topics in modern optics.

Three lectures; one term

Prerequisite: PHYSICS 2A03 or 2P04; and MATH 3E03 or MATH 3P03; and either PHYSICS 2B06 or both ENG PHYS 2A03 and 2E04

MATH PHYS 3T03

RADIOACTIVITY AND RADIATION INTERACTIONS

Formerly: Physics 3T03

Radioactivity and radiation protection: interaction of radiations with matter, dosimetry, radiation in medicine, biological effects, reaction levels and regulations, radiation protection.

Three lectures; one term

Prerequisite: One of PHYSICS 1A03, 1B03 or permission of the instructor

Antirequisite: BIOLOGY 3L03, PHYSICS 3T03

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 3G03, PHYSICS 1B03

PHYSICS 4A03

INQUIRY IN PHYSICS

Independent study of the scientific literature, including the preparation of seminars and reports on assigned topics.

Two lectures or seminars; two terms

Prerequisite: Registration in a program in which PHYSICS 4A03 is required or is a specified option

Antirequisite: MED PHYS 4A03

PHYSICS 4B03

ELECTROMAGNETIC THEORY

Potential theory, electrostatics and magnetostatics in matter, electromagnetics, electromagnetic waves and wave guides.

Two lectures; one term

Prerequisite: MATH 3D03 and either PHYSICS 2B06 or both ENG PHYS 2A03 and 2E04; or registration in Honours Mathematics and Physics

Antirequisite: PHYSICS 4B04

PHYSICS 4D06

DIGITAL LOGIC AND COMPUTER SYSTEMS

The design and use of digital logic systems and their application to data acquisition and control techniques. The project-oriented laboratory involves both hardware and software.

Two lectures, one lab (three hours); two terms

Prerequisite: PHYSICS 2B06, or ENG PHYS 2A03 and 2E04

Antirequisite: COMP ENG 3D04, 3H03, PHYSICS 4D03, 4D03

PHYSICS 4D03

ELECTRONICS

Two lectures, one lab (three hours); two terms

Prerequisite: PHYSICS 2B06, or ENG PHYS 2A03 and 2E04

Antirequisite: COMP ENG 3D04, 3H03, PHYSICS 4D05

PHYSICS 4D05

DIGITAL LOGIC AND COMPUTER SYSTEMS II

The continuation of PHYSICS 4D03.

Two lectures, one lab (three hours); second term

Prerequisite: PHYSICS 4D03

Antirequisite: PHYSICS 4D06

PHYSICS 4E03

NUCLEAR PHYSICS

Nuclear masses and stability; radioactivity and nuclear reactions; elementary nuclear models.

Three lectures; one term

Prerequisite: PHYSICS 3M03; or a grade of at least B- in PHYSICS 3G03; or registration in Level IV of an Honours Medical and Health Physics program

PHYSICS 4F03

QUANTUM MECHANICS

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

PHYSICS 4G03

COMPUTATIONAL PHYSICS

A course using microcomputers to solve selected problems in physics. The emphasis is on applying computational methods to physics, rather than numerical methods or computer programming.

One lab (three hours); one term

Prerequisite: PHYSICS 3M03

PHYSICS 4J03

ADVANCED LABORATORY

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 4J04

PHYSICS 4K03

SOLID STATE PHYSICS

Crystalline structure and binding; lattice vibrations; electron energy bands; metals and semiconductors; magnetism.

Three lectures; one term

Prerequisite: PHYSICS 3M03; or a grade of at least B- in PHYSICS 3G03 and 3Q03; or registration in Level IV of an Honours Medical and Health Physics program

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.

Lab (six hours); 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. Application for permission must be received by March 31st of the academic year prior to registration

Antirequisite: PHYSICS 4Q04

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

MATH PHYS 4T03

CLINICAL APPLICATIONS OF PHYSICS IN MEDICINE

Formerly: Physics 4T03

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 one of MATH 2C03, 2Q03, or 2P04; and one of BIOLOGY 3L03, ENG PHYS 3D03, MED PHYS 3T03, PHYSICS 3T03

Antirequisite: PHYSICS 4T03

POLISH

(SEE MODERN LANGUAGES AND LINGUISTICS, POLISH)

POLITICAL SCIENCE

WEB ADDRESS: http://www.socsci.mcmaster.ca/~polisci

Kenneth Taylor Hall, Room 527

Extn. 24741

Faculty as of January 15, 2002

Chair

Richard W. Stubbs

Professors

Barbara A. Carroll/B.A. (Manitoba), M.A. (Carleton), Ph.D. (American)

William D. Coleman/B.A. (Toronto), A.M., Ph.D. (Chicago)

Henry Jacky/B.S.S. (Fairfield), M.A., Ph.D. (Georgetown)

Thomas J. Lewis/B.A. (Carleton), M.A., Ph.D. (SUNY-Buffalo)

Kim Richard Nossal/B.A., M.A., Ph.D. (Toronto)

Mark Sproule-Jones/B.Sc. (London), M.A., Ph.D. (Indiana/IV.K. Copps)

Chair in Urban Studies

Michael B. Stein/B.A. (McGill), M.A., Ph.D. (Princeton)

Richard W. Stubbs/B.Sc. (Wales), M.A. (Lancaster), Ph.D. (Alberta)

Associate Professors

George B. Breckenridge/M.A. (Glasgow and Duke), Ph.D. (Duke)

Nils A. Galletti/B.A. (McGill), M.A., Ph.D. (Toronto)

Stefania Szlek Miller/M.A. (McMaster), Ph.D. (Toronto)
POLITICAL SCIENCE

Tony Porter/B.A. (McGill), M.A., Ph.D. (Carleton)
John W. Seaman/B.A. (Mount Allison), M.A. (Dalhousie), Ph.D. (Toronto)
Donald M. Wells/B.A. (Western Ontario), M.A. (British Columbia), Ph.D. (Toronto)
Charlotte A. B. Yates/B.A. (Winnipeg), M.A. (Queen's), Ph.D. (Carleton)

Assistant Professors
Karen Bird/B.A. (Wilfrid Laurier), Ph.D. (Minnesota)

Associate Members
Rhoda E. Howard-Hassmann/(Sociology) B.A., M.A., Ph.D. (McGill)
James J. Rice/(Social Work) B.A. (Sir George Williams), B.S.W., M.S.W. (Calgary), Ph.D. (Exeter)

Department Notes:
1. The Department of Political Science offers courses in Canadian Politics, Comparative Politics, Political Theory, International Politics and Research Methods.
2. Not every Political Science course listed in this Calendar is offered every year. Students should consult the Department after April 1st for the list of courses that will be offered in the following academic year.
3. All students are encouraged to seek advice from members of the Department in developing a programme of study. All Honours students are strongly advised to discuss their programme with an undergraduate advisor to ensure that it meets Departmental requirements.
4. POL SCI 2006 (previously 2F06) and 3N06 are required for students in Honours Political Science programmes. These two courses are recommended for students in B.A. programmes.
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 Enrolment is limited have a limit of 50 students. Although priority is given to Political Science students, many Level III courses have spaces for other students.
7. There are no course prerequisites for Level III courses. 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. In courses cross-listed in the Graduate Calendar (POL SCI 4B05, 4E05, 4G06), the limit is 14 undergraduate students; in all others, the limit is 18. Admission to Level IV limited enrolment courses is by pre-registration preferential ballot. Preference will be given as follows:
   a) Level IV Honours and Combined Honours Political Science
   b) Continuing Students
   c) Level III Honours and Combined Honours Political Science
   d) B.A. in Political Science
   e) Others

All students seeking registration in Level IV courses for the Fall/Winter Session including part-time degree students, are urged to consult the Department Office (Kenneth Taylor Hall, Room E27) no later than May 1, regarding ballooning for the following academic year. Permission from the Department will be required to complete registration in Level IV limited-enrolment courses.

Courses

POL SCI 1G06 POLITIES AND GOVERNMENT
An introduction to the study of politics with the spotlight on Canada, emphasizing critical discussion of issues before us today: social conflict, prospects for democracy, citizens' rights and responsibilities and Canada's future as a nation.
Antirequisite: POL SCI 1A03, 1B03, 1C06, 2G06

POL SCI 2A06 COMPARATIVE POLITICS
An introduction to comparative politics with emphasis on the different forms of government in a number of selected countries including Canada. Three hours (lectures and tutorials); two terms

POL SCI 2B05 U.S. POLITICS
A study of the development, nature, and functioning of the political system of the U.S.A.
Three hours (lectures and tutorials); two terms

POL SCI 2E06 GLOBAL POLITICS
A study of the institutions and processes of the international political system. Three hours (lectures and tutorials); two terms

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 2O06 POLITICAL THEORY
An introduction to political theory that includes Classical Greek thought, early modern natural right theory and contemporary political theory. Three hours (lectures and tutorials); two terms (See Note 4 above.)

POL SCI 2X3 POLITICALS OF THE THIRD WORLD
An examination of major theoretical approaches to the study of development and underdevelopment, such as modernization, politics of order, dependency and modes of production. Three hours (lectures and tutorials); one term
Antirequisite: POL SCI 3X03

POL SCI 2Z03 POLITICALS AND THE MEDIA
Theories and practices of the reciprocal relationship between the communications media and the political system. Three hours (lectures and tutorials); one term
Prerequisite: CMST 1A03 and 1B03; or POL SCI 1G06
Cross-list: CMST 2Z03

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
Enrolment is limited.

POL SCI 3A3 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
Enrolment is limited.

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 programme
Cross-list: CMST 3D03

POL SCI 3C03 GOVERNMENT AND POLITICS OF INDIGENOUS PEOPLES
An historical examination of the leadership and politics in Canada's indigenous communities, with a particular focus on pre-contact political structures, the Indian Act and its consequences, and contemporary social questions. Three hours; one term
Cross-list: INDI 3J03
Enrolment is limited.

POL SCI 3D03 POLITICS OF RESTRUCTURING: THE STATE AND THE ECONOMY
An examination of the politics of economic restructuring in selected industrialized countries during the past decade; major issues include privatization, labour policies, and trade agreements. Three hours; one term
Enrolment is limited.

POL SCI 3D03 PARTICIPATION AND ELITIST POLITICS IN CANADA
An analysis of the changing impact of citizen participation and of elitist politics on major Canadian political institutions and on the overall performance of the Canadian political system. Three hours; one term
Antirequisite: POL SCI 3D06
Enrolment is limited.

POL SCI 3E03 THE POLITICALS OF INTERNATIONAL ECONOMIC ORGANIZATIONS
An analysis of the structure, function and politics of the principal multinational organizations governing the postwar international economy. Three lectures; one term
Enrolment is limited.
### POLITICAL SCIENCE

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Hours</th>
<th>Prerequisites</th>
<th>Enrolment</th>
</tr>
</thead>
<tbody>
<tr>
<td>POL SCI 3EE3</td>
<td>INTERNATIONAL RELATIONS: NORTH-SOUTH</td>
<td>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. Enrolment is limited.</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3F03</td>
<td>CONTEMPORARY SOCIAL MOVEMENTS AND POPULAR COALITIONS</td>
<td>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 religious fundamentalist movements. Enrolment is limited.</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3F05</td>
<td>CANADIAN FOREIGN POLICY</td>
<td>An analysis of recent issues in Canada's external relations designed to indicate themes, problems and constraints in the making and execution of foreign policy in Canada. Enrolment is limited.</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3G01</td>
<td>FEDERALISM: THEORETICAL, CONSTITUTIONAL AND INSTITUTIONAL ISSUES</td>
<td>An analysis of the constitutional framework, evolution, and structure of the federal system in Canada and/or other Western countries. Enrolment is limited.</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3H03</td>
<td>INTERGOVERNMENTAL POLICY ISSUES IN CANADA</td>
<td>A survey of the policy processes and substantive policy concerns in the operation of the federal system of Canada, including economic, social and ethno-cultural policy areas. Enrolment is limited.</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3I03</td>
<td>TOPICS IN AMERICAN POLITICS</td>
<td>The study of a central component of the U.S. political system. Enrolment is limited.</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3J03</td>
<td>PROVINCIAL POLITICS IN CANADA</td>
<td>A study of the development, nature and functioning of the political systems of the Canadian provinces. Enrolment is limited.</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3K03</td>
<td>GENOCIDE: SOCIOLOGICAL AND POLITICAL PERSPECTIVES</td>
<td>An examination of genocide and other extreme crimes against humanity. Enrolment is limited.</td>
<td>3</td>
<td>POL SCI 2C03</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3L03</td>
<td>THE AMERICAN PRESIDENCY</td>
<td>An examination of the office of the American presidency and the ideological and institutional environment within which it functions. Enrolment is limited.</td>
<td>3</td>
<td>Cross-list: SOC 3KK3</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3M06</td>
<td>RESEARCH METHODS, STATISTICS AND POLITICAL ANALYSIS</td>
<td>An introduction to the study of concept and theory formation, and an overview of the scope, research methods and statistical techniques of political science. Enrolment is limited.</td>
<td>3</td>
<td>POL SCI 2F06</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3N06</td>
<td>PUBLIC LAW</td>
<td>A study of the nature and function of public law, with special reference to constitutional law and judicial behaviour. Enrolment is limited.</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3O06</td>
<td>MODERN POLITICAL THOUGHT</td>
<td>A critical analysis of modern political ideas, from the early nineteenth century to the present time, with special emphasis on the theories of modern conservatism, liberalism, socialism, fascism and democracy. Enrolment is limited.</td>
<td>3</td>
<td>None</td>
<td></td>
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<tr>
<td>POL SCI 3P03</td>
<td>THE POLITICAL ECONOMY OF REGIONAL INTEGRATION</td>
<td>An examination of regional integration in Europe, the Americas and Asia-Pacific and the implications for global politics and global economics. Enrolment is limited.</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3Q03</td>
<td>THE CAUSES OF WAR</td>
<td>An examination of theoretical perspectives on the causes of war and conditions for peace between and within political communities. Enrolment is limited.</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3R03</td>
<td>POLITICAL PSYCHOLOGY</td>
<td>Psychological explanations for the political behaviour of elites and masses. Enrolment is limited.</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3S03</td>
<td>LOCAL GOVERNMENT AND POLITICS IN CANADA</td>
<td>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. Enrolment is limited.</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3T03</td>
<td>PROBLEMS OF POSTCOMMUNIST TRANSITION</td>
<td>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. Enrolment is limited.</td>
<td>3</td>
<td>POL SCI 3G02, 4J06</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3U03</td>
<td>POLITICS IN EUROPE</td>
<td>Politics, government and policies of the European Union and/or selected countries within Europe. Enrolment is limited.</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3V03</td>
<td>READING COURSE</td>
<td>Topics to be arranged between an individual student and instructor. Enrolment is limited.</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3W03</td>
<td>WOMEN AND POLITICS</td>
<td>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. Enrolment is limited.</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3X03</td>
<td>POLITICS IN BRITAIN</td>
<td>A study of the development and functioning of the British political system, including political culture, political parties and parliamentary institutions.</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3Y03</td>
<td>ISSUES IN COMPARATIVE POLITICS</td>
<td>An examination of emerging theoretical and substantive issues in a comparative context. Enrolment is limited.</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3Z03</td>
<td>DEMOCRATIZATION AND HUMAN RIGHTS</td>
<td>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. Enrolment is limited.</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>POL SCI 3A03</td>
<td>TOPICS IN PUBLIC POLICY</td>
<td>An examination of emerging theoretical and substantive issues in the field of public policy studies. Enrolment is limited.</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>
POL SCI 3203  PUBLIC ADMINISTRATION: STRUCTURES AND PROGRAMME DELIVERY
The organizational arrangements for implementing public policies in Canada, including an assessment of their efficiency, effectiveness and accountability.
Three hours; one term
Enrolment is limited.

POL SCI 3223  PUBLIC ADMINISTRATION: THEORY AND DECISION-MAKING
Explanations of organizational design, bureau resources and other public management issues in Canada.
Three hours; one term
Enrolment is limited.

POL SCI 4A6  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 4B86  THE TRIAL OF SOCRATES
Plato’s understanding of the status of philosophy with respect to politics and rhetoric on the basis of the dialogues thematically connected to the trial and death of Socrates.
Three hours (seminar); two terms
Prerequisite: Registration in Level IV of any programme; and a course in Political Theory; and permission of the Department
Enrolment is limited.

POL SCI 4D06  HUMAN RIGHTS AND INTERNATIONAL POLITICS
An examination of the concept of human rights as reflected in international declarations and practices.
Three hours (seminar); two terms
Prerequisite: POL SCI 2E06 and permission of the Department
Antirequisite: POL SCI 4003, 4P86
Enrolment is limited.

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 programme; and a course in Political Theory; and permission of the Department
Not open to students with credit in POL SCI 4U06 if taken in 1995-1996.
Enrolment is limited.

POL SCI 4G06  COMPARATIVE PUBLIC POLICY
A critical analysis of the formation, content and impact of public policy within advanced industrial societies.
Three hours (seminar); two terms
Prerequisite: Six units of Comparative Politics and permission of the Department
Enrolment is limited.

POL SCI 4H03  ADVANCED STATISTICAL ANALYSIS
An outline of advanced levels of measurement and descriptive statistics, and a study of the logic of statistical inference and its applications.
Three hours (lectures and labs); one term
Prerequisite: POL SCI 3N06 and permission of the Department
Antirequisite: SOCIOL 4203

POL SCI 4M06  TOPICS IN INTERNATIONAL POLITICS
An examination of selected topics in international politics and foreign policy.
Three hours (seminar); two terms
Prerequisite: A course in International Relations and permission of the Department
Enrolment is limited.

POL SCI 4M6  TOPICS IN INTERNATIONAL POLITICAL ECONOMY
An examination of the major international and regional economic and political issues that currently preoccupy the governments and peoples of the Pacific Rim.
Three hours (seminar); two terms
Prerequisite: A course in International Relations and permission of the Department
Enrolment is limited.

POL SCI 4O06  CANADIAN PUBLIC POLICY
An examination of the patterns of public policy in Canada and a critical evaluation of several types of explanation.
Three hours (seminar); two terms
Prerequisite: POL SCI 1G06 or 2G06; and registration in Level IV of any programme; and permission of the Department
Enrolment is limited.

POL SCI 4Q06  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 3XX3 and permission of the Department
Enrolment is limited.

POL SCI 4S06  CANADIAN POLITICAL THEORY
An investigation into the character of Canadian liberalism and the various critiques of liberalism found in the works of G.P. Grant, C.B. Macpherson, George Woodcock and other Canadian political theorists.
Three hours (seminar); two terms
Prerequisite: Two courses from Political Theory, Canadian Politics, or Philosophy and permission of the Department
Enrolment is limited.

POL SCI 4W06  QUEBEC POLITICS
The political ideology of Quebec-based parties and movements, the impact of industrialization upon Quebec culture, and the economic implications of separatism.
Three hours (seminar); two terms
Prerequisite: POL SCI 1G06 or 2G06; and permission of the Department
Enrolment is limited.

POL SCI 4Z06  HONOURS ESSAY
A major research paper, supervised by a faculty member. The subject matter is to be different from that covered in 3U03, if the student is registered or has credit in that course.
Prerequisite: Registration in Level IV of any Honours programme in Political Science. For registration in the summer, written permission of the Course Coordinator is also required.

PSYCHOLOGY

WEB ADDRESS: http://www.mcmaster.ca/psychology
Psychology Building, Room 102
Ext. 23000

Faculty as of January 15, 2002

Chair
Betty A. Levy
University Professor
Shepard Siegel/A.B. (New York), M.S., Ph.D. (Yale)

Professors
Lorraine G. Allan/B.A., M.A. (Toronto), Ph.D. ( McMaster)
Patrick Bennett/B.Sc. (Tufts), Ph.D. (California-Berkeley), Senior Canada Research Chair
Lee R. Brooks/A.B. (Columbia), M.S., Ph.D. (Brown)
Martin Daly/B.A. (Toronto), M.A. (McGill), Ph.D. (Toronto)
Denys deCattanzaro/B.A., M.A., Carleton, Ph.D. (British Columbia)
Bennett G. Gafel/A.B. (Princeton), M.A., Ph.D. (Pennsylvania)
Betty A. Levy/B.A. (Dalhousie), M.A., Ph.D. (Toronto)
Daphne M. Maurer/B.A., M.A. (Pennsylvania), Ph.D. (Minnesota)
Kathryn M. Murphy/B.A. (Western Ontario), M.A., Ph.D. (Dalhousie)
John R. Piatt/B.A. (Kansas), Ph.D. (Texas)
Ronald J. Racine/B.Sc. (Oregon), M.Sc., Ph.D. (McGill)
Larry E. Roberts/B.A., Ph.D. (Minnesota)
Allison Sekuler/B.A. (Pomona), Ph.D. (California-Berkeley), Canada Research Chair

Adjunct Professors
Martice M. Clark/B.A., Ph.D. (McMaster)
Terri L. Lewis/B.A. (Toronto), Ph.D. (McMaster)
Bruce A. Under/B.E.S. (Minnesota), Ph.D. (McMaster)
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

PSYCH 1A01  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
Antirequisite: HTHSCI 1G03, PSYCH 1A06

PSYCH 2A03  SURVEY OF DEVELOPMENTAL PSYCHOLOGY

A general survey of theories and mechanisms of development, illustrated through examples from neural, perceptual, cognitive, social and emotional development. This course is designed for students not registered in a psychology programme or not wishing to do further work in developmental psychology. Others are referred to PSYCH 3G3.

Three lectures; one term
Prerequisite: PSYCH 1A01, 1A03; or PSYCH 1A03 and registration in the Bachelor of Health Sciences (Honours) programme
Antirequisite: PSYCH 2A03, 3G03, 3G3

PSYCH 2B03  PERSONALITY

An introduction to the scientific study of personality which will consider theory, assessment and research in five approaches to personality: psychodynamic, biological, trait, behavioural and humanistic.

Three lectures; one term
Prerequisite: PSYCH 1A03, 1A03; or registration in Honours Biology and Psychology; or PSYCH 1A03 and registration in the Bachelor of Health Sciences (Honours) programme

PSYCH 2C03  INTRODUCTION TO SOCIAL PSYCHOLOGY

An overview of research and theory in areas such as social perception, attitude and attitude change, social influence, interpersonal attraction, altruism, aggression, small group processes.

Three lectures; one term
Prerequisite: PSYCH 1A01, 1A03; or registration in Honours Biology and Psychology; or PSYCH 1A03 and registration in the Bachelor of Health Sciences (Honours) programme

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, 1A03; or registration in Honours Biology and Psychology; or PSYCH 1A03 and registration in the Bachelor of Health Sciences (Honours) programme

PSYCH 2F03  FUNDAMENTALS OF NEUROSCIENCE

Fundamentals of nervous system and endocrine function in humans and animals, including neurophysiology, neural transmission and neuroanatomy.

Three lectures; one term
Prerequisite: PSYCH 1A03, 1A03; or registration in Honours Biology and Psychology; or Honours in Psychology; or PSYCH 1A03 and registration in the Bachelor of Health Sciences (Honours) programme

PSYCH 2H03  HUMAN LEARNING AND COGNITION

The psychological study of knowledge and how people use it. Topics include pattern recognition, remembering and reasoning.

Three lectures; one term
Prerequisite: PSYCH 1A01, 1A03; or registration in Honours Biology and Psychology; or Honours in Psychology; or PSYCH 1A03 and registration in the Bachelor of Health Sciences (Honours) programme

PSYCH 2Q03  RESEARCH PRACTICUM

An 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.
PSYCHOLOGY 265

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 programme; and permission of the course coordinator. Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

PSYCH 2RR3 RESEARCH DESIGN AND STATISTICS FOR PSYCHOLOGISTS
Advanced statistical principles in the design and analysis of experiments in psychology. Parametric and non-parametric techniques for two sample and multi-sample designs.
Three lectures; one term
Prerequisite: One of HTH SCI 1F03 or STATS 1CC3 and registration in an Honours Psychology programme, the Bachelor of Health Sciences (Honours) programme, or Honours Neural Computation; or a grade of at least C+ in STATS 1CC3 and registration in a Psychology programme, B.Sc. Life Sciences, or the Honours Science (Stream B) programme.
Antirequisite: STATS 2M3B, 2R05

PSYCH 2TT3 INTRODUCTION TO ANIMAL LEARNING AND BEHAVIOUR
Evolutionary and associationist approaches to the study of adaptive behaviour of animals.
Three lectures; one term
Prerequisite: PSYCH 1A03, 1A3; or registration in Honours Biology and Psychology or Honours Neural Computation; or PSYCH 1A03 and registration in the Bachelor of Health Sciences (Honours) programme.
Antirequisite: PSYCH 2T03, 3R03

PSYCH 3A03 AUDITION
An introduction to auditory perception. The emphasis is on the application of classical and modern psychoacoustical methods to the development of theories of hearing.
Three lectures; one term
Prerequisite: PSYCH 2E03

PSYCH 3A33 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: PSYCH 3A03; or PSYCH 1A03 and SCIENCE 2J03; or permission of the instructor.
Not offered in 2002-2003

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 disorders.
Three lectures; one term
Prerequisite: PSYCH 3G33 or 3N03; and six units from PSYCH 2E03, 2F03, 2H03, 2R03, 2T03; and one of HTH SCI 1F03, STATS 1A03 or 1CC3

PSYCH 3B33 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 their connection with theoretical linguistics.
Three lectures (lectures and discussion); one term
Prerequisite: LINGUIST 3I03 or 3M03; or LINGUIST 1A03, 1A3A, PSYCH 2H03; or permission of the Department
Cross-list: LINGUIST 3B03
Offered in alternate years. Offered in 2002-2003.

PSYCH 3B83 LABORATORY IN HUMAN ELECTROPHYSIOLOGY
Principles of acquisition and analysis of functional brain imaging data (EEG, ERP, fMRI, MEG, etc., and other) 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 2E03, 2F03, 2H03, and one of PSYCH 2R03 or STATS 2D03; or permission of the instructor.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.
First offered in 2003-2004

PSYCH 3B033 BEHAVIOURAL NEUROSCIENCE I: SURVEY
An introduction to the behavioural neurosciences, which are aimed at the study of psychological, computational, and neuroscientific bases of perception and cognition. The course will focus on behavioural neuroscience methods and their application to contemporary research issues.
Three lectures; one term
Prerequisite: Six units from PSYCH 2E03, 2F03, 2H03, and one of PSYCH 2R03 or STATS 2D03; or permission of the instructor.
Enrolment is limited. However, all students in programmes requiring this course will be admitted. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

PSYCH 3E03 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 term
Prerequisite: PSYCH 2E03; and registration in Level III or IV of an Honours Psychology or Neural Computation programme.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

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.

PSYCH 3F3A 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

PSYCH 3G03 ESSENTIALS OF DEVELOPMENTAL PSYCHOLOGY
This course concentrates on theories and mechanisms of development. The evidence for biological and environmental influences on development is examined and the principles and mechanisms of development are illustrated through examples from neural, perceptual, cognitive, social and emotional development.
Three lectures; one term
Prerequisite: Six units from PSYCH 2E03, 2F03, 2H03, 2T03; and one of HTH SCI 1F03 or STATS 1CC3
Antirequisite: PSYCH 2A03, 2A33, 3G03

PSYCH 3H03 DEVELOPMENT IN 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, 3G33
Antirequisite: PSYCH 3G03
Offered in alternate years. Offered in 2002-2003.

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 behavioral disorders. A 20 page final report must be submitted to the coordinator by April 1. Applications must be submitted to the coordinator by February 1 of the preceding academic year, with selection for placements announced by March 15.
Prerequisite: PSYCH 2R03; and registration in Level III or IV of an Honours Psychology or Combined Honours Psychology programme; and permission of the coordinator. This course cannot be combined with any independent study course with the same supervisor.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

PSYCH 3I33 COGNITIVE DEVELOPMENT
The development of attention, concepts, memory, reasoning and language.
Three lectures; one term
Prerequisite: PSYCH 2H03, 3G33
Antirequisite: PSYCH 3H03

PSYCH 3J03 VISUAL NEUROSCIENCE
Visual perception and visual cognition as revealed by studies of human and animal behaviour, examining anatomy, structure, circuitry, and visual processing systems throughout retinal, subcortical, and cortical pathways.
Three lectures; one term
Prerequisite: PSYCH 2E03, 2H03
PSYCH 3JJ3  SOCIO-EMOTIONAL DEVELOPMENT
Discusses historical and contemporary topics related to socio-emotional development from infancy to middle childhood, with an emphasis on the development of maladaptive social behaviours.
Three lectures; one term
Prerequisite: PSYCH 2G03, 3G03
Offered in alternate years.
Offered in 2002-2003.

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, 1AA3 and one of HTH SCI 1F03 or STATS 1C03; or registration in Honours Biology and Psychology; or PSYCH 1A03 and registration in the Bachelor of Health Sciences (Honours) programme.

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 programme
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

PSYCH 3L13  GENERAL EXPERIMENTAL PSYCHOLOGY LABORATORY
Students undertake to learn critical appraisal skills and to answer general and specific questions by manipulating and analyzing real or simulated data sets drawn from a variety of areas in psychology.
Tutorials, lab by appointment; one term
Prerequisite: PSYCH 2R03 and registration in an Honours Psychology programme
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

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: PSYCH 2F03 or 2TT3

PSYCH 3N03  ABNORMAL PSYCHOLOGY I (FUNDAMENTALS)
Fundamentals of clinical psychology, including viewpoints on the nature of behavioural disorder, diagnostic systems, clinical judgement, and treatment approaches.
Three lectures; one term
Prerequisite: Six units from PSYCH 2E03, 2F03, 2H03, 2TT3; or nine units of Psychology and registration in Level III or IV of a Nursing or Social Work programme

PSYCH 3N33  ABNORMAL PSYCHOLOGY II (MAJOR DISORDERS)
A review of the major forms of mental disorder including dementia, neuropsychological disorder, schizophrenia, mood and anxiety disorders, physiochemical disorders, addiction, and problems of sexual adaptation.
Three lectures; one term
Prerequisite: Credit or registration in PSYCH 3N03

PSYCH 3P03  PSYCHOLOGICAL TOPICS IN THINKING
Areas to be examined include decision making, inference and problem solving. Particular attention will be paid to the informal reasoning and heuristics that are crucial to everyday decisions.
Three lectures; one term
Prerequisite: PSYCH 2H03 and one of HTH SCI 1F03, STATS 1A03 or 1C03

PSYCH 3Q03** INDIVIDUAL STUDY I
A library project that may extend over both terms. Students intending to register must first consult a faculty member and the course coordinator.
Prerequisite: Registration in Level III or IV and permission of the course coordinator. Application for permission must be received by March 31st of the academic year prior to registration.
Antirequisite: PSYCH 3Q03**

PSYCH 3Q03** INDIVIDUAL LAB STUDY I
A laboratory project that may extend over both terms. Students intending to register must first consult a faculty member and the course coordinator.
Prerequisite: Registration in Level III or IV and permission of the course coordinator. Application for permission must be received by March 31st of the academic year prior to registration.
Antirequisite: PSYCH 3Q03**

PSYCH 3RR3  ADVANCED CONDITIONING AND LEARNING
Contemporary investigations of conditioning and learning, primarily focused on the results of research with non-human animals.
Three lectures; one term
Prerequisite: PSYCH 2T03 and registration in Level III or IV of an Honours Psychology programme

PSYCH 3S03  ANIMAL BEHAVIOURO LABORATORY
Laboratory and field studies involving a wide variety of species.
One lab (three hours); one term
Prerequisite: Registration in Level III or IV of an Honours programme in Biology or Psychology; and one of PSYCH 2TT3, 3F03, or six units of Level I Biology
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

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

PSYCH 3U03  HUMAN LANGUAGE PROCESSING
Cognitive processes involved in encoding, storing and retrieving spoken and 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 Computer Science, Linguistics, Psychology programme, B.Sc. Life Science, or the Honours Science (Stream B) programme

PSYCH 3V03  LABORATORY IN HUMAN MEMORY AND COGNITION
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, Honours Neural Computation programme, B.Sc. Life Science, or the Honours Science (Stream B) programme

NEURCOMP 3W03  NEURAL COMPUTATION
An introduction to the use of neural network computational models for understanding the neural bases of psychological processes, and for solving real-world problems.
Three lectures; one term
Prerequisite: One of COMP SCI 1MC3, 1SA3 or permission of the instructor; and one of MATH 1A03, 1N03, ARTS&SCI 1D06; and registration in an Engineering programme or an Honours programme in the Faculty of Science. MATH 1B03 is strongly recommended.

PSYCH 3W3  MEASURING THE MIND
The course reviews, discusses, and illustrates how psychophysical theories and experiments about discrimination, preference and choice, are crucial to the development of modern experimental psychology.
Three lectures; one term
Prerequisite: PSYCH 2E03, 2RR3

PSYCH 3Y03  HORMONES, NEUROCHEMISTRY AND BEHAVIOUR
Steroids, peptides, monoamines, and interacting neural structures are considered in relation to feeding, reproductive behaviour, aggression, stress, and learning in humans and other vertebrates.
Three lectures; one term
Prerequisite: Six units from PSYCH 2F03, 2TT3, 3M03; and six units of Biochemistry and/or Biology; and registration in Level III or IV of an Honours programme
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 programme.

PSYCH 3ZZ3  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 programme.

PSYCH 4B03  HISTORY OF PSYCHOLOGY
An historical account of the main lines of development of psychology.
Three lectures; one term
Prerequisite: Registration in Level IV of an Honours Psychology programme.

PSYCH 4BN3  BEHAVIOURAL NEUROSCIENCE II: SPECIAL TOPICS
Seminar course on one or more selected topics in cognitive neuroscience, including biological and computational models of learning and memory, neuropsychology, and functional brain imaging.
Three lectures; one term
Prerequisite: PSYCH 3B03 or permission of the instructor.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

PSYCH 4C03  LANGUAGE DISORDERS IN CHILDHOOD
Seminar with student presentations on selected language disorders.
Papers will be required.
Three hours (seminar); one term
Prerequisite: PSYCH 3U03 and registration in Level IV of an Honours Psychology programme.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

PSYCH 4D06  PSYCHOLOGY THESIS
Students conduct an individual research project under the supervision of a faculty member.
Prerequisite: Registration in Level IV of an Honours or Combined Honours programme in Psychology for which this course is a specified option. Permission must be requested from the course coordinator by March 31st of the academic year prior to registration. If PSYCH 3Q03**, 3Q03**, 4Q03**, or 4Q03** is taken concurrently with PSYCH 4D06, a different faculty member must supervise each course.
Antirequisite: HTH SCI 3H03, 4A09, 4B06.
Not open to students with credit or registration in courses in the Science Inquiry 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.

PSYCH 4J03  INQUIRY IN PSYCHOLOGY
This course will provide students with an opportunity to develop skills required to launch investigations of selected psychological themes.
Seminar and discussions (three hours); one term
Prerequisite: Registration in Level IV of an Honours Psychology programme. Students registered in Honours Psychology (Complementary Studies Option) will be given preference.
Antirequisite: INQUIRY 4SHS.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

PSYCH 4Q03**  INDIVIDUAL STUDY II
A library project that may extend over both terms. Students intending to register must first consult a faculty member and the course coordinator.
Prerequisite: Registration in Level IV of a Psychology programme with a CA of at least 6.0 and permission of the course coordinator. Application for permission must be received by March 31 of the academic year prior to registration.
Antirequisite: PSYCH 4Q03**.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

PSYCH 4Q02**  INDIVIDUAL LAB STUDY II
A laboratory project that may extend over both terms. Students intending to register must first consult a faculty member and the course coordinator.
Prerequisite: Registration in Level IV of an Honours Psychology programme and permission of the course coordinator. Application for permission must be received by March 31st of the academic year prior to registration.
Antirequisite: PSYCH 4Q03**.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

PSYCH 4R03  SPECIAL TOPICS IN ANIMAL BEHAVIOUR
An advanced seminar focusing on selected topics in animal behaviour. Seminar and discussions (three hours); one term.
Prerequisite: PSYCH 3T03; and one of PSYCH 3F03, 3S03, 3T03; and registration in an Honours Biology or Psychology programme.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.


BIOLOGY 4T03  NEUROBIOLOGY
Selected topics in neurobiology at the molecular and cellular level including growth factors and neuronal development, ion channels, neurotransmitter functions, learning and memory, and neurological disorders.
Two (or one) lecture(s), one (or two) tutorial(s); one term.
Prerequisite: BIOLOGY 3P03 or permission of the instructor. One or more of BIOLOGY 3H03, 3H13, 3U03, PSYCH 2F03, 3F03 are also recommended.
Cross-list: HTH SCI 4R03
Offered in alternate years.

PSYCH 4Z03  TOPICS IN PSYCHOLINGUISTICS
Consult the Department of Modern Languages and Linguistics for topics to be offered.
Prerequisite: LINGUIST 3803 or PSYCH 3BB3
Cross-list: LINGUIST 4Z03
PSYCH 4Z03 may be repeated if on a different topic to a total of six units.

RELIGIOUS STUDIES

WEB ADDRESS: http://www.socsci.mcmaster.ca/relstud
University Hall, Room 105
Ext. 24567

Faculty as of January 15, 2002

Chair
Eileen Schuller

Professors

Phyllis Granoff/B.A. (Radcliffe College), Ph.D. (Harvard)
Alan Mendelson/A.B. (Kenyon College), M.A. ( Brandeis), Ph.D. (Chicago)
Adele Reinhardt/B.A. (Toronto), M.A., Ph.D. (McMaster)
Koichi Shinohara/B.A., M.L.S., M.A. (Tokyo), Ph.D. (Columbia)

Adjunct Professor

David B. Waterhouse/B.A. (Cantab) M.A. (Cantab), F.R.S.C.

Associate Professors

Ellen Badone/B.A., M.A. (Toronto), Ph.D. (California-Berkeley)
P. Travis Kroeker/B.A. (Winnipeg), M.A. (Manitoba), Ph.D. (Chicago)
Stephen R. Westerholm/B.A., M.A. (Toronto), D.Th. (Lund)
Wayne K. Whillier/B.A. (Sir George Williams), Ph.D. (McMaster)/part-time
Peter Widicombe/B.A. (Manitoba), M.Phil., M.Div. (Oxford), M.Div. (Toronto), D.Phil. (Oxford)

Adjunct Associate Professors

Neil McMullin/B.A. (St. Francis Xavier), S.T.B. (St. Michael's, Toronto), Th.M. (Harvard), Ph.D. (British Columbia)
Stella M. Sandal/M.A. (Stockholm), M.A. (Sorbonne), Ph.D. (Sorbonne)

Adjunct Assistant Professor

Kay Koppedreayer/B.A. (McGill), M.A. (McMaster), Ph.D. (McMaster)

Associate Member

Virginia Aksan/(History) B.A. (Allegheny College), M.L.S. (California-Berkeley), M.A., Ph.D. (Toronto)
Department Note:
Students are advised to consult both the Department's Handbook (available in University Hall 105) and the Undergraduate Timetable for a list of the courses offered in the current year. It is especially important that students interested in the Level IV Advanced Reading courses (4AA3, 4BB3, 4CC3, and 4DD3) consult a departmental undergraduate advisor.

Fields of Study
The Department offers courses in four fields of study. Students are encouraged to specialize in any one of these fields: Level II, III and IV courses are allocated to the fields as follows:

I. ASIAN RELIGIONS

- RELIG ST 2E03, 2F03, 2I03, 2P06, 3A03, 3E03, 3L03, 3S03, 3U03, 3V03
- Sanskrit: 3A06, 4B06

II. BIBLICAL STUDIES

- RELIG ST 2B03, 2D03, 2E03, 2G03, 2H03, 2V03, 2Y03, 2Z03
- Hebrew: 2A03, 2B03, 3A03, 3B03

III. WESTERN RELIGIOUS THOUGHT

- RELIG ST 2C03, 2D03, 3K03, 2M03, 2U03, 3C03, 3D03, 3E03, 3F03, 3G03, 3H03

IV. CONTEMPORARY AND COMPARATIVE RELIGIONS

- RELIG ST 2A03, 2B03, 2E03, 2F03, 2H03, 2M03, 2N03, 2O03, 2Q03, 2S03, 2V03, 2W03
- RELIG ST 2P03, 2Q03, 3A03, 3B03, 3C03, 3D03, 3E03, 3F03, 3G03

Courses
If no prerequisite is listed, the course is open.

RELIG ST 1806 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 1006 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 1H03 RELIGIOUS DISSERTATION
A study of recent dissent from establishment religion as exemplified in feminist thought, liberation theology, and ecological spirituality.
Two lectures, one tutorial; one term

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 1I06

RELIG ST 2A03 MYSTICISM IN HINDU AND CHRISTIAN TRADITIONS
An exploration of the unique and common characteristics of mysticism in the Hindu and Christian traditions, both in its philosophical and popular expression through the study of selected texts.
Two lectures, one tutorial; one term

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: PHIL 2003
Enrollment 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
Prerequisite: Registration in Level II or above

RELIG ST 2E03 ENGAGED BUDDHISM
A study of contemporary Buddhist thinkers from Asia and the West who have advocated a renewed, socially engaged Buddhism that addresses issues of war, oppression and the destruction of the environment.
Two lectures, one tutorial; one term

RELIG ST 2EA3 ISLAM AND MEDITERRANEAN SOCIETY, 600-1300
An introduction to Islamic civilization from its beginnings in Arabia to the period of the Crusaders, with an emphasis on Mediterranean culture of the period.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 2EA3
Antirequisite: RELIG ST 2006

RELIG ST 2EB3 ISLAM IN THE WORLD, 1300-1800
A survey course which emphasizes the role of Islam in the global setting in the period of the great Islamic empires.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 2EB3
Antirequisite: RELIG ST 2006

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
Cross-list: JAPAN 3F03
Antirequisite: RELIG ST 3F03

RELIG ST 2G03 EARLIEST PORTRAITS OF JESUS
A study of the Gospels of Matthew, Mark, and Luke. Special attention will be given to the possible literary relationships among them as well as to the distinctive features of their Jesus stories.
Two lectures, one tutorial; one term

RELIG ST 2H03 THEORY AND PRACTICE OF NON-VIOLENCE
An introduction to the history, theory and practice of non-violence, with attention to the relations between religious representatives of the tradition such as Tolstoy, Gandhi and King, and to secular political figures such as Gene Sharp and James Scott.
Two lectures, one tutorial; one term

RELIG ST 2H03 PAUL AND CHRISTIAN ORIGINS
Two lectures, one tutorial; one term

RELIG ST 2I03 STORYTELLING IN INDIAN RELIGION
A survey of some of the many stories that were told by Buddhists, Jains and Hindus as a form of popular religious instruction and of the various uses made of humour and wit in religious teaching.
Two lectures, one tutorial; one term
Antirequisite: RELIG ST 3I03

RELIG ST 2J03 CHRISTIANITY IN THE PATRIARCHIC PERIOD (100-800)
The development of Christianity in the first centuries C.E. in relation to competing religious traditions in the Mediterranean world.
Two lectures, one tutorial; one term
A study of the central religious and ethical ideas of Gandhi in the context of his life; in particular: his doctrines of Non-violent Struggle and Truth; his place in contemporary consciousness, particularly in the struggle for human harmony and preservation of the earth and its living species; and his revolutionary view of Truth itself as God.

Two lectures, one tutorial; one term

Cross-list: Registration in Level II or above

RELIG ST 2Z03 GREEK AND ROMAN RELIGION
A study of the role of religion in Greek and Roman public and private life.
Three lectures; three terms
Prerequisite: Registration in Level II or above

RELIG ST 3E03 JAPANESE RELIGION
Two lectures; one tutorial; one term
Cross-list: JAPAN ST 3E03

RELIG ST 2W03 RELIGION AND ECOLOGY
Attitudes toward nature or the environment in Native, Asian and Western Religious Traditions; the underlying assumptions of our contemporary view of the natural world.
Two lectures; one tutorial; one term

RELIG ST 2W03 RELIGION AND ECOLOGY
Two lectures, one tutorial; one term

RELIG ST 2W03 RELIGION AND ECOLOGY
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 2W03 RELIGION AND ECOLOGY
Two lectures, one tutorial; one term

RELIG ST 2W03 RELIGION AND ECOLOGY
Three lectures; one term

RELIG ST 3AA3 POPULAR RELIGION IN INDIA
The Music, Dance and Festivals of Indian Temples will be analyzed in terms of their social, psychological and political implications.
Two lectures, one tutorial; one term

RELIG ST 3B03 CHRIST THROUGH THE CENTURIES
A study of the varied theological and artistic conceptions of Jesus Christ in the principal periods of Christian thought: the Biblical, Patristic, Medieval, Reformation, and Modern.
Two lectures, one tutorial; one term

RELIG ST 3D03 GOD, REASON AND EVIL
An examination of understandings of reason and evil in ancient Greek, medieval Christian and modern times, and of how these understandings are related to accounts of the nature of God.
Two lectures, one tutorial; one term

RELIG ST 3DD3 THE JEWISH WORLD IN NEW TESTAMENT TIMES
A study of Judaism in the Greco-Roman world. The course will explore selected questions in historical 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 3DD3
Antirequisite: RELIG ST 2NN3

RELIG ST 3E03 JAPANESE RELIGION
Two lectures; one tutorial; one term
Cross-list: JAPAN ST 3EE03

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 3I03 RELIGION AND SOCIAL JUSTICE
An examination of conceptions of justice, ancient and modern, and their relationship to religious understandings of human nature and society.
Two lectures, one tutorial; one term

RELIG ST 3I03 RELIGION AND SOCIAL JUSTICE
Prerequisite: Six units of Religious Studies courses above Level I

RELIG ST 3J03 RELIGION AND SOCIAL JUSTICE
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 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

Cross-list: COMP LIT 2503
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 3L3  RELIGION AND HUMAN NATURE
What is the nature of human nature and its fulfillment? A study of recent philosophical, scientific and religious anthropology.
Two lectures, one tutorial; one term

RELIG ST 3M03  SONGS OF DAVID: POETRY IN THE HEBREW BIBLE
A study of poetry in the Hebrew Bible (in translation). The course will give primary attention to the study of the psalms. Some examples of early epic poetry and wisdom poetry will also be included.
Two lectures, one tutorial; one term

RELIG ST 3M3  SCEPTICISM, ATHEISM AND RELIGIOUS FAITH
What is authentic human existence and is religious faith essential, irrelevant or imatical? A study of the struggle of several remarkable outsiders with questions of life's meaning and God: Pascal, Nietzsche, Buber and Simone Weil.
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 2O03

RELIG ST 3N3  THE ENCOUNTER OF SCIENCE AND RELIGION
A study of contemporary discussions of: (a) methods of inquiry in science and religion, (b) the human beings' relation to nature and (c) God's relation to nature.
Two lectures, one tutorial; one term

RELIG ST 3P03  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 and Christianity. 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

RELIG ST 3T03  THE QUEST FOR THE HISTORICAL JESUS
A look at the continuing scholarly efforts 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 3U3  BUDDHISM IN EAST ASIA
An examination of myth, history, doctrine, monastic culture, and ritual practices in East Asian Buddhism.
Two lectures, one tutorial; one term
Cross-list: JAPAN ST 3U3

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, philosophic 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 threats and 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 3Z23  JUDAISM AND THE JEWISH PEOPLE IN THE TWENTIETH CENTURY
Jews and Judaism in a century of catastrophe and renewal. The progress of Nationalism: Jews in Canada and the U.S.; the Jewish revolution in Europe; the Jewish state; Jewish identities in literature and the arts.
Two lectures, one tutorial; one term
Cross-list: HISTORY 3Z23
Antirequisite: RELIG ST 2X03

RELIG ST 4A06  HONOURS SEMINAR
A seminar in selected topics in the study of religion, including a presentation and discussion of research conducted by students in the Honours Research Course (4J06).
Seminar; (three hours); two terms
Prerequisite: Registration in Level IV Honours Religious Studies
Corequisite: RELIG ST 4J06

RELIG ST 4A03  ADVANCED READING: ASIAN RELIGIONS
Independent study of special topics in Asian Religions.
Prerequisite: Registration in Level IV of an honours programme and written permission of the supervising instructor

RELIG ST 4B03  ADVANCED READING: BIBLICAL STUDIES
Independent study of special topics in Biblical Studies.
Prerequisite: Registration in Level IV of an honours programme and written permission of the supervising instructor

RELIG ST 4C03  ADVANCED READING: WESTERN RELIGIOUS THOUGHT
Independent study of special topics in Western Religious Thought.
Prerequisite: Registration in Level IV of an honours programme and written permission of the supervising instructor

RELIG ST 4D03  ADVANCED READING: CONTEMPORARY AND COMPARATIVE RELIGION
Independent study of special topics in Contemporary and Comparative Religion.
Prerequisite: Registration in Level IV of an honours programme and written permission of the supervising instructor

RELIG ST 4J06  HONOURS RESEARCH COURSE
Students in this course will work closely with faculty members who specialize in the fields in which they plan to write their honours essay.
Two terms
Prerequisite: Registration in Level IV Honours Religious Studies
Corequisite: RELIG ST 4A06

RELIG ST 4W06  GUIDED READING IN RELIGIOUS STUDY
Independent study on a topic approved by the Instructor.
Two terms
Prerequisite: Registration in Level IV of an honours programme in Religious Studies and permission of the Instructor.

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 2A03 or permission of the instructor
Antirequisite: HEBREW 2A06
HEBREW 3A03  INTERMEDIATE HEBREW I
A reading course in classical (biblical) Hebrew. Sample texts will be read from some or all of the following: the Hebrew Bible, Mishnah, ancient Hebrew inscriptions and the Dead Sea Scrolls.
Four hours (two lectures); one term
Prerequisite: HEBREW 2B03 or permission of the instructor
Antirequisite: HEBREW 3A06

HEBREW 3B03  INTERMEDIATE HEBREW II
Further sample texts will be read from some or all of the following: the Hebrew Bible, Mishnah, ancient inscriptions and the Dead Sea Scrolls.
Four hours (two lectures); one term
Prerequisite: HEBREW 2B03 or permission of the instructor
Antirequisite: HEBREW 3A06

SANSKRIT ...

SANSKRIT 3A06  INTRODUCTION TO SANSKRIT GRAMMAR
Basic course in the elements of Sanskrit grammar. No previous knowledge of Sanskrit is required.
Three lectures; two terms

SANSKRIT 4B06  READINGS IN SANSKRIT TEXTS
Intermediate course with readings in selected texts.
Three lectures; two terms
Prerequisite: SANSKRIT 3A06

RUSSIAN

(SEE MODERN LANGUAGES AND LINGUISTICS, RUSSIAN)

SANSKRIT

(SEE RELIGIOUS STUDIES, SANSKRIT)

SCHOOL OF THE ARTS

WEB ADDRESS:
http://www.humanities.mcmaster.ca/-sota/index.html
Togo Salmon Hall, Room 414
Ext. 27671

Faculty as of January 15, 2002

Director
James Deaville

Professors

Associate Professors
Donald F. Carr/B.A. (Geelph), M.F.A. (Chicago) (Art)
Susan Fast/B.M. (Western Washington), M.A., Ph.D. (Iowa) (Music)
Hugh G. Gullway/Dipl. Art (Edinburgh) (Art)
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)
Keith W. Kinder/Dipl. F.A. (Calgary), B.Mus. (Western Ontario), M.Mus. (Northwestern), Ph.D. (Colorado) (Music)
William Renwick/B.Mus. (British Columbia), Ph.D. (CUNY), A.A.G.O., F.R.C.C.O. (Music)
Geoffrey Rockwell/B.A. (Haverford College), M.A., Ph.D. (Toronto) (Multimedia)
Graham Todd/L.D.A.D. Dipl. (Chicago School of Art) M.F.A. (Guainuato) (Art)
Valerie Tryon/L.R.A.M., F.R.A.M., A.R.C.M., Artist in Residence (Music) (part-time)

Assistant Professors
Joanne Buckley/B.A., M.A., Ph.D. (Western Ontario) (Multimedia)
Christie Carson/B.A. (Queen’s), M.A. (Toronto), Ph.D. (Glasgow) (Theatre & Film Studies and Multimedia)
Catherine Graham/B.A., M.A., Ph.D. (McGill) (Theatre & Film Studies)
Sally Hickson/B.A. (Carleton), M.A. (Queen’s) (Art History)
Janice Hlak/B.A. (York), M.A., Ph.D. (Toronto) (Theatre & Film Studies)
Kenneth McLeod/B.Mus. (British Columbia), M.A. (McMaster), Ph.D. (McGill)
Alison McQueen/B.A. (McGill), M.A., Ph.D. (Pittsburgh)
Paul Rivers/B.A. (McMaster), M.F.A. (Victoria) (Theatre & Film Studies)
Joseph Sokalski/B.E. (Alberta), M.A., Ph.D. (Toronto) (Theatre & Film Studies)

Adjunct Assistant Professor
Kim Noss/Museology) B.A. (McMaster), M.Litt. (Edinburgh), M.M. St. (Toronto)

Associate Members
Katherine M.D. Dunbar/Classics) M.A., D.Phil. (Oxford)
Michele G. George/Classics) B.A. (Toronto), M.A., Ph.D. (McMaster)
Gretchen Umitz/Classics) A.B., (Bryn Mawr), M.A., (Buffalo), Ph.D. (Califomia-Berkeley)

Lecturers
Andrew Macleish/B.A. (Mount Saint Vincent), M.A. (Dalhousie), Ph.D. (Alberta) (Multimedia)

Sessional Lecturers
Greg Bush/B.F.A. (Concordia), M.Mus. (McGill) (Music)
Caroline Coleman/B.Mus. (McMaster) (Music)
Tara Cymbalista/B.A. (McMaster) (Theatre & Film Studies) (part-time)
Roger Flock (Music)
Ron Gabor/B.A. (McMaster) (Multimedia)
David Gerry/A.R.C.T., B.Mus. (Toronto) (Music)
Paul Grimwood/B.Mus. (Western Ontario) (Music)
William Hills/B.Mus. (Lund), B.Mus. (McMaster), B.Ed. (Toronto) (Music)
Alexandre Lukas/B.F.A. (Belgrade), M.F.A. (York), M.A. (Toronto) (Theatre & Film Studies)
Rudy Neufeld (Music)
Terry Paynter/B Mus. (Saskatchewan), M.A. (British Columbia) (Music)
Karen Pegley/B.Mus., B.A. (Dalhousie), Ph.D. (York) (Music)
Rocco Pino (Multimedia)
Tessa Simm/B.A. (Western Ontario), B.Ed., M.A. (Toronto) (Theatre & Film Studies)

Music Studio Instructors
Elise Bédard/B.Mus., L.Mus., M.Mus. (McGill) (Voice)
John Brownell/percussion
Greg Bush/B.F.A. (Concordia), M.Mus. (McGill) (Trumpet)
Lita Classen/B.Mus. (Ottawa), M.Mus. (Vincent d’Indy Montreal) Dipl. Perf. (Vienna) (Voice)
Richard Cunningham/B.Mus. (Toronto) (Voice)
Kevin Dampney/percussion
Lance Eliott/defian
Paula Elliott/B.Mus. (Oberlin), M.M. (New England Conservatory) (Flute)
Roger Flock/percussion
David Gerry/A.R.C.T., B.Mus. (Toronto), Dipl. Ped. (Japan) (Flute)
Paul Grimwood/B.Mus. (Western Ontario) (Harpsichord & Organ)
Willy Jarvis/electric bass
Zoltan Kaiman/Dipl. (FRAZISZ Academy of Music, Budapest) (Clarinet)
Leokadia Kanovich/B.Mus. (Vilnius) (Clarinet)
Leon Karan/piano
Jeffrey Fish/Schneider/B.Mus. (Western Ontario), Mus. M. (Toronto) (Guitar)
William Melenbeek/A.R.C.T., B.Sc., M.Sc. (Guelph) (Saxophone)
Stephen Pierre/Mus. Bac. (Toronto) (Clarinet)
Mike Polo/Trombone
Sharr Preuss/B.Mus. (McMaster), B.Ed. (Toronto), M.A. (Calgary) (Double Bass)
Philip Starbuck/A.R.C.T., B.Mus. (Western Ontario) (Choir)
Bob Shields/Jazz guitar
Suzanne Shulman/A.R.C.T., B.Ed. (Althouse), B.Mus. (Western Ontario), M.M. (Toronto) (Piano)
Alla Zacarisi/Dipl. Perf. (Odessa, St. Petersburg) (Piano)
School Note:
Art, Multimedia, Music and Theatre & Film Studies courses can be found listed alphabetically within the Course Listings section of this Calendar.
In order to foster interdisciplinarity in the Arts, the School of the Arts offers the following SOTA courses for students who wish to combine various disciplines within the School.

Courses

SOTA 2A03 INQUIRY IN THE ARTS
An introduction to interdisciplinary, problem-based approaches to issues in the arts. Students learn how to formulate questions, gather evidence and reach well-considered conclusions about topics central to current scholarship in the arts. Topics will vary.
Three hours; one term
Prerequisite: Registration in any honors programme in the School of the Arts, or permission of the School
Enrolment is limited

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
Prerequisite: Three units of Communication Studies and registration in Level II or above
Cross-list: CMST 2003

SOTA 3B03 PERFORMANCE ART
This course will examine historical and contemporary concerns related to performance art including the relevance of traditional categories of artistic production, the roles of the audience, the institution and market, and the body as artistic medium.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: CMST 3U03

SOTA 3C03 TOPICS IN VISUAL CULTURE
This course will examine a variety of topics in the critical study of visual culture, including gender and spectatorship, consumerism and the arts, and visual literacy in the 21st century.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: CMST 3F03

SCIENCE
With the exception of SCIENCE 1A00, the Science courses are designed primarily for students in the Sciences 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 1J03 Human Physiology
COMP SCI 1S03 A Computing Fundamentals
COMP SCI 1T03 A Elementary Computing and Computer Use
KINESIOL 1X06 A Human Anatomy and Physiology
STATS 1A03 A Statistical Reasoning
STATS 1L03 A Probability and Linear Algebra

Courses
If no prerequisite is listed, the course is open.

INQUIRY 1SC3 INQUIRY IN SCIENCE I
This introduction to the systematic investigation of an issue develops skills that will serve students well in their university careers. Students learn how to formulate questions, gather and interpret evidence, and reach well-considered conclusions, using, as content, a variety of Science-based topics. The choice of topics is guided by the student's interest.
One hour, term one; Two hours, term two
Prerequisite: Registration in Science I or Mathematics and Statistics I
Enrolment is limited.

INQUIRY 1AO0 WHMIS, HEALTH AND SAFETY
Introduction to safety guidelines at McMaster University, acceptable safety conduct and positive safety attitudes and practices in laboratories and Workplace Hazardous Materials Information System (WHMIS). Evaluation: one multiple choice examination graded Pass or Fail; students who fail will be required to attend the course again during the same academic year.
One session (one hour)

SCIENCE 1D03 ASTRONOMY
A survey of modern and historical concepts in astronomy. Light and the telescope; distance measurement in space; the structure and evolution of stars, galaxies, cosmology.
Three lectures; one term
Prerequisite: Open to students registered in any faculty other than Science or Engineering. OSIS Grade 12 or OSS Grade 11 Mathematics required.
Antirequisite: ASTRON 1F03, SCIENCE 2003

SCIENCE 2A03 THE NATURE OF MATTER
Contemporary ideas about the structure of atoms and molecules; the collective behaviour of large numbers of atoms in solids, liquids, and gases and the technological implications of such behaviour.
Three lectures; one term
Prerequisite: Registration in Level II or above of a non-science or non-engineering programme
No mathematics is required.
Offered in alternate years.

SCIENCE 2G03 THE RIGHT TO FOOD
Human food requirements; how food is produced; alternative approaches to alleviating world hunger.
Three lectures or two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above
Enrolment is limited to 100. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

SCIENCE 2K03 THE MOLECULAR BASIS OF LIFE
A survey of the molecular basis of life; the current revolution in biology caused by recombinant DNA technology and its implications for the future.
Three lectures; or two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above
Antirequisite: BIOLOGY 1A03, 1A06, 1A03, 1K03
Offered in alternate years.

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 programme
Antirequisite: PHYSICS 2J03
Knowledge of OSIS Grade 12 Mathematics or OSS Grade 11 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 1A06, 1A03, 1A03
Offered in alternate years.
Offered in 2002-2003.

SOCIAL SCIENCES
Note:
All students are strongly recommended to complete SOC SCI 2EL0. Effective September 2002, completion of SOC SCI 2EL0 is required for students who participate in an internship.

Courses
If no prerequisite is listed, the course is open.

INQUIRY 1SS3 INQUIRY IN THE SOCIAL SCIENCES
This introduction to the systematic investigation of an issue develops skills that will serve students well in their university careers. Students learn how to formulate questions, gather and interpret evidence, and reach well-considered conclusions, using, as content, a topic central to research in the Faculty of Social Sciences. Topics may vary from session to session.
Three hours; one term
Prerequisite: Registration in Social Sciences I or Kinesiology I

Note:
All students are strongly recommended to complete SOC SCI 2EL0.
SOC SCI 2F03  SELECTED TOPICS IN INTERDISCIPLINARY STUDIES I

2002-2003: The Structure of the Family and the Role of Women in Historical and Contemporary Society

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

'SOC SCI 2E03 may be repeated, if on a different topic, to a total of six units.

SOC SCI 2F03  SELECTED TOPICS IN INTERDISCIPLINARY STUDIES II

2002-2003: Women and Work in Canada

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. (This course should not normally be considered as an extension of SOC SCI 2E03.)

Three hours (lectures and discussion); one term

'SOC SCI 2F03 may be repeated, if on a different topic, to a total of six units.

SOC SCI 2G03  INTRODUCTION TO STATISTICS

An introduction to basic statistical concepts and their application to the analysis of data from the social sciences. The use of spreadsheets is emphasized.

Three hours; one term

Prerequisite: Registration in Level II and above

Not open to students with credit or registration in: COMMERCE 2B03, ECON 2B03, 2C06, 3C03, GEOG 2F03, GEOG 2L03, 2N03, HTH SCI 1F03, KINESIO 1B03, 1B06, 2B03, POL SCI 1F03, 2B03, PSYCH 2B03, 2F03, 2N03, SOC SCI 2F03, 3H06, STATS 1A03, 1C03, 2A03, 2B03, 2F03

SOCIAL WORK

WEB ADDRESS: http://www.socscl.mcmaster.ca/~socwork

Kenneth Taylor Hall, Room 319

Ext. 23795

Faculty as of January 15, 2002

Director
Ralph A. Brown

Professors
Jane Aronson/B.Sc. (New University of Ulster), B.S.W., M.S.W. (McGill), Ph.D. (Ottawa)
James J. Rice/B.A. (Sir George Williams), B.S.W., M.S.W. (Calgary)

Adjunct Professor
Ramesh Mishra (York), B.Sc., Ph.D. (London)

Associate Professors
Ralph A. Brown/B.A., M.S.W. (Waterloo Lutheran), D.S.W. (UCLA)
Roy Cain/B.S.W., M.S.W., Ph.D. (McGill)
Patricia M. Daenzer/B.A., B.S.W., (York), M.S.W., Ph.D. (Toronto)
James W. Gladstone/B.A. (McGill), M.S.W. (British Columbia), Ph.D. (Toronto)
L. William Lee/B.A. (St. Thomas, Texas), M.S.W., Adv. Dip. S.W., Ed.D. (Toronto)
Shella Sammon/B.A. (Nazareth College, New York), M.S.W. (Toronto)

Assistant Professor
Donna Baines/B.S.W. (Calgary), M.S.W. (Ottawa), Ph.D. (Toronto)
Sandra Preston/B.A., M.A., Ph.D. (McMaster)
Tracy Swan/B.A. (McMaster), M.S.W. (Toronto), Ph.D. (Wilfrid Laurier)
Brenda Symons-Moulton/B.A., B.S.W. (McMaster), M.S.W. (Wilfrid Laurier)

Associate Members
N.C. Agarwall (Business)/B.A., M.A. (Delhi), Ph.D. (Minnesota)
M. Dooley (Economics)/B.A. (Indiana), M.S., Ph.D. (Wisconsin-Madison)

Practice Instructors
Michael Balkwill/B.A., B.S.W., M.A. (McMaster)
Suzanne Brown/B.A. (Wilfrid Laurier), B.S.W., M.S.W. (McMaster)
Donna Burris/B.A. (Guelph), M.S.W. (Toronto)
Chris Cardy/B.A., B.S.W. (McMaster), M.S.W. (Toronto)
Jane Chapman/B.A. (Mount Allison), B.S.W., M.S.W. (McMaster)
Shawn Chisholm/B.Sc (Toronto), B.S.W., M.S.W. (McMaster)
Mary Cloutt/B.S.W. (Western Ontario), M.S.W. (Toronto), C.C.C. (Fanshawe)
Andrew Deblieck/B.A., B.S.W., M.S.W. (McMaster)
Margaret Doma/B.A., B.S.W. (Wilfrid Laurier)
Mark Fraser/B.A. (Acadia), B.S.W. (McMaster), M.S.W. (Toronto)
M. Heather Gardner/B.A., B.S.W., M.S.W. (McMaster)
Rocco Gizzarel/B.A., B.S.W. (McMaster), M.S.W. (Toronto)
Niki Gomez-Perales/B.A. (Winnipeg), B.S.W. (McMaster), M.S.W. (Toronto)
Gordon Greenway/B.A., M.S.W. (Carleton)
Rosemary Hilbert/B.A., B.S.W. (McMaster), M.S.W. (York)
Barbara Hill/B.S.W. (Western Ontario), M.S.W. (Wilfrid Laurier)
Liz Lamb/B.A., B.S.W. (McMaster), M.S.W. (Carleton)
Maxine Lane/B.A., B.S.W. (McMaster), M.S.W. (York)
Kelly Lazure-Valcon/B.A., B.S.W. (McMaster), M.S.W. (York)
Linda Lear/B.S.W. (McMaster), M.S.W. (Toronto)
Gillian McClosky/B.A. (Queen's), M.S.W. (Toronto)
Carol McKenna/B.S.W. (Western Ontario), M.S.W. (Toronto)
Anna Mietlantrict/B.A., M.S.W. (McMaster), M.S.W. (Toronto)
Cindy Player/B.A. (Victoria), M.S.W. (Carleton)
Tony Quick/B.A. (St. Mary's), M.S.W. (Daihouse)
Shelley M. Rempel/B.A. (Toronto), B.S.W., M.A. (McMaster)
Randy Scott/B.S.W. (Calgary), M.S.W. (Wilfrid Laurier)
Gerald Smith/B.S.W., M.S.W. (Windsor)
Darlene Sykes/B.A., B.S.W. (McMaster)
Brenda Symons-Moulton/B.A., B.S.W. (McMaster), M.S.W. (Wilfrid Laurier)
Helen Tobias/B.A., B.S.W. (McMaster), M.S.W. (Wilfrid Laurier)
Karen Van Dyke/B.A. (Dordt College), M.S.W. (SUNY-Buffalo)
Jane Vock/B.A. (Wilfrid Laurier), M.A. (McMaster), M.S.W. (Wilfrid Laurier)
Susan West/B.A. (Alberta), M.A. (McMaster)

School Notes:
1. SOC WORK 1A06 is available to all students.
2. The following courses are available for elective credit for students enrolled in Level III or above of a non-Social Work programme. SOC WORK 1A06 is a prerequisite. Enrolment for such students is limited and places are assigned on a first come basis.

SOC WORK 3C03 Social Aspects of Health and Illness
SOC WORK 3H03 Justice and Social Welfare
SOC WORK 3Q03 Human Sexuality in Social Context
SOC WORK 4B03 Adult Family Violence
SOC WORK 4C03 Racism and Social Marginalization in Canadian Society
SOC WORK 4F03 Child Abuse
SOC WORK 4G03 Selected Topics
SOC WORK 4I03 Social Work and Indigenous Peoples
SOC WORK 4J03 Social Change: Social Movements and Advocacy
SOC WORK 4L03 Social Work with an Aging Population
SOC WORK 4M03 International and Comparative Social Welfare
SOC WORK 4R03 Social Work with Women
SOC WORK 4W03 Child Welfare

Courses
All courses are open only to Social Work students unless otherwise specified. (See Notes 1 and 2 above.)

SOC WORK 1A06 INTRODUCTION TO SOCIAL WORK
General introduction to the values, perspectives, ideologies, settings and methods of social work within the broad field of social welfare. This course combines a practical and theoretical orientation to the field. Lectures and discussions; two terms

(See Note 1 above.)
SOC WORK 2A06  THEORY, PROCESS AND COMMUNICATION SKILLS FOR SOCIAL WORK
Knowledge, value base and intervention methods of social work practice; basic skill development in interpersonal communication and interviewing. Lectures, discussions, exercises; two terms
Antirequisite: SOC WORK 2C06, 2C03, 2D03
Enrolment is limited.

SOC WORK 2B03  SOCIAL WELFARE I: GENERAL INTRODUCTION
Purpose: values underlying development of social welfare programmes; 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 programme must register for this course as SOC WORK 2B03.

SOC WORK 2B03  SOCIAL WELFARE II: POLICY AND PROCESS
Analysis of key concepts in the process and dynamics of social policy development in Canada. Examination of current issues and strategies influencing social policy formation in selected areas. Lectures, discussion; one term
Prerequisite: SOC WORK 2B03
Cross-list: LABR ST 2B03
Antirequisite: SOC WORK 2B06, 3G03
Students in a Social Work programme must register for this course as SOC WORK 2B03.

SOC WORK 2E03  HUMAN GROWTH AND DEVELOPMENT IN THE SOCIAL ENVIRONMENT
Human development throughout the life span with emphasis on the interaction between the personal and social contexts and social work concerns at each developmental stage. Lectures, discussion; one term

SOC WORK 3A03  SOCIAL WORK WITH INDIVIDUALS AND GROUPS
Examination of theories of social work intervention and current practice models of intervention with individuals and groups. Seminars; one term
Antirequisite: SOC WORK 3N03, 3P03, 4N03

SOC WORK 3C03  SOCIAL ASPECTS OF HEALTH AND ILLNESS
Exploration of the meaning of health and sickness in our society. Organization and delivery of health care. Consideration of ethical and other issues. Prerequisite: Registration in a Social Work programme; or SOC WORK 1A06 and registration in Level III or above of any programme Lectures, discussion and selective use of community resources; one term
This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work programme who have completed SOC WORK 1A06.
Enrolment is limited.

SOC WORK 3D06  GENERAL SOCIAL WORK I
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 (summer). Priority for summer block given to B.S.W. students. Prerequisite: SOC WORK 2B06 or both SOC WORK 2B03 and 2B83; and SOC WORK 2A06 or both SOC WORK 2C03 and 2D03; and PSYCH 2A03 or SOC WORK 2E03
Corequisite: SOC WORK 3D06
Antirequisite: SOC WORK 3D09
Credit in this course is dependent on achieving a minimum grade of C+ and a Pass in SOC WORK 3D06.
Enrolment is limited.

SOC WORK 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 taken in the summer. Priority for summer block given to B.S.W. students. Prerequisite: SOC WORK 2B06 or both SOC WORK 2B03 and 2B83; and SOC WORK 2A06 or both SOC WORK 2C03 and 2D03; and PSYCH 2A03 or SOC WORK 2E03
Corequisite: SOC WORK 3D06
Antirequisite: SOC WORK 4D12
Credit in this course is dependent on achieving a minimum grade of C+ and a Pass in SOC WORK 4D06.
Enrolment is limited.

SOC WORK 3H03  JUSTICE AND SOCIAL WELFARE
Human rights and the role of law in enhancing civil liberties in Canada. Social work, law and social change. Study of selected issues and review of administrative discretion. Seminars; one term
Prerequisite: Registration in a Social Work programme; or SOC WORK 1A06 and registration in Level III or above of any programme
This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work programme who have completed SOC WORK 1A06.
Enrolment is limited.

SOC WORK 3J03  HUMAN SEXUALITY IN SOCIAL CONTEXT
Basic information on anatomy, physiology, psychology and sociology of sexuality and fertility. Attitudinal self-awareness, communication skills, values regarding sexual identity and roles; analysis of policy issues. Seminars; one term
Prerequisite: Registration in a Social Work programme; or SOC WORK 1A06 and registration in Level III or above of any programme
This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work programme 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 programme; or SOC WORK 1A06 and registration in Level III or above of any programme
This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work programme who have completed SOC WORK 1A06.
Not open to students with credit or registration in SOC WORK 4Z03 SELEC TED ISSUES IN SOCIAL WELFARE POLICY, if the issue was Family Violence.
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 programme; or SOC WORK 1A06 and registration in Level III or above of any programme
This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work programme who have completed SOC WORK 1A06.
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.
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, 3D06
Corequisite: SOC WORK 4D06
Antirequisite: SOC WORK 4D12
Credit in this course is dependent on achieving a minimum grade of C+ and a Pass in SOC WORK 4D06.
Enrolment is limited.

SOC WORK 4D06  FIELD PRACTICUM II
Field experience to refine practice skills. Students spend the equivalent of two days per week in social agencies, or with other organizations, in supervised practice. Option of equivalent block placement in conjunction with SOC WORK 4D06.
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 programme; or SOC WORK 1A06 and registration in Level III or above of any programme
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 programme 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 programme; or SOC WORK 1A06 and registration in Level III or above of any programme
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 programme 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 programme; or SOC WORK 1A06 and registration in Level III or above of any programme
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 programme who have completed SOC WORK 1A06.
Enrolment is limited.

SOC WORK 4J03 SOCIAL CHANGE: SOCIAL MOVEMENTS AND ADVOCACY
Critical examination of the meaning of social change as a concept and event. Review of strategies of social change and of attempts to effect social change.
Seminars; one term
Prerequisite: Registration in a Social Work programme; or SOC WORK 1A06 and registration in Level III or above of any programme
This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work programme who have completed SOC WORK 1A06.
Enrolment is limited.

SOC WORK 4K03 SOCIAL WORK WITH AN AGING POPULATION
Analysis of the context of aging within Canadian society; examination of selected themes related to social welfare policies and models of social work practice with the elderly.
Seminars; one term
Prerequisite: Registration in a Social Work programme; or SOC WORK 1A06 and registration in Level III or above of any programme
Antirequisite: SOC WORK 4A03, 4V03
This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work programme who have completed SOC WORK 1A06.
Enrolment is limited.

SOC WORK 4M03 INTERNATIONAL AND COMPARATIVE SOCIAL WELFARE
Comparative perspective on problems of social structures in shaping social welfare institutions. Scope and limits of international collaboration.
Seminars; one term
Prerequisite: Registration in a Social Work programme; or SOC WORK 1A06 and registration in Level III or above of any programme
This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work programme who have completed SOC WORK 1A06.
Enrolment is limited.

SOCIOLOGY

WEB ADDRESS:
http://www.mcmaster.ca/socscidocs/sochome.htm
Kenneth Taylor Hall, Room 627
Ext. 24481

Faculty as of January 15, 2002

Chair
Victor Satzewich

Professors
W. Peter Archibald/B.A. (Mt. Allison), M.A. (British Columbia), Ph.D. (Michigan)
Carl J. Cuneo/B.A., M.A., Ph.D. (Waterloo)
Margaret Denton/B.A., Ph.D. (McMaster)
John Fox/B.A., M.A., Ph.D. (Michigan)
Rhonda Lenton/B.A. (Winnipeg), M.A. (Manitoba), Ph.D. (Toronto)
Cyril H. Levitt/B.A., M.A. (Waterloo), Ph.D. (Freie Universität, Berlin)
Carolyn Rosenthal/B.A. (Toronto), M.A., Ph.D.  (McMaster)
Victor Satzewich/B.A., M.A. (Saskatchewan), Ph.D. (Glasgow)
William B. Shaffer/B.A., M.A., Ph.D. (McGill)
Vivienne Walters/B.A., M.A. (Sheffield), Ph.D. (McGill)

Associate Professors
Art Budros/B.A. (San Jose State ), M.A. (UCLA), Ph.D. (UCLA)
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)
SOCIOL 2F06 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: SOCIOL 1A06

SOCIOL 2F06 POLITICAL SOCIOLOGY
A survey of social and state institutions, focusing on current debates in the field.
Three hours (lectures and discussion); two terms
Prerequisite: SOCIOL 1A06
Antirequisite: SOCIOL 3F06
Enrolment is limited.

SOCIOL 2106 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: SOCIOL 1A06
Cross-list: LABR ST 2106
Antirequisite: LABR ST 2103, 3103, SOCIOL 2103

SOCIOL 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 programme production and the relationship between media production and management.
Three hours (lectures); one term
Prerequisite: CMST 1A03 and 1B03; or SOCIOL 1A06
Cross-list: CMST 2L03

SOCIOL 2P06 SOCIOLOGY OF EDUCATION
A comprehensive analysis of educational institutions in modern society.
Three hours (lectures and discussion); two terms
Prerequisite: SOCIOL 1A06
Enrolment is limited.

SOCIOL 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: SOCIOL 1A06
Enrolment is limited.

SOCIOL 2R03 THEORIES OF CLASS AND STRATIFICATION
This course will introduce the student to major theories of social inequality, such as the Marxist, Weberian and structural-functionalist perspectives.
Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 1A06
Antirequisite: SOCIOL 2Q06

SOCIOL 2RR3 EMPIRICAL STUDIES OF CLASS AND STRATIFICATION
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, 2R03
Antirequisite: SOCIOL 2Q06

SOCIOL 2066 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 any programme in Sociology
Antirequisite: SOCIOL 2503, 3A06

SOCIOL 2U06 SOCIOLOGY OF THE FAMILY
An analysis of kinship and family units in comparative, historical, and contemporary perspective.
Three hours (lectures and discussion); two terms
Prerequisite: SOCIOL 1A06

SOCIOL 2Z03 INTRODUCTION TO SOCIOLOGICAL RESEARCH
This course is designed to develop those skills necessary to pursue and understand research. Several general methods of sociological research will be examined.
Three hours (lectures and discussion); one term
Prerequisite: Registration in any programme in Sociology or Social Work
Cross-list: ANTHROP 2Z03
Antirequisite: CMST 2A63, GEO 2HR3, GERONTOL 2C03, HEALTHST 2B03
SOCIO 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 programme
Enrolment is limited.
However, the Department of Sociology guarantees that all Third and Fourth Level Honours Sociology students will have access to either this course, SOCIOL 3P03 or 3PP3.

SOCIO 3B03  SELECTED TOPICS IN THE SOCIOLOGY OF EDUCATION
An examination of selected topics in the sociology of education.
Three hours (lectures and discussion); one term
Prerequisite: At least 18 units of Sociology
Enrolment is limited.

SOCIO 3C03  MEDIA AND SOCIAL ISSUES
Media representations of social problems such as homelessness and violence are examined comparatively in light of journalistic ethics and ideology, the relations between media and sources, and the constraints on objectivity.
Three hours (lectures); one term
Prerequisite: Registration in a Communication Studies or Sociology programme
Cross-list: CMST 3C03

SOCIO 3CC3  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 (lecture and discussion); one term
Prerequisite: SOCIOL 2U06 or registration in a Combined Honours in Sociology and Gerontology programme
Antirequisite: GERONTOL 3M03
Enrolment is limited.

SOCIO 3D03  SELECTED TOPICS IN THE SOCIOLOGY OF THE FAMILY
An advanced course allowing detailed study of selected topics in the sociology of the family.
Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 2U06
Enrolment is limited.

SOCIO 3E03  SELECTED TOPICS IN THE SOCIOLOGY OF WOMEN
An advanced course allowing detailed study of selected topics in the sociology of women.
Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 1A06, 2U06
Enrolment is limited.

SOCIO 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.

SOCIO 3GG3  SPECIAL TOPICS IN THE SOCIOLOGY OF DEVIANCE
An advanced course allowing detailed study of selected topics in the Sociology of Deviance. Topics will vary from year to year.
Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 2C06
SOCIO 3GG3 may be repeated, if on a different topic, a total of six units.
Enrolment is limited.

SOCIO 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 programme 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 Statistics as prescribed by all other Social Science programmes; SOCIOL 2Y03; all Statistics courses except STATS 1A03, 1L03, 2S03, 3S03, 3U03, 4H03.
Enrolment is limited.

SOCIO 3HH3  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.

SOCIO 3I03  SURVEY METHODS
An introduction to survey research methods in the social sciences, including issues of research design, data collection, and data analysis.
Three hours (seminar and discussion); one term
Prerequisite: SOCIOL 2203; and registration in or completion of SOCIOL 3H06 (or the equivalent for students enrolled in a Combined Honours Programme); and registration in Honours Sociology
Enrolment is limited.
However, the Department of Sociology guarantees that all Third and Fourth Level Honours Sociology students will have access to either this course, SOCIOL 3O03 or 3W03.

SOCIO 3J03  SPECIAL TOPICS IN SOCIOLOGICAL ANALYSIS I
An examination of selected topics of contemporary interest to sociologists. Students should consult the Department concerning the topics to be examined.
Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 1A06
Antirequisite: KINESIOL 3P03, KINESIOL 3Q03
SOCIO 3J03 may be repeated, if on a different topic.
Enrolment is limited.

SOCIO 3K03  SPECIAL TOPICS IN SOCIOLOGICAL ANALYSIS II
Same as SOCIOL 3J03.
Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 1A06
SOCIO 3K03 may be repeated, if on a different topic.
Enrolment is limited.

SOCIO 3K3  GENOCIDE: SOCIOLOGICAL AND POLITICAL PERSPECTIVES
An examination of genocide and other extreme crimes against humanity.
Three hours (lectures and discussion); one term
Cross-list: FOL SCI 3K3
Antirequisite: SOC SCI 2C03
Enrolment is limited.

SOCIO 3L03  SELECTED TOPICS IN OCCUPATIONAL SOCIOLOGY
An advanced course allowing detailed study of one or more topics of special interest in the sociology of occupations.
Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 1A06
Enrolment is limited.

SOCIO 3L13  SOCIOLOGY OF WORK AND LABOUR MARKETS
A consideration of the manner in which labour markets are structured and how they influence the access that people have to employment.
Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 1A06
Enrolment is limited.

SOCIO 3L03  QUALITATIVE RESEARCH METHODS
This course will provide a detailed study of selected qualitative methods in Sociology.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Honours Sociology
Enrolment is limited.
However, the Department of Sociology guarantees that all Level III and Level IV Honours Sociology students will have access to either this course, SOCIOL 3L03 or 3W03.

SOCIO 3L03  AMERICAN SOCIOLOGICAL THEORY
An advanced examination of classical and contemporary American sociological theory.
Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 2S06 and registration in Level III or IV of an Honours Sociology programme
Antirequisite: SOCIOL 3A06
Alternates with SOCIOL 3P03
Enrolment is limited.
However, the Department of Sociology guarantees that all Third and Fourth Level Honours Sociology students will have access to either this course, SOCIOL 3A03 or 3PP3.
SOCIOL 3PP3  CANADIAN SOCIOLOGICAL THEORY
An examination of the more or less unique contributions of English Canadians to sociological theory. Emphasis is on the Toronto school, and its 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 programme
Alternates with SOCIOL 3PP2.
Enrolment is limited. However, the Department of Sociology guarantees that all third and fourth level Honours Sociology students will have access to either this course, SOCIOL 3AP3 or 3PP3.

SOCIOL 3W03  HISTORICAL METHODS IN SOCIOLOGY
An examination of methods for incorporating historical data and archival sources into sociological argument.
Three hours (seminar and discussions); one term
Prerequisite: Registration in Honours Sociology
Enrolment is limited. However, the Department of Sociology guarantees that all Level III and IV Honours Sociology students will have access to either this course, SOCIOL 3W03 or 3W03.

SOCIOL 3X03  SOCIOLOGY OF AGING
This course deals with changing population structure, economic support of the aged, family of later life, the sociology of retirement, widowhood, death, bereavement, and institutionalization.
Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 1A06
Not open to students registered in a Gerontology programme as of September 1998.
Enrolment is limited.

SOCIOL 3Z03  ETHNIC RELATIONS
An analysis of political, social, and economic change in selected locales.
Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 1A05
Enrolment is limited.

SOCIOL 4A03  ETHNIC/RACIAL TENSIONS
The course will investigate the processes by which racial and/or ethnic tensions develop in various societies.
Three hours (seminar); one term
Prerequisite: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department.
Enrolment is limited.

SOCIOL 4AA3  SELECTED TOPICS IN THE SOCIOLOGY OF THE FAMILY
An intensive examination of selected problems in the sociology of the family.
Three hours (seminar); one term
Prerequisite: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department.
Not open to students with credit in SOCIOL 4GG3 if on a similar topic.
Enrolment is limited.

SOCIOL 4B06  FIELD STUDY METHODOLOGY
This course provides students with an opportunity to engage in first hand sociological research using field study methods, particularly participant observation.
Three hours (seminar); two terms
Prerequisite: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department.
Enrolment is limited.

SOCIOL 4BB3  SELECTED TOPICS IN THE SOCIOLOGY OF EDUCATION
This advanced course offers an intensive examination of selected problems involving the relationship between schooling and society.
Three hours (seminar); one term
Prerequisite: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department.
Not open to students with credit in SOCIOL 4J03 or 4K03 if on a similar topic.
Enrolment is limited.

SOCIOL 4C03  SELECTED PROBLEMS IN QUANTITATIVE RESEARCH
Students will undertake a class project that involves the application of statistical methods to a research problem.
Three hours (seminar); one term
Prerequisite: SOCIOL 3H06 and registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department.
Antirequisite: SOCIOL 4C05
Enrolment is limited.

SOCIOL 4D03  CRITIQUES OF SOCIOLOGICAL THEORY
A discussion of various sociological and non-sociological critiques of sociological theory.
Three hours (seminar); one term
Prerequisite: SOCIOL 2506 and registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department.
Enrolment is limited.

SOCIOL 4E03  SELF AND IDENTITY
A consideration of theoretical and empirical questions relating to self and identity viewed from historical, cross-cultural, and cross-disciplinary perspectives.
Three hours (seminar); one term
Prerequisite: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department.
Enrolment is limited.

SOCIOL 4G03  THE SOCIAL PRODUCTION OF ILLNESS
An examination of the social bases of illness. In different years consideration may be given to topics such as gender, social class and occupational and environmental health issues.
Three hours (seminar); one term
Prerequisite: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department.
Enrolment is limited.

SOCIOL 4GG3  SPECIAL TOPICS IN THE SOCIOLOGIES OF ORGANIZATIONS
An advanced course allowing detailed study of selected topics in the Sociology of Organizations. Topics will vary from year to year.
Three hours (seminar); one term
Prerequisite: SOCIOL 2C06 and registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department.
SOCIOl 4GG3 may be repeated, if on a different topic, to a total of six units.
Enrolment is limited.

SOCIOL 4HH3  SELECTED TOPICS IN THE 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.
Enrolment is limited.

SOCIOL 4J03  SELECTED TOPICS IN SOCIOLOGY I
Topics of contemporary interest to sociologists, with emphasis upon current theory and research. Students should consult the Department concerning the topics to be examined.
Three hours (seminar); one term
Prerequisite: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department.
SOCIOl 4J03 may be repeated, if on a different topic.
Enrolment is limited.

SOCIOL 4JJ3  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.
NOTE: Students entering this course should be well-versed in basic Internet navigation skills, such as the use of e-mail, usenet, listservs, and the World Wide Web. Such skills are required to complete the research paper using Internet electronic sources of information.
Enrolment is limited.

SOCIOL 4K03  SELECTED TOPICS IN SOCIOLOGY II
Topics of contemporary interest to sociologists, with emphasis upon current theory and research. Students should consult the Department concerning the topics to be examined.
Three hours (seminar); one term
Prerequisite: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department.
SOCIOl 4K03 may be repeated, if on a different topic.
Enrolment is limited.
SOFTWARE ENGINEERING
(SEE COMPUTING AND SOFTWARE)

SPANISH
(SEE MODERN LANGUAGES AND LINGUISTICS, HISPANIC STUDIES)

STATISTICS
(SEE MATHEMATICS AND STATISTICS)

TECHNOLOGY
(SEE MANUFACTURING TECHNOLOGY AND ENGINEERING TECHNOLOGY)

THEATRE & FILM

WEB ADDRESS:
http://www.humanities.mcmaster.ca/~sota/index.html

Togo Salmon Hall, Room 414
Ext. 27671

Courses and programmes in Theatre & Film are administered within the School of the Arts of the Faculty of Humanities.

Notes:

1. The following are courses open as electives to students registered in Level II or above in any university programme.

THTR&FLM 1A03 INTRODUCTION TO THEATRICAL PERFORMANCE
An exploration of the ways theatre artists bring different production elements and performance techniques together to get audiences thinking about important social issues.
Two lectures, one tutorial; one term.
Antirequisite: DRAMA 1A03, 1A06, 1A3

THTR&FLM 1B03 INTRODUCTION TO FILM ANALYSIS
An introduction to an interrelated set of approaches to film study, all of which are defined by their attention to the filmic text and which provide students with a grasp of the fundamentals of film analysis.
One lecture, one tutorial, plus one weekly film screening; one term.
Antirequisite: DRAMA 2X06

THTR&FLM 2A06 THE ART OF ACTING
Formally: DRAMA 2A06
A practical exploration of the methods that inform the actor’s art, designed to expose students to the range and complexity of performance styles. The class will be organized around a variety of approaches to the preparation of dramatic performances.
Two studios; two terms.
Antirequisite: DRAMA 2A03 and 1A03 (or DRAMA 1A03 and 1A3) with an average of at least 7.0, or DRAMA 1A06 with a grade of at least B; and registration in a programme in Theatre & Film Studies.
Enrolment is limited.
THTR&FLM 2B03  TECHNICAL THEATRE PRODUCTION  
Formerly: DRAMA 2A04  
A survey of the skills and practices involved in technical theatrical production, such as set construction, lighting, sound, properties and costumes. Students will work on Theatre & Film Studies Productions.  
Term One: two hour workshop, one hour lab; Term Two: practical exercises  
Prerequisite: Registration in a programme in Theatre & Film Studies  
Antirequisite: DRAMA 3A03  
Enrolment is limited.

THTR&FLM 2C03  DRAMATIC FORMS  
Formerly: DRAMA 2A04  
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 and 1A04 (or 1A06); or THTR&FLM 1A03 and 1B03  
Cross-list: CMST 2Z03, COMP LIT 2D03  
Antirequisite: DRAMA 2D03, 2D06

THTR&FLM 2D03  HISTORY OF WESTERN THEATRE  
PERFORMANCE TO THE EIGHTEENTH CENTURY  
Formerly: DRAMA 2A03  
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 programme in Theatre & Film Studies  
Antirequisite: DRAMA 2B03, 2M03, 2M06, 3G03

THTR&FLM 2E03  NEW MEDIA AND PERFORMANCE  
Formerly: DRAMA 2A03  
This course will explore the different approaches to performance where the proliferation of new media has affected the ways we create and interpret both live and recorded performances, the ways performance reaches audiences and our methods of analyzing and archiving performance.  
Three hours (lectures and discussion); one term  
Prerequisite: Registration in Level II or above  
Antirequisite: DRAMA 2B03  
Cross-list: CMST 2Z03

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: Six units from the Faculty of Humanities and registration in Level II or above  
Cross-list: CMST 2X03 (formerly CMST 2X06)  
Antirequisite: DRAMA 2X06

THTR&FLM 2G03  THE ANCIENT WORLD IN FILM  
The emphasis is on myth (e.g. Amazons, Hercules and history (slave revolts, banquets, decadent emperors), studied via Greek and Latin accounts (in translation) and cinematic versions (e.g., Elektra, Medea, Mighty Aphrodite, Apocalypse Now, Spartacus, I Claudius).  
Three lectures; one term  
Prerequisite: Registration in Level II or above  
Cross-list: CLASSICS 2E03, CMST 2Y03  
This course is administered by the Department of Classics.

THTR&FLM 2H03  THE CONTEMPORARY JAPANESE FILM  
This course examines the development of Japanese films since the Second World War, including contemporary feature films and animations, exploring the rich legacy of directors such as Akira Kurosawa, Kon Ichikawa, Juzo Itami and Masayuki Suo, and animation directors such as Hayao Miyazaki and Isao Takahata.  
Two lectures, plus one weekly film screening; one term  
Prerequisite: Registration in Level II or above  
Cross-list: JAPAN ST 2F03  
Offered in alternate years.  
This course is administered by the Department of Modern Languages and Linguistics.

THTR&FLM 3A03  ACTING SHAKESPEARE  
Formerly: DRAMA 3A03  
The study and performance of scenes from the works of William Shakespeare. Extension of acting skills through specific voice, body and language techniques.  
Two studios; one term  
Prerequisite: DRAMA 2A06 or THTR&FLM 2A06; and registration in a programme in Theatre & Film Studies  
Antirequisite: DRAMA 3A03  
Enrolment is limited.

THTR&FLM 3B03  TOPICS IN ACTING  
Formerly: DRAMA 3A03  
An exploration of the methods that inform the actor's art, focusing on a specific historical period or creative model, through the study and performance of dramatic texts. Previous topics include Italian, Physical Theatre, Realism and Farce.  
Two studios; one term  
Prerequisite: DRAMA 2A06 or THTR&FLM 2A06; and registration in a programme in Theatre & Film Studies  
Antirequisite: DRAMA 3A03  
THTR&FLM 3B03 may be repeated, if on a different topic, to a total of six units.  
Enrolment is limited.

THTR&FLM 3C03  STAGE AND PRODUCTION MANAGEMENT  
A survey of the skills and practices of production management and stage management of theatrical performances. Students will undertake managing Theatre & Film Studies Productions as part of their course of study.  
Term one: two hours; Term two: one hour (workshop and practical exercises)  
Prerequisite: DRAMA 2D05 or THTR&FLM 2B03; and registration in a programme in Theatre & Film Studies  
Enrolment is limited.

THTR&FLM 3D03  WESTERN THEATRE HISTORY: 1700-1885  
A study of the major movements shaping Western theatre from the Restoration to the rise of Naturalism.  
Two hours, plus play readings; one term  
Prerequisite: Six units of Level II Drama or Theatre & Film  
Offered in alternate years.

THTR&FLM 3E03  TWENTIETH-CENTURY THEATRE  
An exploration of important formal and social experiments that marked twentieth-century theatre and paved the way for contemporary theatre forms.  
Three hour lecture and discussion; one term  
Prerequisite: Six units of Level II Drama or Theatre & Film; or registration in Level III or IV of a Comparative Literature programme and three units of Drama or Theatre & Film  
Cross-list: COMP LIT 3C03  
Offered in alternate years.

THTR&FLM 3F03  DEVELOPMENT OF CANADIAN THEATRE  
Formerly: DRAMA 3E03  
A study of the development of theatrical performance in English Canadian, Québécois, First Nations and culturally diverse communities, with an emphasis on the period since 1967.  
Three hours (lecture and discussion); one term  
Prerequisite: Six units of Level II Drama or Theatre & Film; or registration in Level III or IV of a Comparative Literature programme and three units of Drama or Theatre & Film  
Antirequisite: DRAMA 3E03  
Offered in alternate years.

THTR&FLM 3G03  THEATRE AND COMMUNITY DEVELOPMENT  
Formerly: DRAMA 3M03  
Students will explore the different approaches to community-based theatre generated in a social and cultural milieu 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 3M03  
Antirequisite: DRAMA 3M03  
Offered in alternate years.

THTR&FLM 3H03  COMPARATIVE THEATRE  
Formerly: DRAMA 3G03  
A comparison of two or more theatrical traditions.  
Three lectures; one term  
Prerequisite: Six units of Level II Drama or Theatre & Film; or registration in Level III or IV of a Comparative Literature programme and three units of Drama or Theatre & Film  
Cross-list: COMP LIT 3G03  
Antirequisite: DRAMA 3G03  
Offered in alternate years.
THTR&FLM 3J03 STRATEGIES IN PERFORMANCE COMPOSITION
This course introduces students to artists' strategies in performance composition and practice. Students will critically analyze performative explorations and innovations regarding texts, spaces, bodies, audiences, including performance modes which challenge artistic, social and political norms.
Three hours; one term
Prerequisite: Six units of Level II Drama or Theatre & Film (including one of DRAMA 2B03, 2D03, 2L03, THTR&FLM 2C03, 2D03, 2E03); or ART HIST 3AA3
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
Antirequisite: DRAMA 3P06
THTR&FLM 3J03 may be repeated, if on a different topic, to a total of six units.
Offered in alternate years.

THTR&FLM 3K03 TOPICS IN DRAMATIC PERFORMANCE
An exploration of contemporary dramatic performance trends since 1960. Topics will vary and may cover dramatic performance in theatre, film, television or other media.
Three hours lecture and discussion; one term
Prerequisite: One of DRAMA 2D03, 2L03, THTR&FLM 2C03 or 2D03
Offered in alternate years.
THTR&FLM 3K03 may be repeated, if on a different topic, to a total of six units.

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: 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 social and cultural meaning of popular imagery, viewing practices, star-making and star-gazing, commercialization.
Two hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: DRAMA 2X06 or THTR&FLM 2F03
Cross-list: CMST 3SS3
Offered in alternate years.

THTR&FLM 3N03 INDEPENDENT FILM AND VIDEO
An introduction to artists' film and video produced outside of dominant institutions. Works and practices analyzed may include: forms of documentary, community-based projects, experimental films, short films, video art, low-budget features.
Two hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: One of DRAMA 2B03, 2X06, THTR&FLM 2E03 or 2F03
Cross-list: CMST 3U03
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, and others.
Two hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: One of ART HIST 2A03, DRAMA 2X06, THTR&FLM 2F03; or registration in Level III or above of the Women's Studies Programme.
Cross-list: CMST 3B03, WOMEN ST 3B03
Not open to students with credit or registration in WOMEN ST 3B03 if taken in 2001-2002.
This course is administered by Women's Studies.

THTR&FLM 3Q03 TOPICS IN NATIONAL CINEMAS
Formerly: DRAMA 3T03
This course examines cinematic forms in relation to national contexts and to perspectives about nation. Areas of investigation may include: national bodies, globalization and local identities. Two hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: One of DRAMA 2B03, 2X06, THTR&FLM 1B03, 2E03, 2F03
Antirequisite: DRAMA 3T03
THTR &FLM 3Q03 may be repeated, if on a different topic, to a total of six units.
Offered in alternate years.

THTR&FLM 3R03 LITERATURE AND FILM
Formerly: DRAMA 3H03
An examination of the particular characteristics of both literature and film and the relationships between them through a detailed study of selected novels, short stories and plays and the films that have been based on them. Three lectures, plus one weekly film screening; one term
Prerequisite: Registration in Level II or above of a programme in Art History, English, Drama, Film Studies or the School of the Arts. It is recommended that students should already have taken DRAMA 2X06 or THTR&FLM 2F03.
Antirequisite: DRAMA 3H03
Cross-list: CMST 3CC3, COMP LIT 3LO3, ENGLISH 3CC3
Offered in alternate years.
This course is administered by the Department of English.

THTR&FLM 3S03 INDEPENDENT STUDY IN PRACTICAL THEATRE
Formerly: DRAMA 3Z03
This course is reserved for students with a strong academic record and the demonstrated ability to work independently. Students must submit a written proposal to the Academic Counsellor for Theatre & Film Studies no later than the first day of classes.
Prerequisite: Registration in an Honours programme in Theatre & Film Studies with a Cumulative Average of at least 8.0 and permission of the School of the Arts
Antirequisite: DRAMA 3Z03

THTR&FLM 3T03 INDEPENDENT STUDY IN THEATRE & FILM I
Formerly: DRAMA 3B03
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 programme in Theatre & Film Studies with a Cumulative Average of at least 9.0 and permission of the School of the Arts
Antirequisite: DRAMA 3B03

THTR&FLM 4A06 PRINCIPLES OF STAGE DIRECTING
Formerly: DRAMA 4A06
Theory of directing a play; play analysis; rehearsal techniques; technical stagework. Direction of a play under the supervision of an instructor.
Two lectures and practical exercises, plus rehearsals; two terms
Prerequisite: Registration in Level IV of an Honours programme in Theatre & Film Studies; and one of DRAMA 2A06, 2C03, 2L03, THTR&FLM 2A06, 2C03 or 2D03; and one of DRAMA 3A03, 3AA3, 3D03, THTR&FLM 3B03, 3A03 or 3B03; 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 a School committee.

THTR&FLM 4B03 STUDIES IN THE THEORY AND PRACTICE OF DRAMA
Formerly: DRAMA 4C03
Students will explore the relationship between theory and practice in creating dramatic works by using a combination of practical exercises and theoretical reflections to construct short performance pieces.
Seminar (two hours), one hour lab; one term
Prerequisite: One of DRAMA 2B03, 2D03, THTR&FLM 2C03 or 2E03; and registration in Level III or IV of an Honours programme in Theatre & Film Studies
Antirequisite: DRAMA 4C03
Offered in alternate years.
Enrolment is limited. Priority will be given to students registered in Level IV of any Theatre & Film Studies programme.
### WOMEN'S STUDIES

**WEB ADDRESS:** [http://www.humanities.mcmaster.ca/~womensst](http://www.humanities.mcmaster.ca/~womensst)

**Office of Interdisciplinary Studies**

**Togo Salmon Hall, Room 726**

**Ext. 23112**

The Honours B.A. Women's Studies and Another Subject Programme is taught by an Interdisciplinary Committee of Instruction.

**Director**

Elisabeth Boetjes (Philosophy) B.A., M.A. (Alberta), Ph.D. (Calgary),

MTH. (Newman Theological College)

**Academic Advisory Committee**

Maroussia Ahmed (French) L. é s L., M. é s L., D. de l'IU (Paris-Sorbonne)

Jane Aronson (Social Work) B.S. (New University of Ulster), B.S.W.,

M.S.W. (McGill), Ph.D. (Toronto)

Donna Baines (Labour Studies) B.S.W. (Calgary), M.S.W. (Carleton),

Ph.D. (Toronto)

Nancy Bouchier (Kinesiology) B.A., M.A., Ph.D. (Western Ontario)

Sylvia Bowerbank (Arts & Science & English) B.A. (McMaster), B.Ed. (Toronto), M.A. (Simon Fraser), Ph.D. (McMaster)

Vera Chouinard (Geography) B.A. (Western Ontario), M.A. (Toronto),

Ph.D. (McMaster)

Patricia M. Daenzer (Social Work) B.A., B.S.W. (York), M.S.W. (Ph.D. (Toronto)

Ruth Fraser (History) B.A. (Rochester), M.A., Ph.D. (Toronto)

Kathy Garay (Archives) B.A. (East Anglia), M.A. (McMaster), Ph.D. (Toronto)

Janice Hladki (B.A.), York, M.A., Ph.D. (Toronto)

Rhonda Lenton (Sociology) B.A. (Winnipeg), M.A. (Manitoba), Ph.D. (Toronto)

Mary O'Connor (English) B.A. (McGill), M.A., Ph.D. (Toronto)

Brightie Sassen (Philosophy) B.A. (Toronto), M.A., Ph.D. (Pennsylvania State)

Mark Vorobej (B.A. (Carleton), M.A., Ph.D. (Toronto)

Jean Wilson (Modern Languages and Linguistics and Comparative Literature) B.A. (McMaster), B.Ed., M.A., Ph.D. (Toronto)

**Committee of Instruction as of January 15, 2002**


Ph.D. (Toronto)

Maureen Connolly (B.P.E., M.P.E. (Memorial), Ph.D. (Alberta)

Thomas Craig (B.A. (California-Berkeley), M.A. (Texas-Arlington), M.A.

(Northern Baptist), M.A. Div. (Chicago), Ph.D. (Vanderbilt), Ph.D. (Southern Illinois))

Nicolete D'Francesco (B.A. (Carleton), M.A. (McMaster)

Catherine Gisèle (B.A. (Trent), M.A., Ph.D. (Western Ontario)

Janice Hladki (B.A., York) (Toronto), M.A., Ph.D. (Toronto)

Nisha Karumanchery (B.A., M.A., Ph.D. (McMaster)

Grace Kehler (B.A. (Regina), M.A., Ph.D. (Western Ontario)

Mary O'Connolly (English) B.A. (McGill), M.A., Ph.D. (Toronto)

Patricia Simpson (B.A., M.Ed. (Toronto)

Isik Zaytunoglu (Business) B.A., M.A., (Bogazici), M.S., Ph.D. (Pennsylvania State)

**Courses**

If no prerequisite is listed, the course is open.

**WOMEN ST 1A06  WOMEN IN CANADIAN SOCIETY**

An interdisciplinary introduction to Women's Studies, focusing on critical analysis of women's position in Canadian society. Possible areas of enquiry include health, law, sexualities, spirituality, history, work, literature and the arts.

Three hours (two lectures, one tutorial); two terms

**WOMEN ST 2A03  HISTORY OF WOMEN AND SOCIAL MOVEMENTS**

The course explores the history of women's collective efforts to improve social conditions.

Three hours; one term

Prerequisite: WOMEN ST 1A06 or permission of the Director of Women's Studies

Antirequisite: WOMEN ST 2A06

### WOMEN'S STUDIES

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<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>THTR&amp;FLM 4C03</td>
<td>STUDIES IN THE THEORY OF DRAMATIC PERFORMANCE</td>
</tr>
<tr>
<td>Formerly: DRAMA 4E03</td>
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<tr>
<td>An examination of theoretical documents, with an emphasis on contemporary theories of the nature of dramatic performance.</td>
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<td>Seminar (two hours); one term</td>
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<tr>
<td>Prerequisite: One of DRAMA 2903, 2D03, THTR&amp;FLM 2C03 or 2E03, and registration in Level III or IV of an Honours programme in Theatre &amp; Film Studies</td>
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<td>Antirequisite: DRAMA 4E03</td>
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<td>Offered in alternate years.</td>
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<td>Enrolment is limited. Priority will be given to students registered in Level IV of any Theatre &amp; Film Studies programme.</td>
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| THTR&FLM 4D03 | STUDIES IN THEATRE AND FILM |
| Formerly: DRAMA 4C03 |
| This senior 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: DRAMA 2X06 or THTR&FLM 2F03 and registration in Level III or IV of an Honours programme in Theatre & Film Studies |
| Antirequisite: DRAMA 4D03 |
| Offered in alternate years. |
| Enrolment is limited. Priority will be given to students registered in Level IV of any Theatre & Film Studies programme. |

| THTR&FLM 4E03 | STUDIES IN FILM |
| Formerly: DRAMA 4F03 |
| Senior seminar: An examination of selected films. |
| Seminar (two hours); one term |
| Prerequisite: DRAMA 2B03 or THTR&FLM 2E03, and registration in Level III or IV of an Honours programme in Theatre & Film Studies; or registration in Level IV of an Honours programme in Communication Studies. |
| THTR&FLM 2F03 is recommended. |
| Cross-list: CMST 4F03 |
| Antirequisite: DRAMA 4F03 |
| Offered in alternate years. |
| Enrolment is limited. Priority will be given to students registered in Level IV of any Theatre & Film Studies programme, and then to students registered in Level IV of the Communication Studies programme. |

| THTR&FLM 4F03 | INDEPENDENT STUDY IN THEATRE & FILM STUDIES II |
| Formerly: DRAMA 4B03 |
| This course is reserved for Honours Theatre & Film Studies students with the demonstrated ability to work independently. Students must submit a written proposal to the Academic Counsellor for Theatre & Film Studies no later than the end of classes. |
| Prerequisite: Registration in an Honours programme in Theatre & Film Studies with a Cumulative Average of at least 9.0 and permission of the School of the Arts |
| Antirequisite: DRAMA 4B03 |

**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 programme in Theatre & Film Studies. Students are advised that there may be restrictions on enrolment in these courses.

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<td>CLASSICS 3T03</td>
<td>The Theatre of Greece and Rome</td>
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<td>COMP LIT 3B03</td>
<td>Russian drama since 1800</td>
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<td>COMP LIT 3F03</td>
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<td>KINESIOL 3JJ</td>
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<td>RELIG ST 2YY3</td>
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<tr>
<td>WOMEN ST 3B03</td>
<td>Topics on Women and the Arts</td>
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</tbody>
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WOMEN ST 2A03 FEMINIST THEORIES
An introduction to the range of feminist theories and their epistemological foundations.
Three hours; one term
Prerequisite: WOMEN ST 1A06 or permission of the Director of Women's Studies
Antirequisite: WOMEN ST 3A06

WOMEN ST 2B06 WOMEN'S ROLE IN WESTERN EUROPEAN SOCIETY
An examination of the contribution of women to Western European society from classical times to the early twentieth century. Whether examined from a historical, sociological or cultural perspective, the female role is seen in relation to major political changes taking place during this period.
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 2B06
This course is administered by the Department of History.

WOMEN ST 2C03 PERSPECTIVES ON GENDER
An interdisciplinary overview of debates and research on the shaping of gender identity.
Three hours; one term
Prerequisite: Registration in Level II or above, WOMEN ST 1A06 is recommended.
Antirequisite: WOMEN ST 2C06

WOMEN ST 2D03 WOMEN AND TECHNOLOGY
An attempt to situate women within technological change, focusing on theoretical aspects of technology, new gender theorists and feminist assessment strategies. Includes an introduction to women's Internet resources.
Three hours; one term
Prerequisite: Registration in Level II or above

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: HEALTH ST 2H03, HTH SCI 2I03

WOMEN ST 2H05 WOMEN'S HEALTH: A SOCIO-CULTURAL PERSPECTIVE
Topics may include biomedicine and social construction of gender, women as paid and unpaid health workers, consequences of discrimination for women's health and historical analysis of female healers.
Three hours; one term
Prerequisite: Registration in Level II or above, WOMEN ST 1A06 is recommended.
Antirequisite: SOCIOI. 4U03

WOMEN ST 2K05 STUDIES IN WOMEN WRITERS
A closely focused course on women's writing in English. The topic for the course varies, sometimes concentrating on specific issues, sometimes on an historical period or national literature. Relevant feminist theory is a component of the course.
Three hours; two terms
Prerequisite: WOMEN ST 1A06 or permission of the Director of Women's Studies
Cross-list: ENGLISH 2K06
This course is administered by the Department of English.

WOMEN ST 2L03 FEMINIST UTOPIAS
An examination of literary texts offering women's visions of social change. Three hours (seminar and discussion); one term
Prerequisite: Registration in Level II or above, WOMEN ST 1A06 is recommended.
Cross-list: ENGLISH 2L03
Antirequisite: WOMEN ST 2A06

WOMEN ST 3A03 FEMINIST METHODOLOGIES
This course critically examines a range of feminist methodologies, focusing on issues of power/knowledge/research.
Three hours; one term
Prerequisite: WOMEN ST 2A06 or permission of the Director of Women's Studies
Antirequisite: WOMEN ST 3A06

WOMEN ST 3A03 FEMINIST THEORIES AND RESEARCH
An advanced inquiry into feminist theory, as it shapes the conduct of knowledge production.
Three hours; one term
Prerequisite: WOMEN ST 2A06 or permission of the Director of Women's Studies
Antirequisite: WOMEN ST 3A06

WOMEN ST 3B03 TOPICS ON WOMEN AND THE ARTS
This course explores the roles of women in any of the following fields: music, visual arts, film or theatre, whether as subjects or creators. Approaches may be practical, historical and/or theoretical, and interrelationships between the fields will be examined where appropriate.
Three hours; one term
Prerequisite: Registration in Level II or above. WOMEN ST 1A06 is recommended.

WOMEN ST 3B03 may be repeated, if on a different topic, to a total of six units.

WOMEN ST 3B03 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 visibility in forms such as film, video, television, advertising, etc. et cetera.
Two hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: One of ART-HIST 2A03, CMST 2X03, 2X06, DRAMA 2X05, THTR&FLM 2F03, or registration in Level III or above of the Women's Studies programs.
Cross-list: CMST 3B03, THTR&FLM 3P03
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 3C03 WOMEN AND ECOLOGY
An exploration of women's roles in the ecology movement, examining the various meanings of ecofeminism. Possible areas of enquiry: environmental ethics, anti-militarism, earth-goddess religions and the nature/culture debate.
Three hours; one term
Prerequisite: Registration in Level II or above. WOMEN ST 1A06 is recommended.

WOMEN ST 3C03 WOMEN AND THE URBAN ENVIRONMENT
An interdisciplinary examination of women's experiences of urban living with a focus on such issues as women's responses to urban change, women's housing problems and struggles for socially safer environments.
Three hours; one term
Prerequisite: Registration in Level II or above. WOMEN ST 1A06 is recommended.

WOMEN ST 3D03 WOMEN IN CROSS-CULTURAL PERSPECTIVE
An interdisciplinary exploration of women's experiences in different cultures, examining social and historical conditions, and symbolic systems. Topics may include women and development, women's rights, reproductive freedom, women and religion.
Three hours; one term
Prerequisite: Registration in Level II or above. WOMEN ST 1A06 is recommended.
Cross-list: CMST 3W03
Antirequisite: WOMEN ST 3D06

WOMEN ST 3D03 WOMEN IN A MULTICULTURAL SOCIETY
An interdisciplinary exploration of women's experiences in subcultures within a multicultural society, examining social and historical conditions, policies, and personal narratives. Topics may include immigration, voice, mobility, identity, hybridity.
Three hours; one term
Prerequisite: Registration in Level II or above. WOMEN ST 1A06 is recommended.
Cross-list: CMST 3W03
Antirequisite: WOMEN ST 3D06

WOMEN ST 3E03 SPECIAL TOPICS IN WOMEN'S ISSUES
2002-2003: Women and Spirituality
Recent topics have included: Ethical Issues in Women's Health, Feminist Issues in Reproduction and Motherhood, Women and Spirituality, Women in Islam.
Three hours; one term
Prerequisite: Registration in Level II or above. WOMEN ST 1A06 is recommended.

WOMEN ST 3E03 may be repeated, if on a different topic, to a total of six units.

WOMEN ST 3F03 HISTORY OF WOMEN IN CANADA AND THE U.S. TO 1920
This course examines key areas of women's history, such as indigenous cultures, slavery, immigration, religion, 'witchcraft', the family, sexuality, paid and unpaid labour, and the first wave of the women's movement.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 3W03
Antirequisite: WOMEN ST 3X03
This course is administered by the Department of History.
WOMEN ST 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
Co-registered: HISTORY 3WW3
Antirequisite: WOMEN ST 3X03
This course is administered by the Department of History

WOMEN ST 3HH3 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 programme in Comparative Literature, English, Peace Studies, Women's Studies or permission of the Departmental Counsellor in the Department of English
Cross-list: COMP LIT 3RR3, ENGLISH 3A03, PEACE ST 3A03
This course is administered by the Department of English.

WOMEN ST 3IH3 THEORIES OF GENDER AND SEXUALITY
This course explores the range of theories of gender and sexuality by working through readings from the intersecting fields of feminism, queer and masculinity studies.

WOMEN ST 3X03 PHILOSOPHY AND FEMINISM
A study of philosophical issues in feminist thought.
Three hours; one term
Prerequisite: Registration in Level III or IV of any programme or six units of Philosophy. WOMEN ST 1A06 is recommended.
Cross-list: PHILOS 3903
Offered in alternate years.
This course is administered by the Department of Philosophy.

WOMEN ST 3W03 GERMAN WOMEN WRITERS
A study of selected works by German women writers from the eighteenth century to the present.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: COMP LIT 3W03
This course is administered by Comparative Literature.

WOMEN ST 4A06 INDEPENDENT RESEARCH
Students develop their own research projects, in regular consultation with a faculty supervisor. Upon completion, students present their results at a one-day open forum, and submit a written report.
Prerequisite: Registration in Level IV of the Women's Studies Programme

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 Programme or permission of the Director of Women's Studies
Antirequisite: WOMEN ST 4B06
Enrolment is limited.

WOMEN ST 4B03 TOPICS IN WOMEN AND THE STATE
An analysis of the role of the State in Canadian social policies, including the responses of law, labour, education, immigration or health to women in Canada.
Three hours (seminar and discussion); one term
Prerequisite: Registration in Level III or IV of the Combined Honours in Women's Studies Programme or permission of the Director of Women's Studies
Antirequisite: WOMEN ST 4B06
Enrolment is limited.

WOMEN ST 4B03 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 Level III or IV of the Combined Honours in Women's Studies Programme
Cross-list: COMMERCE 4B03
Enrolment is limited.

WOMEN ST 4C03 TOPICS IN FEMINIST SCHOLARSHIP: WOMEN IN CANADA
An intensive seminar in a field reflecting the instructor's research interests. Students benefit from current scholarship, and learn research methods complementary to those used in WOMEN ST 4A06.
Three hours; one term
Prerequisite: Registration in Level III or IV of the Combined Honours in Women's Studies Programme or permission of the Director of Women's Studies
Antirequisite: WOMEN ST 4C06
Enrolment is limited.

WOMEN ST 4CC3 TOPICS IN FEMINIST SCHOLARSHIP: WOMEN IN AN INTERNATIONAL CONTEXT
An intensive seminar in a field reflecting the instructor's research interests. Students benefit from current scholarship, and learn research methods complementary to those used in WOMEN ST 4A06.
Three hours; one term
Prerequisite: Registration in Level III or IV of the Combined Honours in Women's Studies Programme or permission of the Director of Women's Studies
Antirequisite: WOMEN ST 4C06
Enrolment is limited.

WOMEN ST 4D03 INDEPENDENT STUDY
In consultation with a faculty member, students will research an approved topic, on the basis of materials outside normally available course offerings. A major paper will be required.
Prerequisite: Registration in Level IV of the Combined Honours in Women's Studies programme and permission of the Director

Note:
The following courses, offered by other departments, may be used to help fulfill Women's Studies programme requirements, provided that the prerequisite requirements of the home department are fulfilled:

ANTHROP 2R03 Religion, Magic, and Witchcraft
ANTHROP 3RP3 The Anthropology of Gender
COMP LIT 4E03 Topics in Comparative Literature (when the topic is Twentieth-Century Women Writers)
HISTORY 4H06 Canadian Women's History
HUMAN 2F03 Selected Interdisciplinary Topics in Medieval Life and Culture
KINESIO 4T03 Gender, Sport and Leisure
LABR ST 20G3 Different Labours, Different Voices
LABR ST 3E03 Women, Work and Trade Unionism
RELIG ST 2803 Women in the Biblical Tradition
RELIG ST 2BB3 Images of the Divine Feminine
RELIG ST 2SS3 Women and Religion
SOC WORK 4R03 Social Work with Women
SOCIOL 2006 Sociology of Gender
SOCIOL 2U06 Sociology of the Family
SOCIOL 3D03 Special Topics in the Sociology of the Family
SOCIOL 3E03 Selected Topics in the Sociology of Women
SOCIOLOGY 3X03 Sociology of Aging
SOCIOL 4U03 Special Topics in the Sociology of Women
ACADEMIC FACILITIES, STUDENT SERVICES AND ORGANIZATIONS

THE UNIVERSITY LIBRARY

Web Address
http://library.mcmaster.ca/

E-mail Address
library@mcmaster.ca (Business, Humanities, Social Sciences, Science and Engineering)
hlibrary@mcmaster.ca (Health Sciences)

University Librarian
Graham R. Hill, B.A., M.A., M.L.S.

Health Sciences Library
Dorothy Fitzgerald, B.A., M.L.S./Director

Reader Services
Sheila Pepper, B.A., M.A., B.L.S./Assistant University Librarian

Thode Library of Science and Engineering
Kathryn Ball, B.A., M.L.S./Librarian

Innis Library
Vivian Lewis, B.A., M.L.S./Librarian

Collections Management and Development
Charlotte Stewart, B.A., M.A., M.L.S./Assistant University Librarian

Bibliographic Services
Cheryl Martin, B.Mus., M.A., M.L.S./Director Bibliographic Services

Administrative Services
Mary Ruth Linkert/Administrator

Systems Development
Paul Otto, B.A., B.Ed., M.L.S./Assistant University Librarian

The University Library System consists of Mills Memorial Library (Humanities and Social Sciences), the Thode 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 2000 contained more than 1,875,000 volumes, over 3,800 electronic journals and 11,386 linear feet of archival material. Current periodical titles number about 10,900.

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 online tutorial, http://dot@mac is also available through the Gateway. Service is maintained at key Reference points in the various libraries and in-library instructional sessions are available.

Mills Library has several collections - Reference, Periodicals, Government Publications, Music, Maps, and Reserve, which is used mainly by Undergraduates.

The William Ready Division of Archives and Research Collections in Mills Library contains rare books, manuscripts and special book and archival collections, which afford many opportunities for original research. Of outstanding interest are the Bertrand Russell Archives, a massive collection of correspondence and manuscripts supported by books, journal articles, secondary literature, tapes, films and personal memorabilia.

The Eighteenth-Century Collection of British materials 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, Robert Fulford, Farley Mowat, Peter Newman, Matt Cohen and many others.

Business interests are reflected in such files as the General Steel Wares 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 SUPA-CUGNO 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

COMPUTING AND INFORMATION SERVICES (CIS)

Web Address
http://www.mcmaster.ca/cis

E-mail Address
helpline@mcmaster.ca

Assistant Vice-President, IST
Marvin Ryder, B.A., B.Sc., M.B.A.

Director, CIS
Pat O'Day, B.A.

Networking Services
Robin Griffin, B.Sc., Ph.D./Senior Manager

Data Services
Eric Matthews, B.A., B.Ed./Senior Manager

System Support
Brian McEntegart, B.Sc./Senior Manager

Client Services
Heather Grigg/Senior Manager

Administration
Barb Campbell, B.A./Senior Manager, Departmental

CIS provides computing services in support of both administrative and networking activities. CIS manages a campus-wide network which is linked to the Internet, allowing access to resources throughout the world. Administrative computing is run on an IBM S/390 system and several SUN UNIX systems. MUGSI provides students access to their academic and personal data via the web. Student computer laboratories for academic use, equipped with Pentiums, are located in the Burke Sciences Building, Rooms 240-245, the John Hodgins Engineering Building, Room 234, the Arthur Bourns Building, Room 168, Kenneth Taylor Hall, Rooms B110, B111, B120 and B123 and the Health Sciences Library. All labs provide access to the world wide web, 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 CIS Office located in Arthur Bourns Building, Room 132.

* Every undergraduate and graduate student can register for an email account, free of charge, with full access to the Internet. Students may dial in from home using the enhanced modem pool. Rates are currently $0.50 per hour for 56k access with full access to the WWW and email provided. A limited modem pool is also available free of charge. 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 CIS, there is computer equipment located in Departments to support academic programmes.
CENTRE FOR LEADERSHIP IN LEARNING

> General Sciences Building, Room 217, ext. 24540

Web Address
http://www.mcmaster.ca/cll

E-mail Address
riselays@mcmaster.ca

Academic Director
Dick Day, Ph.D.

Executive Director
Dale Roy, B.A., M.A.

Educational Consultants
Erika Kustra, Ph.D.

Administrative Assistant
Sylvia Riselays
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 programmes 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 courses after 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.

Activities for Teaching Assistants: The Centre plans and organizes T.A. Day, a campus-wide welcome and orientation programme for teaching assistants. It also offers a series of mini-courses designed for graduate students who are about to apply for or take up their first position as a faculty member or a non-academic professional. The Centre also offers a credit course in teaching to help graduate students become familiar with the literature on university teaching and to develop some basic skills in the practical aspects of teaching.

Workshops, Seminars and Conferences: A wide variety of events are offered, conducted by McMaster faculty, visiting resource people and CLl staff. Generally, the topics are ones requested by instructors or departments and typically include subjects such as teaching large classes, self-directed learning, research on learning and teaching methods, lecturing, small group discussion, simulations and the use of technology in education.

Peer Consultation: The University has a group of faculty members who are trained to help other instructors collect information on how a course is going. The process is designed to give instructors feedback on a course, not to give advice on how to teach it. The ultimate goal is to improve the quality of student learning. All communications are confidential, and every peer consultant has 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 instructor, the students in a particular course, and a third party come together early in the term with the intention of modifying one particular course. Since the instructor has final responsibility, he or she initiates the process and sets the boundaries for what can be modified.

Library Resources: The CLl Library is a collection of over 3,500 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 website: http://www.mcmaster.ca/cll.

MCMASTER MEDIA PRODUCTION SERVICES

Web Address
http://www.media.mcmaster.ca

E-mail Address
knowles@mcmaster.ca

AUDIO VISUAL DIVISION

> Health Sciences Centre, Room 1G1, ext. 22301 or Building 8231, ext. 22761

McMaster Audio Visual Services provides a complete range of services to faculty, staff and students at McMaster. These services include: television production, audio and digital editing and tape duplication; audio recording, cassette editing, high-speed tape duplication; AV equipment distribution (all kinds of projectors, audio and video tape recorders, video/data projectors, etc.; film reservations; AV equipment repair; creative services for design, charts and graphs for publication, display or poster presentations, and digital imaging and CD production, colour laser prints and high-resolution 35mm colour slides; full line of desktop publishing services; photographic services, including location and studio photography, black-and-white and colour photo finishing, 35mm slides, film processing and slide duplication, and a wide range of film and supply sales. Full videocassetting services are available.

PRINTING SERVICES DIVISION

> Michael G. DeGroote School of Business, Room B111, ext. 24447 or Health Sciences Centre, Room 1TS, ext. 22348

Printing is staffed and equipped to provide a comprehensive, efficient service to the university at low cost. The service includes: creation and design, typesetting, full range of high speed digital typesetting and offset printing, binding (tolling, collating, stitching, drilling).

Printing Services will reproduce a wide range of printed material from business cards to a multi-page brochure and will provide technical assistance for any printing jobs.
GERONTOLOGICAL STUDIES

There are three Gerontology components at McMaster: the Centre for Gerontological Studies; The R. Samuel McLaughlin Centre for Research and Education in Aging and Health; and Undergraduate Degree Studies in Gerontology. (Further information concerning the two Centres mentioned above can be obtained by contacting Margaret Denton in Kenneth 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 programmes 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 programme 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

Kenneth Taylor Hall, Rooms 239, 240, ext. 24211, 22916

Web Address
http://www.mcmaster.ca/ why

International Admissions Inquiries E-mail Address
inadin@mcmaster.ca

Executive Director
Luke Chan

Senior Project Manager/International Liaison Officer

Ni Jadon

Project Officer
Theresa Bae
May Zhai

Administrative Coordinator
Laurine Mollinga

McMaster University has become increasingly involved around the world in exchange agreements, institutional linkages and externally funded international programmes 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 will be participating in four broad areas including international student recruitment, development of international projects, international programmes 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

University Avenue, ext. 23081

Director and Curator
K.G. Ness, B.A., M.Litt., MMST
E-mail: kennn@mcmaster.ca

Special Programmes Officer
Appointment Pending

Collections and Operations Manager
G. Lovays, B.A.
E-mail: loveys@mcmaster.ca

Installations/Preservation Officer
J. Petteplace, B.A.
E-mail:jpette@mcmaster.ca

Director’s Assistant
Z. McLachlan, B.A., B.Ed.
E-mail: mcclachz@mcmaster.ca

Assistant Curator/Exhibitions Manager
C. Butterfield, B.Des.
E-mail: buterc@mcmaster.ca

Communications Officer
R.A. Prevec, B.A.
E-mail: prevecr@mcmaster.ca

Gallery Attendant/Information Staff
K. Hogue, B.A.
E-mail: hoguek@mcmaster.ca
N. Knibb, B.A.
E-mail: knibbn@mcmaster.ca
G. Rennick, B.A.
M. Howson, B.A.

Located at the west end of Mills Library on University Avenue, the Museum contains five Exhibition Galleries, a Paper Centre and an Educational Access Gallery. The Museum offers a year-round programme 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 Art Gallery of Ontario or the National Gallery of Canada, as well as a regular programme of public events including lunchtime talks, Visiting Artist talks, seminars and concerts.

McMaster’s permanent art collection contains close to 6,000 Canadian, American and European art works with a specialized collection of over 250 German Expressionist prints and the Levy Collection of Impressionist and Post Impressionist paintings as a teaching collection. The central emphasis is on collections access and use of the collection as a cultural learning resource.

Contact the Museum for exhibition listings. Hours: Tuesday to Friday, 11:00 a.m. - 6:00 p.m.; Thursday evening, 7:00 p.m. - 9:00 p.m.; Sunday, 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://www.access.mcmaster.ca

ASSOCIATE VICE-PRESIDENT (STUDENT AFFAIRS)
- Gilmour Hall, Room 207, ext. 27455

The Associate Vice-President (Student Affairs) leads a variety of specialized student service offices and is happy to meet with individuals and representatives of student organizations with problems, concerns, questions or suggestions on any matter relating to student life and services on campus.

CENTRE FOR STUDENT DEVELOPMENT
- McMaster University Student Centre, Room B107, ext. 24711

Web Address
http://csd.mcmaster.ca/

Programme Coordinator, Learning Specialist
Caroline Cayuga

Programme Coordinators, Disability Specialists
Marge Marriott
Tim Nolan

Academic Skills Counsellor/Coordinator
David Palmer

Counsellor
Appointment Pending

Psychologists
Pam Dillon
Kate Henry
Debbie Nifakis
Bill Wilkinson

Administrative Assistant
Rachel Diaconou
Noreen Myers

Accommodations Assistant/Receptionist
Julia Shelly

The Centre provides services to McMaster students to promote their academic effectiveness and personal well-being. It also provides specific kinds of assistance to students with disabilities. (For more details see Students with Disabilities below.)

Students are encouraged to seek assistance from the Centre if they experience any of the following:
- Personal, emotional, social, family or relationship concerns.
- Feelings of stress, anxiety, loneliness, depression, low self-esteem or loss of motivation.
- Concerns about academic performance, study habits, time management, effective learning, reading, remembering, concentration, tests and exams, writing essays, making class presentations.
- The need for disability-related support services.

The Centre also provides services to international students wishing to improve their English.

Counselling, individual help, skill-development workshops and short courses are available. Peer helpers (trained and experienced students) provide some services, under staff supervision. Contacts between students and counsellors are voluntary and confidential. Students in urgent situations are given priority and seen as soon as possible. Students are given assistance in locating other specialized help on- or off-campus when required. All personal, health or disability-related information will be treated as confidential.

Students with Disabilities

All students are expected to satisfy the normal requirements for courses and programmes (including final examinations), but the Associate Deans (Studies) may authorize special arrangements to assist students with disabilities in the completion of assignments, tests, examinations and other course requirements.

The Centre for Student Development can provide advice to 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, screening/assessment for suspected learning disabilities and attention deficit disorders, and referral to professional services or community resources. It provides counselling, advice, support and workshops to help students meet their educational objectives.

SEXUAL HARASSMENT/ANTI-DISCRIMINATION OFFICE (S.H.A.D.O.)
- Kenneth Taylor Hall, Room 118, ext. 23641

Web Address
http://www.mcmaster.ca/shado

E-mail Address
shado@mcmaster.ca

Officer
Cindy Player
ext. 23641

E-mail: playerc@mcmaster.ca

Human Rights Educator
Tony Conte
ext. 24067

E-mail: contea@mcmaster.ca

Administrative Assistant
Elaine Hay
ext. 27561

E-mail: hayelain@mcmaster.ca

This office administers the Sexual Harassment and Anti-Discrimination policies for McMaster University. The goal of this office is to ensure that students, staff and faculty can learn and work in an environment free from all forms of harassment and discrimination.

Cindy Player (Sexual Harassment/Anti-Discrimination Officer) is available to any member of the university community with questions or concerns regarding situations that may involve sexual harassment or human rights. Tony Conte is the Human Rights Educator at McMaster. In that role, he is responsible for the development and implementation of training workshops and educational programs dealing with human rights, anti-discrimination and sexual harassment. In addition, there are two liaisons within the Faculty of Health Sciences: Dr. David Groves (905) 522-1155, ext. 5016) and Dr. Anne Niec (905) 522-2100, ext. 73268). Assistance is provided for complaint resolution and the design and facilitation of workshops concerning all forms of harassment and discrimination.

The Safer Space Programme is also run out of the S.H.A.D.O. Office and offers a number of services including a network of First Contacts, an After Hours Help Line and an Off-Campus Shelter. The Safer Space Programme is available to all women of the McMaster community—students, staff, faculty and their partners. The After Hours Help Line (719-7768) operates Monday through Friday 5:00 p.m. to 3:00 a.m. and 24 hours on weekends, during the school year. During business hours callers will be assisted by the S.H.A.D.O. Officer (905) 525-9140, ext. 23641). The fax number for the office is (905) 522-7102 and TTY is (905) 521-8709. Wheelchair accessible.
ATHLETICS AND RECREATION

Web Address
http://www.ATHREC.mcmaster.ca

E-mail Address
lwynne@mcmaster.ca (Customer Service Line)

Director of Athletics and Recreation
Thérèse A. Quigley

The Department of Athletics and Recreation provides a wide variety of opportunities for students involved in high performance athletic competition, intramural and club competition as well as recreation, fitness and instructional and outdoor recreation programmes. A diverse programme of recreatonal activities is available for those who wish to keep fit, compete in active pursuits at their own level, and enjoy sports and active living opportunities of their choice. Access to the various facilities on campus is open to all McMaster students.

The facilities include a 50-metre pool, an outdoor 400-metre chevron track, eight tennis courts, several gyms, dance studio and a fitness centre covering 7,700 square feet, known as The Pulse. It features computerized cardiovascular equipment, circuit training, aerobic floor and a comprehensive strength training area. An additional aerobic floor of 2464 square feet in the Activity Centre completes the Pulse programming.

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 programme 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 programme at McMaster fields 27 teams competing at the provincial (OUA) and national (CIS) level. There are also four inter-university club teams competing at various levels. Highly skilled coaches help McMaster athletes achieve their potential while competing against other universities in Ontario and across Canada. The outstanding efforts of McMaster's student-athletes and the social involvement of student supporters are focal points of student life on campus. Varsity events are a major source of school spirit for competitors and spectators alike. The Department of Athletics and Recreation takes pride in the quality programmes and services provided to the McMaster Community and urges all members of the Community to take advantage of its facilities and programmes.

BOOKSTORE

Web Address
http://www.bookstore.services.mcmaster.ca

E-mail Address
bookstr@mcmaster.ca

The University Bookstore is owned and operated by the University. First year textbooks are located in the Mezzanine at the Ivor Wynne Centre. Second and third year textbooks are located in the auxiliary store located in Togo Salmon Hall, Room 8203. Fourth year, and grad textbooks are located in the lower level of Gilmour Hall. A Microcomputer Centre and a Post Office are located within the Bookstore. A Health Sciences Branch is located in the McMaster University Medical Centre. In addition to course books, the Bookstore maintains a wide range of supplementary reading materials, both academic and general. Stationery and computer supplies and other items are also stocked. Charge accounts may be opened after registration.

POST OFFICE

The McMaster University Sub-Post Office is located in the Bookstore. The Post Office offers full postal service, Monday to Friday, from 9:00 a.m. to 4:00 p.m. Post Office boxes may be rented by faculty, staff, and students for the duration of their stay at McMaster.

CAREER PLANNING AND EMPLOYMENT CENTRE

Web Address
http://careers.mcmaster.ca/

E-mail Address
cpec@mcmaster.ca

Career Counsellors
Laurie Barlow Cash
Don Jamieson
David Lawson

Career Information Coordinator
Gale Walker Hammond

Employer Development Coordinator
Gisela Oliveira

Office Coordinator
Amanda McFarland

Employment Services Coordinator
Wendy Burston

Technical Support Staff
Alex Alvarez
Ugo Anama

The Career Planning and Employment Centre (CPEC) offers a wide range of programmes and services to meet the needs of McMaster students and alumni. For a virtual CPEC tour, please visit our web site (http://careers.mcmaster.ca). There you will find a full introduction to our services, our staff and our many available resources. Our state-of-the-art on-line job posting service offers some 5,000 plus job opportunities a year.

CPEC offers assistance in all aspects of career planning, educational planning and the employment search process. Our staff are experienced, knowledgeable professionals with a strong track record of assisting students in pursuing their career and educational goals. Our services and programmes include:

- help in identifying and choosing career and educational goals;
- interest and personality type testing to help students make educational and career plans;
- workshops on applying to graduate and professional schools such as teaching, law and medicine;
- individual, confidential counselling;
- web-based on-line job postings, available from any internet connection, on-campus or off, 24 hours a day, 365 days a year;
- help in applying to full-time, summer and part-time jobs;
- workshops and assistance with resume writing, job search and interview skills;
- a resource centre with career, educational and job search information;
- Information about government employment programmes.

We also offer help and resources for students to get connected with what is out there in the world of work including:

- Career Links, a network organization that connects students with recent McMaster graduates;
- referrals to volunteer opportunities both on-and-off-campus;
- our Peer Helper Programme, which offers opportunities to gain training and hands-on experience working directly with CPEC in service roles like Career Information and Work Search.

The office is open 8:30 a.m. to 4:30 p.m. Monday to Friday. The phone number is (905) 525-9140, ext. 24253 and the fax number is (905) 529-6972.
OFFICE OF THE INTERNATIONAL STUDENTS' ADVISOR/STUDENT EXCHANGES/WORK AND STUDY ABROAD

Web Address
http://www.access.mcmaster.ca/international

Office of the International Students' Advisor

Gilmour Hall, Room 104, ext. 24748

The major purpose of the Office is to assist international students, visiting scholars, post-doctoral fellows and faculty.

The Office provides a number of services such as:
- reception and orientation for newly arriving students
- preliminary information concerning immigration matters
- liaison with sponsoring agencies, foreign governments, consulates and embassies
- general advising and counselling regarding personal, financial and academic problems

The Office produces an International Students' Handbook which provides basic information for international students in preparation for their life in Canada. The International Students' Advisor 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

Gilmour Hall, Room 104, ext. 24748

The Office provides information on a range of options from independent study and externally sponsored programmes, to summer session and McMaster's formal student exchanges. As well, information concerning opportunities for working and volunteering abroad is provided.

McMaster University has formal student exchanges with universities in 26 countries abroad and participates in the Canada Student Exchanges/Work and Study Abroad also the dependent session and McMaster's formal student exchanges. As well, information concerning opportunities for working and volunteer each year. As well, an education and support group for students with eating disorders is conducted for six weeks during either or both the fall and winter terms. Contraceptive supplies (birth control pills and condoms) are dispensed at a reduced cost to patients of SHS. Further information can be obtained by calling the Student Health Service office at (905) 525-9140, ext. 27700.

STUDENT HEALTH SERVICE

McMaster University Student Centre, Room B101, ext. 27700

Web Address
http://www.mcmaster.ca/shs

Medical Director
Jan Young

Clinic Director
Julie Fair service

Health care is available to all university students year-round at the Student Health Service (SHS). Appointments can be made by calling (905) 525-9140, ext. 27700.

Staffed by family physicians and registered nurses, the Student Health Service provides comprehensive primary medical care. Services include medical assessment and treatment; annual health examinations (physicals); birth-control counselling; assessment and treatment of depression, eating disorders, anxiety and other mental or emotional health problems; allergy injections; immunization; on-site laboratory; pregnancy tests; and information or counselling for any personal health concerns. A specialist in sports medicine is available for sports related injuries. Physiotherapy for sports injuries is also available at Ivor Wynne Centre on referral from one of the physicians. A registered dietitian is available on a four-hour-a-day basis. For students living in residence, a nurse is located in residence in the evenings on a part-time basis.

The SHS Health Educators can be reached at (905) 525-9140, ext. 27619. The Health Educators are available for lectures, seminars, or small group discussions on health-related issues, on request by students. A smoking cessation group is offered a few times each year. As well, an education and support group for students with eating disorders is conducted for six weeks during either or both the fall and winter terms. Contraceptive supplies (birth control pills and condoms) are dispensed at a reduced cost to patients of SHS. Further information can be obtained by calling the Student Health Service office at (905) 525-9140, ext. 27700.

HOSPITALITY SERVICES

Commons Building, Room 116, ext. 24836

Web Address
http://hospitality.mcmaster.ca/hospitality

Director, Hospitality Services
Albert Y. Ng

McMaster Hospitality Services is a self-supporting department that strives to ensure that dining experiences on campus are positive. Our goal is to provide high quality food services, convenience and value.

Students living in residence are required to-purchase a meal plan. The MAC Express Meal Plan works on a debit or credit 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 2001-2002 the off-campus vendors included East Side Mario's, Kelsey's, Pita Pit, Player's, Swiss Chalet and Pizza Pizza. Off-campus students and other members of the University community may purchase an off-campus meal plan at the MAC Express Centre, located in the Commons Building, Room 116.

Hospitality Services has five full-service dining locations located conveniently across campus. During the regular academic school year from Monday to Friday meals can be obtained anytime from 7:00 am - 12:00 midnight and weekends from 10:00 am - 12:00 midnight or can be delivered even later by one of our off-campus vendors.

- The Commons Marketplace provides students with a varied dining experience and is home to Your Healthy Choice, Pacific Rim, Chef's Table, Player's Dell and a soup and salad bar.

- The Refectory serves the west quad of campus and is renowned for it's home cooked classics and friendly staff. The Refectory also offers Pita Pit, Swiss Chalet and Pizza Pizza.

- Our newest location, La Piazza, situated in the McMaster University Student Centre features many exciting new concepts; from Made In Japan to an International Grill, Creation X,

STUDENT FINANCIAL AID AND SCHOLARSHIPS

Gilmour Hall, Room 120, ext. 24319

Web Address
http://access.mcmaster.ca/financial_aid/

E-mail Address
awards@mcmaster.ca or osap@mcmaster.ca

Director
E. Seymour

The office administers a variety of programmes which are accessed by more than half of all full-time students as well as a large number of part-time students attending McMaster. These programmes include the Ontario Student Loan Programme, Canada Student Loan Programmes, Part-Time Canada Student Loan Plan, Ontario Work Study Programme, Ontario Special Bursary Programme, University Bursary and Emergency Loan Programme, and Undergraduate Scholarships. In addition, the office provides administrative support to outside agencies providing scholarships and bursaries to students attending McMaster.

The Office offers financial and budget counselling, assessment and information service to current and potential students designed to help identify and address post-secondary education expenses. All discussions with students are voluntary, private and confidential. Drop-in style counselling is available.

For more detailed profiles of programme offerings, please refer to Undergraduate Academic Awards and Student Financial Aid sections in this Calendar.
HOUSING AND CONFERENCE SERVICES

Web Address
http://housing.mcmaster.ca

E-mail Address
housing@mcmaster.ca

Director, Housing and Conference Services
Catherine Miller

RESIDENCES

The University owns and operates ten on-campus residence buildings, accommodating a total of 2,782 students. The nine traditional-style residences consist of two women’s residences and seven co-educational residences. A variety of theme and lifestyle options are available: International House and La Maison Française for those interested in learning about other cultures; Halcyon (Quiet) House and quiet floors; Wellness House and substance-free lifestyle for those wishing to balance healthy living with academic studies. Housing and Conference Services will expand the opportunity for life-style options based on interest and demand.

In addition, an apartment-style residence (Bates Residence) accommodates approximately 500 male and female students. All apartments are furnished (except for a television). Bates students can purchase a meal plan directly from the Mac Express Centre, Commons Bldg., Room 116, ext. 27448.

A new residence building housing 280 students in suite-style accommodations is under construction and scheduled to open in Fall 2002. This will raise the total number of residence beds to 3,062.

Eighty percent of the spaces in traditional residences are reserved for incoming first-year students. Admission offers to residence are based on a student’s admission average to his/her academic programme. All students with a 75% admission average are guaranteed a space in residence provided they meet the residence application and deposit deadline.

First-year students will receive a residence application and instructions regarding application procedures with their offer of acceptance from the University. To accept the offer of residence, students must return their completed Residence Application form and a deposit to the Residence Admissions Office before the specified deadline. This deposit will then be applied to the student’s residence fee if they remain in residence for the full year. 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 ordered 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 to the specified deadline. Failure to do so by the specified deadline, will result in forfeiture of the full amount of the deposit.

All students in the traditional-style residences are required to purchase one of the following meal plans: light, small, regular, large and extra-large. Residents use their student ID cards as a debit card for food purchases made at all Housing 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 Bates and the new suite-style residence, is available in the 2002-2003 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 functional units: Admissions, Residence Life, Facilities and Conferences.

Please visit our website to learn more about each residence, the Residence Discipline Code, MacOnline and the other services available to McMaster’s residence students at http://housing.mcmaster.ca.

RESIDENCE ADMISSIONS

This area is responsible for residence admission policies and procedures, including: the Residence Agreement/Contract; residence applications, deposits and room assignments; the waiting list and procedures; refund procedures; and medical and grade appeals; and various Housing publications. Inquiries about residence should be directed to Residence Admissions, Housing and Conference Services, Commons Building, Room 101, (905) 525-9140 ext. 24223, email: housing@mcmaster.ca.

RESIDENCE LIFE

This area is responsible for programmes 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 programmes, and positive and inclusive social activities. Residence Life also provides leadership opportunities including student staff, peer helper and elected residence council positions.

Residence students and student staff are supported by six full-time Residence Managers, all of whom live in residence. The staff are available to answer questions, ensure community standards are followed and coordinate programmes and activities.

All students agree to be bound by the Residence Agreement/Contract and the Residence Discipline Code as a condition of applying to residence at McMaster University.

RESIDENCE FACILITIES

The Residence Facilities Team is responsible for repairs and maintenance, renovations, student damages, safety and security needs, furnishings, cleaning, residence recreational facilities, and the 24 hour Housing and Conference Service Centres located in Moulton Hall (west campus, ext. 24898) and the Commons Building (north campus, ext. 27222).

CONFERENCE SERVICES

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 accommodations are also available for summer students and casual guests.

The Conference Services Office is located in the Commons Building, Room 129B, (905) 525-9140, ext. 24781. All reservations can be made by email to confs@mcmaster.ca.

OFF-CAMPUS HOUSING

Web Address
http://www.maccoho.com

E-mail Address
occho@mcmaster.ca

The Off-Campus Housing Office (OCHO) maintains updated lists of available accommodation in Hamilton and the surrounding area. It also provides free bus route maps, zone maps, free telephones for students to contact landlords, information on housing by-laws...
PARKING

- E.T. Clarke Centre, ext. 24232 or 27416

Web Address
http://parking.mcmaster.ca

Campus parking facilities are limited and the availability of spaces cannot be assured.

Travel to and from the University on foot, by public transportation and in car pools is encouraged.

Students wishing to park a motor vehicle or motorcycle on campus are required to complete and submit a parking application. Applications are accepted between June 1 and midnight 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: Parking and Transit Services E.T. Clarke Centre, McMaster University, Hamilton, Ontario L8S 4K1. Cheques post-dated after July 31 will not be accepted.

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 Parking and Transit Services Office.

The Parking and Transit Office has the overall responsibility for dealing with parking matters. If you have a problem, parking personnel will assist you. The office is located in the E.T. Clarke Centre, (905) 525-9140 ext. 24232 or 27416 and is open Monday to Friday from 9:00 a.m. to 4:00 p.m.

UNIVERSITY CHAPLAINS

- McMaster University Student Centre, Room 231, ext. 24207

Web Address:
http://www.mcmaster.ca/chaplain

E-mail Address:
chaplain@mcmaster.ca

The McMaster Chaplaincy Centre is open to all students and the campus community. The Chaplaincy Centre is staffed by Carol Wood, Ecumenical Chaplain; Michael Fallon, Christian Reformed Chaplain; Father Jack Hurley, Roman Catholic Chaplain and Donna White, Assistant to the Chaplains. The Office is usually open between 9:00 a.m. and 5:00 p.m. Monday through Friday and appointments outside of these hours can be arranged.

The Centre offers personal and confidential counselling for a wide range of concerns; groups to deal with topics such as bereavement support; and an experience of community through cost suppers, 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. 21000

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 12,000 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 bar, a convenience store, a games room, a design and copy centre, an advertising department (CAB), an information centre, a day care centre, the Gay, Lesbian, Bisexual and Transgendered Centre, a yearbook (The Maroons), the Student Health Insurance Plan, a campus events department (which organizes Welcome Week, Homecoming and other special events), and a jointly funded Ombuds Office. The MSU offers volunteer opportunities through the Emergency First Response Team (EFRT), a radio station (93.3 CFMU FM), a newspaper (The Silhouette), a Student Walk Home Attendant Team (SWHAT), a Student Health Education Centre (SHEC), the Maroons, and more than 100 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. It meets bi-weekly to discuss issues varying from the fate of the campus radio station to the amount of study space on campus. The President is elected by the entire student body while the Vice-Presidents of Administration, Education and Finance are elected by the SRA.

Committees: Hundreds of energetic and ambitious volunteers from committees are the powerhouse of the Students Union. Established committees include Alcohol Awareness, Community Relations, Elections, Environment, Events, Finance, Gender Equity, Human Rights, Public Relations, Teaching Awards, and Constitution, Bylaws and Policies.

University Centre: The MSU is the major stakeholder in the new McMaster University Student Centre. Most of the mentioned services are located here, including the President and student representatives. For further information, visit the MSU information centre, The Compass, or call (905) 525-9140, ext. 21000.

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

E-mail Address
ombuds@mcmaster.ca

Ombudsperson
Shelley Lancaster

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 such as parking, accommodation, security and financial aid.

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/
- E-mail Address: maps@mcmaster.ca

MAPS exists to look after the special interests of part-time degree (taking less than 18 units) and certificate students, who have a different educational experience than full-time students. University fees for these students include an assessment to support the Association.

When classes are in session MAPS office hours are:
- Monday to Thursday: 10:00 a.m. to 8:55 p.m.
- Friday: 10:00 a.m. to 2:00 p.m.
All other times, MAPS office hours are:
- Monday to Thursday: 10:00 a.m. to 7:00 p.m.
- Friday: 10 a.m. to 2:00 p.m.

MAPS Executive Director is available to help students. If you have a question pertaining to university procedure or a problem of any kind the MAPS staff can either supply the answer or put you in touch with someone who can. A handbook is published annually to help guide you through the University system and will be mailed to you.

The part-time student newsletter, *The Link*, is published on a regular basis, and will be mailed to you. If you do not receive a copy, call or drop by the office. Essay writing, exam preparation and research seminars are offered through MAPS. Watch the newsletter, *The Link*, for classes and times.

MAPS provides the opportunities and methods for part-time students to communicate their needs and ideas to university officials, by ensuring representation on university governing bodies and committees, and by the Association’s direct contact with university administrators on matters such as course availability, evening services, tuition and ancillary fees.

MAPS is also pleased to offer four awards: two Centennial Awards, the Martin W. Johns Award and a Gold Medal. MAPS has also established bursaries to assist students who have demonstrated financial need.

In addition, there is a MAPS Work Study Programme available to part-time students who have demonstrated financial need. This programme allows part-time students to work for eight to ten hours a week for ten weeks. Contact Student Financial Aid and Scholarship Office, ext. 24319, for information.

There are two computers in the office for your use where you can access your student record, surf the Web, use email, WordPerfect or Word.

If you are a part-time student, MAPS is for you. It is a way to bridge the gap between you and the University, by helping you 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
- Web Address: http://www.mcmaster.ca/ua
- E-mail Address: alumni@mcmaster.ca

Following convocation, all graduates of McMaster University automatically become members of the McMaster Alumni Association (MAA) and join our over 100,000 alumni living in over 120 countries. The Association’s mission statement addresses a number of goals: support of McMaster University, involvement of alumni, recognition of alumni achievements, alumni services and benefits, alumni communication, and involvement of current students.

Our alumni branch programme 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 Nursing Alumni Branch, Michael G. DeGroote School of Business Alumni Association, Humanities Alumni Branch, or Social Work Alumni Branch. Still other branches create connections among Mac grads who share a common interest or affinity, like the MSU Alumni Branch or Athletics Alumni Association, just to name a few.

The MAA also offers programmes in the greater Hamilton community. The McMaster Alumni Connection Luncheon Series brings high profile speakers to downtown Hamilton to talk with McMaster alumni and friends, and the Albert Lager Event Series expands your educational relationship with Mac into a lifelong affair by providing fun and unique opportunities to enjoy lectures, trips and seminars. Alumni Weekend occurs every year in June, and is the largest single alumni event. It incorporates class reunions and other events like the Alumni Gallery Induction Ceremony designed to attract alumni to the McMaster campus.

The Association also gives its members the chance to obtain unique or discounted products or services through its Services and Benefits portfolio. Alumni can experience fantastic trips, order CDs and DVDs online, obtain unique McMaster merchandise, use their McMaster MasterCard to help benefit the Association, receive high-quality home and auto insurance at group rates, or investigate the other services offered through the MAA.

The McMaster Alumni Association also acts as your advocate, with representatives on the University Senate and Board of Governors. These representatives, along with other elected alumni, compose the MAA Board of Directors which, along with hundreds of other alumni volunteers, provides 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, or by fax at (905) 524-1733.

CAMPUS NAMES

The University’s Board of Governors has made provision for naming buildings, facilities, spaces and streets after individuals or organizations who have some connection with the University. Recommendations made according to the criteria outlined below are considered by the President’s Advisory Committee on Campus Names in accordance with the policy of the Board of Governors.

1. The names of distinguished members of the McMaster University community who are no longer actively involved in the affairs of the University.
2. Others in the following groups:
   a) Outstanding scholars outside the University who have had a close relationship with McMaster and whose academic disciplines relate to the structure or area being named.
   b) Major benefactors of the University, including foundations and corporations.
   c) Names that bear a special relationship to McMaster University, Hamilton or district.

(For campus names see University Open House, December 9, 1993) Information concerning the nomination can be obtained via the Vice-President (Administration), Chair, Presidents’ Advisory Committee on Campus Names, Gilmour Hall, Room 202.)
Ontario Work-Study
The Work-Study Programme 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 Plan
This plan is intended to assist students who demonstrate financial need, who have three or more children and are studying on a full-time basis.

Bursaries for Students with Disabilities
This plan is intended to assist students with disabilities, who demonstrate financial need, to meet disability-related costs related to their participation in post-secondary education. For more information, contact the Centre for Student Development at http://csd.mcmaster.ca/.

MCMASTERWORK-STUDY PROGRAMMES
McMaster Work-Study Programmes offer part-time jobs to students demonstrating financial need during the school year to help them meet costs not recognized under regular federal and provincial financial aid programmes. In particular, programmes 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 Work-Study Programmes identified below, students should obtain a Work-Study Application from the Office of Student Financial Aid & Scholarships.

THE R. ROSS CRAIG MEMORIAL FUNDWORK-STUDY PROGRAMME
Established in 1997 in memory of R. Ross Craig. 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 for Studies of Children at Risk, McMaster University. To be eligible for consideration, students must be approved for Work-Study through the Office of Student Financial Aid & Scholarships. (90763-725)

THE HAMLIN FAMILY FOUNDATION WORK-STUDY PROGRAMME
Established in 1996 by the Hamlin Family Foundation. A variable number of employment opportunities made available to students in any programme who demonstrate financial need. Preference will be given to students in disciplines related to the fields of Health Sciences and Engineering. To be eligible for consideration, students must be approved for Work-Study through the Office of Student Financial Aid & Scholarships. (90656)

THE SALLY HORSFALL WORK-STUDY PROGRAMME
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 Work-Study through the Office of Student Financial Aid & Scholarships. (90657)

THE HUMANITIES COMMUNICATIONS CENTRE WORK-STUDY ENDOWMENT
Established in 1997 by Edward and Margaret Lyons, McMaster alumni of the Class of '49 and later augmented by friends of the Centre. A variable number of employment opportunities will be made available in The Edward and Margaret Lyons Humanities Communications Centre to assist students demonstrating financial need. These jobs will provide an opportunity for students to pursue research in the fields of computing and human communication. To be eligible for consideration, students must be approved for Work-Study through the Office of Student Financial Aid & Scholarships. (90658)

THE MCMASTER "MCWORK" PROGRAMME
Established in 1996 by the University with the goal of creating meaningful employment opportunities for current full-time students who demonstrate financial need. (90659)

SHORT-TERM EMERGENCY LOANS
Assistance in the form of short-term 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 academic year. Students requesting a short-term loan must meet with a representative from the Office of Student Financial Aid & Scholarships to complete an application. A number of funds exist to provide assistance to students in financial need.

EDITH M. GRIFFEN LOAN FUND
Established in 1957 by Paardeburg Chapter, IODE, in honour of Mrs. H.S. Griffen.

MARGARET B. SUTTERBY MEMORIAL FUND
Established in 1955 by the 67th University Battery Chapter, IODE.

THE MCLROY LOAN FUND
Established in 1956 by the University Women's Club of Hamilton. To assist female students in the final level of any programme.

THE IVORY WYNNE MEMORIAL LOAN FUND
Established in 1971 in memory of Ivor Wynne, Dean of Students. To assist students in any programme.

THE UNIVERSITY LOAN FUNDS
Small short-term emergency loans from the University funds are available to assist students in any programme. These funds have been supported through contributions from a number of local Chapters, Imperial Order Daughters of the Empire, including the Emma Frances Pratt, Princess Marina and Sovereign Chapters.

BURSARIES
Bursaries are granted by the University Bursary Selection Committee on the basis of demonstrated financial need. They are intended to supplement resources when the student's own financial contribution, parental assistance and government aid leave the student with insufficient funds to complete the academic year.

Application forms are available from the Office of Student Financial Aid & Scholarships, Gilmour Hall, Room 120 or on our website at http://access.mcmaster.ca/financialaid. Any government-sponsored student loan applicant who is registered and in good standing (not on academic probation twice) as a student of McMaster University is eligible to apply. The first term deadline is in early November and the second term deadline is in February. Students may submit one application only and are assessed for their full academic year regardless of the date of application.

Bursaries have been grouped according to category and/or Faculty.

GENERAL BURSARIES

THE 4 WINDS BURSARIES
Established in 1997 by John F. Evans and Patricia Peacock-Evans in recognition of John's long-standing association with McMaster as Chair of the President's Club Executive Committee. The Bursary is named after the island where the family's cottage is located. A variable number of bursaries to be granted to students who demonstrate financial need. (905708 670)

THE AINSWORTH BURSARIES
Established in 1996. To be granted to undergraduate students in any programme who demonstrate financial need. Preference to be given to female students. (90578 402)

THE PHYLLIS MAY ALTKEN BURSARY FUND
Established in 1997 by the bequest of Phyllis May Altken. A variable number of bursaries to be granted to students enrolled in any programme who demonstrate financial need. (90653 820)

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 programme who demonstrates financial need. (90805 622)

THE JOY BÁBY BURSARY
Established in 1997 by Joy Baby under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in any programme who demonstrates financial need. (90809 627)

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 programme who demonstrate financial need. (90560 332)

THE DR. C. HOWARD BENTALL AND DR. SHIRLEY F. BENTALL BURSARIES
Established in 1999 by Dr. C. Howard Bentall (Class of '37) and Dr. Shirley F. Bentall (Class of '46) under the McMaster Student Opportunity Fund initiative. A variable number of bursaries to be granted to students enrolled in any programme who demonstrate financial need. (90855 851)

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 programme who demonstrate financial need. (90580 404)

THE BIRKS FAMILY FOUNDATION BURSARY FUND
Established in 1987 by The Birks Family Foundation in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to students annually who demonstrate financial need. (90960)

THE BOWES FAMILY BURSARIES
Established in 1996 by Eleanor and Terrence Aurini of Cambridge. A variable number of bursaries to be granted to students enrolled in any programme who demonstrate financial need. Preference to be given to female students. (90581 405)

BURSARIES FOR IN-COURSE VISA STUDENTS
Established in 1982 by the University to assist visa students in any programs. (90547)

BURSARIES FOR VISA STUDENTS
Established in 1999. A variable number of bursaries to be granted to visa students in any programme who demonstrate financial need. (90933)

THE BUSINESS MANAGEMENT SERVICES BURSARIES
Established in 1996 by staff of McMaster's Business Management Services who through their leadership, guidance and support, enable the University community to deploy its financial resources to the greatest advantage. A variable number of bursaries to be granted to students in any programme who demonstrate financial need. (90584 408)

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 programme who demonstrate financial need. (90831 803)

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 programme who demonstrate financial need. (90684 580)

THE BETTY-TAYLOR CAMPBELL BURSARIES
Established in 1998 by William F. Campbell of Ottawa, Ontario in memory of his wife Betty Taylor Campbell, a 1937 McMaster graduate, an Olympic medallist in 1936 and a 1990 inductee to the Athletics Hall of Fame. To be granted to students who demonstrate financial need. Preference will be given to the recipient of the Betty Taylor Campbell Scholarship. (90832 804)

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 programme who demonstrate financial need. (90586 410)

THE CHAUKERS 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. (90837 411)

THE CIBC BURSARIES
Established in 1997 by the Canadian Imperial Bank of Commerce under the McMaster Student Opportunity Fund initiative. A variable number of bursaries to be granted to students enrolled in any programme who demonstrate financial need. (90883 645)

THE SAM M. CINO BURSARY
Established in 1997 by Sam Cino in support of McMaster students. To be granted to a student enrolled in any programme who demonstrates financial need. (90684 646)

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 programme who demonstrate financial need. Preference will be given to the recipient of the Hugh Clark Scholarship. (90685 647)
THE CLASS OF '35 BURSARIES
Established in 1985 by the Year '35 in honour of their 50th class reunion and augmented in 1996 in conjunction with the McMaster Student Opportunity Fund initiative. To be awarded to a student in good academic standing who is a Canadian citizen or permanent resident. (90507 180)

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 programme at McMaster who demonstrate financial need and are in good academic standing. (90564 397)

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 programme who demonstrate financial need. (90590 414)

THE CLASS OF '49 GOLDEN ANNIVERSARY BURSARIES
Established by the Class of '49 in honour of their 50th Anniversary Reunion in 1999. A variable number of bursaries to be granted to students enrolled in any programme who demonstrate financial need. (90591 415)

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 programme who demonstrate financial need. (90666 648)

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 programme who demonstrates financial need. (90688 463)

THE DORIS PARTRIDGE COLE BURSARY
Established in 1881, this bursary is to be granted to a worthy student in memory of Doris Partridge Cole (Class of '45). (90508 002)

THE ELEANOR EWING BURSARY
Established in 1996 by the bequest of Lloyd Andrew Hillgartner. A variable number of bursaries to be granted to students enrolled in any programme who demonstrate financial need. (90511 289)

THE EDITH E. FERRIE BURSARIES
Established in 1965 by the late Edith E. Ferrie. To be granted to students in any programme who demonstrate financial need. (90511 289)

THE FORRESTER/GREGORY BURSARIES
Established in 1997 by Shelley Forrester and Douglas Gregory in support of McMaster students. To be granted to a student in any programme who demonstrates financial need. (90707 460)

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 programme who demonstrate financial need. (90600 424)

THE EMMA FOX BURSARIES
Established in 1961 by the Wallington Hall Committee of which Emma Fox was treasurer from 1918 to 1935. To assist female students in any programme. (90512 830)

THE GENERAL ELECTRIC CANADA INC. BURSARIES
Established in 1997 by General Electric Canada Inc. under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in any programme who demonstrates financial need. (90711 673)

THE ANGELUS BURSARIES
Established in 1893 by the family, friends and colleagues of Thomas Daly. A variable number of bursaries to be granted to students in any undergraduate programme who demonstrate financial need. (90675 414)

THE J O HN DEERE BURSARIES
Established in 1997 by John Deere in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to students enrolled in any programme who demonstrate financial need. (90698 660)

THE OFSARIES
Established in 1996 by the Telford Burrard Bursary (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 programme who demonstrates financial need. (90693 655)

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 undergraduate programme who demonstrate financial need. (90592 416)

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 programme who demonstrate financial need. (90719 681)

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 in any programme who demonstrate financial need. (90714 401)

THE HALCYON HOUSE BURSARIES
Established in 1991 by past residents of Halcyon House under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in any programme who demonstrates financial need. Preference to be given to a student in residence at Halcyon House. (90658 655)

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 programme who demonstrates financial need. (90727 668)

THE ELENA BURSARIES
Established in 1997 by The Hamilton Spectator in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to a McMaster student enrolled in any programme who demonstrates financial need. (90728 690)

THE MURIEL HEDDEN BURSARIES
Established in 1996 by Murie Heden in memory of her husband, D.M. (Mike) Haddock, 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 programme who demonstrate financial need. (90603 427)

THE RUDY HEINZL BURSARY
Established in 1998 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 programme who demonstrate financial need. (90577 850)

THE EDDIE BURSARIES
Established in 1965 by bequest of Edwin W. Hildborn. To be granted to a student in any programme. (90520 831)

THE LLOYD ANDREW HILLGARTNER BURSARIES
Established in 1997 by bequest of Lloyd Andrew Hillgartner. A variable number of bursaries to be granted to students enrolled in any programme who demonstrate financial need. (90634 606)

THE INTER-RESIDENCE COUNCIL BURSARIES
Established in 1995 by the Inter-Residence Council in support of McMaster students. To be granted to a student in any programme who demonstrates financial need. (90580 446)

THE YOUNG AND MURIEL HEDDEN BURSARIES
Established in 1996 by Murie Heden in memory of her husband, D.M. (Mike) Haddock, 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 programme who demonstrate financial need. (90603 427)

THE JADDOO ANDERSON BURSARY
Established in 1997 by Jaddoo 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 programme who demonstrates financial need. (90738 700)
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 programme who demonstrates financial need. (90743 705)

THE MURIEL McERlEN KAUFFMAN BURSARIES
Established in 1997 by the Muriel McEnen Kauffman 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 programme who demonstrate financial need. (90744 706)

THE ROBERT A. KENNEDY BURSARIES
Established in 1997 by Robert A. Kennedy under the McMaster Student Opportunity Fund initiative. A variable number of bursaries to be granted to students enrolled in any programme who demonstrate financial need. (90608 452)

THE BETTY MAY LAMB MEMORIAL BURSARY
Established in 1991 by family, friends, colleagues in memory of Betty May Lamb, an employee at McMaster University for 22 years, most recently as Executive Assistant to the Faculty Association from 1988-91. To assist students in any programme, preference to be given to children of war veterans. (90523 284)

THE LAIDLAW INC. BURSARIES
Established in 1996 by Laidlaw Inc. a major provider of transportation services to school boards, municipalities and the general public throughout Canada and the United States, in support of students pursuing their post-secondary studies at McMaster. A variable number of bursaries to assist students in any programme who demonstrate financial need. (90564 452)

THE GARY LAUTENS MEMORIAL BURSARIES
Established in 1998 by Mrs. Jackie Lautens, the Toronto Star, family and friends, in memory of Gary Lautens (Class of '50), columnist and editor of the Toronto Star (1952-92), the Hamilton Spectator (1950-58) and the McMaster Silhouette (1946-50), remembered as a journalist with wit and insight. A variable number of bursaries to be granted to students in any programme who demonstrate financial need. Preference will be given to the recipient of The Gary Lautens Memorial Scholarship. (90613 437)

THE BERTRAM LEGGAT MEMORIAL BURSARIES
Established in 1996 by his family and friends in memory of Bertram Leggat, Q.C., as a tribute to his dedication to the community, his esteem in the legal profession and his devotion to his family. A variable number of bursaries to be granted to students who demonstrate financial need. (90614 438)

THE LINCLUDEN MANAGEMENT BURSARIES
Established in 1997 by Lincluden Management Ltd. under the McMaster Student Opportunity Fund initiative. A variable number of bursaries to be granted to students enrolled in any programme who demonstrate financial need. (90755 177)

THE LONDON GUARANTEE BURSARIES
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 719)

THE MAKSTEEL BURSARY
Established in 1997 by Maksteel Inc. in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to students enrolled in any programme who demonstrate financial need. (90761 723)

THE LINDA MATTHEWS BURSARIES
Established in 1996 by Linda Matthews (Class of '69). A variable number of bursaries to be granted to students enrolled in any programme who demonstrate financial need. Preference to be given to female students. (90664 461)

THE ANDREW McFARLANE BURSARIES
Established in 1986 by bequest of Andrew McFarlane of Hamilton. To be granted to a student or students who are in good standing and have demonstrated financial need. (90526 832)

THE MCMASTcr BURSARIES
Established in 1969 by the University to assist undergraduate students in any programme. (90527)

THE MCMASTcr GENERAL BURSARIES
Established in 1996 by the University to assist undergraduate students in any programme who demonstrate financial need. (90624)

THE MCMASTcr ALUMNAl CENTENNIAL BURSARY
Established in 1988 by the McMaster Women's Alumni, Hamilton Branch, to be granted to a mature student in his or her graduating year, who is a Canadian citizen or permanent resident and who exhibits financial need. Preference will be given to a single parent. (90528 214)

THE MCMASTcr ALUMNAl ASSOCIATION BURSARY
Established in 1997 by the McMaster Alumni Association in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to assist students currently enrolled in a degree or certificate programme who, without such assistance, would be unable to continue their studies. Consideration may also be given to students who would not otherwise enrol without such assistance. Applications will be reviewed by the MAPS Centennial Bursary Selection Committee. (90529 290)

THE MCMASTcr ALUMNAl ASSOCIATION BURSARIES
Established in 1998 in celebration of McMaster's Centennial celebration to assist students currently enrolled in a degree or certificate programme, who demonstrate financial need. Applications will be reviewed by the MAPS Bursary Selection Committee. (90835 867)

THE MCMASTcr SAVINGS AND CREDIT UNION LIMITED BURSARIES
Established in 1997 by McMaster Savings and Credit Union Limited in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted annually to McMaster students enrolled in any programme who demonstrate financial need. (90622 767)

THE MCMASTcr STUDENT OPPORTUNITY FUND BURSARIES
Established in 1996 by McMaster University from general donations to the University bursary programme and matching funding provided through the Ontario Student Opportunity Trust Fund initiative. A variable number of bursaries to be granted to students enrolled in any programme who demonstrate financial need. (90627 451)

THE MCMASTcr STUDENTS' UNION BURSARIES
Established in 1965 by the McMaster Students' Union. To assist those undergraduate MSU members who demonstrate financial need. (90530 292)

THE MCMASTcr UNIVERSITY FACULTY ASSOCIATION BURSARIES
Established in 1997 by the McMaster Faculty Association under the McMaster Student Opportunity Fund initiative based on the assumption that all students should have access to educational opportunities. To be granted to a student enrolled in any programme who demonstrates financial need. (90768 730)

THE A.J. MELLONI MEMORIAL FUND
To be granted to a student in any programme. (90532 833)

THE MELOCHE MONNEX INC. BURSARY
Established in 1997 by Melecho Monnex Inc. under the McMaster Student Opportunity Fund initiative in the belief that students should have the opportunity to pursue their educational goals. To be granted to a student enrolled in any programme who demonstrates financial need. (90776 738)

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 programme who demonstrates financial need. (90776 741)
THE WALLACE R. MORRIS BURSARY FUND
Established in 1987 by bequest of Wallace Ronald Morris. A variable number of bursaries to be granted to students enrolled in any programme who demonstrate financial need. (90780 743)

THE JOHN DOUGLAS MOYER BURSARY
Established in 1985 by bequest of John Douglas Moyer to assist needy students. (90534 834)

THE MARJORIE AND BILL NELSON BURSARY
Established in 1967 by Marjorie and Bill Nelson under the McMaster Student Opportunity Fund initiative in support of the Hamilton community, and in support of the efforts of McMaster University to ensure that all students have the opportunity to achieve their educational goals. To be granted to a student enrolled in any programme who demonstrates financial need. (90781 744)

THE NELSON STEEL BURSARY
Established in 1997 by Nelson Steel in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to students in any programme who demonstrate financial need. (90782 745)

THE PETRO-CANADA BURSARIES
Established in 1996 by Petro-Canada, the largest Canadian-owned oil and gas company and one of the country’s leading refiners and marketers of petroleum products, in support of its belief that all students should have the opportunity to pursue their educational aspirations. A variable number of bursaries to be granted to students in any programme who demonstrate financial need. (90634 483)

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 programme who demonstrate financial need. (90635 484)

THE KATHERINE PULFORD BURSARY
Established in 1999 by Katherine Pulford. To be granted to a student enrolled in any programme who demonstrates financial need. Preference to be given to a sole-support parent. (90341 5)

THE REDPATH SUGARS BURSARY
Established in 1997 by Redpath Sugars, Division of Redpath Industries Limited, in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to a student enrolled in any programme who demonstrates financial need. (90824 769)

THE JAMES AND ELIZABETH ROBERTS BURSARIES
Established in 1957 by R.H. Roberts in memory of his parents to assist any male student of good academic standing. (90538 835)

THE HUGH AND ALICE ROBERTSON MEMORIAL BURSARIES
Established in 1997 by R.G. Hamish Robertson in honour of his parents. To be granted to students enrolled in any programme who demonstrate financial need. (90735 758)

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 programme who demonstrate financial need. (90561 5)

THE ROYAL BANK BURSARY FUND
Established in 1997 by the Royal Bank of Canada in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to McMaster students who demonstrate financial need. (90797 760)

THE ROYAL & SUNALLIANCE BURSARIES
Established in 1997 by Royal & SunAlliance Canada in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries will be granted annually to McMaster students who demonstrate financial need. (90799 762)

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 programme who demonstrate financial need. (90641 490)

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. (90581 295)

THE ROSA MAUDE SHEARWOOD BURSARY
Established in 1997 by Gordon R. Baker, C.C. in honour of his foster mother, Rosa Maude Shearwood, and her belief in the importance of education and providing a helping hand to others. To be granted to students in any Faculty who demonstrate financial need. Preference to be given to students from single-parent families, foster or group homes, disadvantaged backgrounds or King Township. (90967)

THE ALBERT EDWARD SMITH AND JEAN MCTAVISH SMITH BURSARY
Established in 1998 by Mrs. Jean Mctavish Smith (Class of ’31), in memory of Albert Edward Smith (Class of ’29) under the McMaster Student Opportunity Fund Initiative. To be granted to a student in any programme who demonstrates financial need. (90836 808)

THE SAM SMURRICK BURSARY
Established in 1978 by the Smurick family in memory of Sam Smurick (Class of ’33). To be granted to a student in any programme who demonstrates financial need. (90541 836)

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 TARButt CONSTRUCTION LTD. BURSARY
Established in 1997 by Tarbutt Construction Ltd. under the McMaster Student Opportunity Fund Initiative. To be granted to a student enrolled in any programme who demonstrates financial need. (90732 654)

THE TD BANK FINANCIAL GROUP BURSARIES
Established in 1996 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 programme who demonstrate financial need. (90939)

THE RAY AND Joyce TRuLL BURSARY
Established in 1998 by Roger and Janet Trull and their children in honour of Ray and Joyce Trull. To be granted to a student in any programme who demonstrates financial need. (90857 809)

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 programme who demonstrate financial need. (90648 497)

THE TYNOWSKI 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 Tynowski Scholarship. (90953)

THE VALLEY CITY BURSARY
Established in 1996 by Valley City in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to a student in any programme who demonstrates financial need. (90662 459)

THE WALLINGFORD HALL BURSARIES
Established through anonymous donations to assist students in any programme 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 programme who demonstrates financial need. (90589 413)

THE LLOYDWERDEN MEMORIAL BURSARIES
Established in 1996 by bequest of Lloyd Werden of Bonavista in the Township of Louth in the County of Lincoln, former Physician. To be granted to students enrolled in any programme who demonstrate financial need. (90651 500)

THE YATES BURSARIES
Established in 1963 by bequest of William Henry Yates of Hamilton. To assist students in any programme. (90549)

THE GLADYS A. YOUNG BURSARY
Established in 1997 under the McMaster Student Opportunity Fund Initiative. Preference will be given, if financial need is demonstrated, to the recipient of THE Gladys A. Young Scholarship. (90878)

BURSARIES FOR STUDENTS WITH DISABILITIES

THE AUBREY DALGLEISH BURSARY
Established in 1985. To be granted to a student in any programme who demonstrate 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 ’88) by the Operating Committee on the Disabled through its Awareness Week Activities. To be granted to a disabled student in any programme who demonstrates financial need. Students should have registered with the Centre for Student Development. (90553 287)
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 programme.
b) The Richard Konrad Bursaries for physically challenged students registered with the Centre for Student Development, who are enrolled in any programme. (90750 712)

THE SERTOMA CLUB BURSARY
Established in 1989 by the Sertoma Club of Hamilton. To be granted to a hearing disabled student in any programme 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 221)

THE LILLIAN R. STEGNE MEMORIAL BURSARIES
Established in 1990 in memory of Lillian Rose Stegner (Class of ’62) by family, friends and colleagues. Two or three bursaries to be granted to handicapped students in any programme who demonstrate financial need. (90543 137)

ATHLETIC BURSARIES
All athletic bursaries are only applicable to students in Level II or higher who meet the OUA and the CIAU regulations for Athletic Bursaries. Verification of eligibility will be done in consultation with the Department of Athletics.

THE CROSS COUNTRY BURSARY
Established in 1997 by coaches, former team members and supporters of the Men’s and Women’s Varsity Cross Country running teams under the McMaster Student Opportunity Fund initiative. To be granted to a student who demonstrates financial need and who is a member of the varsity men’s or women’s cross country team. (90697 659)

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 programme who demonstrates financial need and who is a member of any interuniversity team at McMaster. (90697 659)

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 programme who demonstrates financial need and who has demonstrated outstanding athletic achievement in interuniversity football. (90627 659)

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. (90615 439)

THE JOHN MCCAHILL MEMORIAL BURSARY
Established in 2001 in loving memory of John (Jack) Woodhouse MacCahill by his family and friends. To be granted to a student who demonstrates financial need and who demonstrates outstanding athletic achievement in men’s basketball, golf, football, hockey or tennis. (90968)

McMASTER MEN’S ATHLETICS BURSARY
Established by past and present student-athletes and friends of McMaster Interuniversity Athletics to assist students in any academic programme who demonstrate financial need and who demonstrate outstanding athletic participation in men’s interuniversity athletics. (90625 449)

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 programme who demonstrate financial need and who demonstrate outstanding athletic participation in the sport of men’s basketball. (90770 732)

McMASTER SQUASH AND GOLF BURSARY
Established by past and present student-athletes and friends of McMaster Golf and Squash to assist a student in any academic programme who demonstrates financial need and who demonstrates outstanding athletic participation in the sport of golf or squash. (90771 733)

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 programme who demonstrates financial need and who demonstrates outstanding athletic participation in the sport of women’s basketball. (90772 734)

McMASTERWOMEN’S VOLLEYBALL BURSARY
Established by past and present student-athletes and friends of McMaster Women’s Volleyball to assist a student in any academic programme who demonstrates financial need and who demonstrates outstanding athletic participation in the sport of women’s volleyball. (90773 735)

THE NHL PLAYERS’ ASSOCIATION BURSARY
Established in 1999 by The NHL Players’ Association Alumni. To be granted to a student enrolled in any programme who demonstrates financial need and who has demonstrated outstanding athletic achievement in an intervarsity sport. (90889 874)

THE THOMAS ALEXANDER PAIN BURSARY
Established by past and present student-athletes and friends of McMaster Football to assist students in any academic programme who demonstrate financial need and who demonstrate outstanding participation in the sport of football. (90777 739)

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 programmes such as Athletes helping Athletes. (90637 486)

COMMUNITY SERVICE BURSARIES

THE ERIC JOHN BRETZLER 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 programme who demonstrates financial need. Preference will be given to students associated with the McMaster Students Union. (90614 634)

THE ARCHIBALD R. CROZIER BURSARIES
Established in 1992 in memory of Archibald (Archie) Crozier (Class of ’35), former professional football player and Chair of the Ontario Energy Board for 17 years. To be granted to a student who has demonstrated financial need and a sense of social awareness and shown interest in, and concern for, others. It is hoped that recipients, after graduation, will reimburse the fund to the extent of their award so that increasing numbers of students may be assisted. (90665 336)

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 programme 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 875)

THE RAYMOND C. LABARGE MEMORIAL BURSARIES
Established in 1973 by friends and associates in memory of Raymond C. Labarge (Class of ’36) of Ottawa. Four bursaries are available for senior undergraduate students. Applicants should have a record of academic performance that has normally been at the upper second-class level or higher. They should also have demonstrated a sense of social awareness, shown interest in and concern for others and been an active participant in University or general community affairs. Students should describe their qualifications for this bursary in the covering letter. (90524 212)

THE LYNDEN LIONS CLUB BURSARY
Established in 1997 by the Lynden Lions Club under the McMaster Student Opportunity Fund initiative to exemplify the Lions international objective to take an active interest in the civic, cultural, social and moral welfare of the community. To be granted to a student enrolled in any programme 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. (90778 720)

REGIONAL BURSARIES

THE JAMES N. ALLAN FOUNDATION BURSARY
Established in 1990 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 621)
THE ANCASTER LIONS CLUB BURSARY
Established in 1997 by the Ancaster Lions Club under the McMaster Student Opportunity Fund initiative and to exemplify the Lions international objective to take an active interest in the civic, cultural, social and moral welfare of the community. To be granted to a student enrolled in any programme who demonstrates financial need. Preference to be given to students who currently reside in the town of Ancaster. (90804 623)

THE CANADIAN FEDERATION OF UNIVERSITY WOMEN’S (BURLINGTON) BURSARY
Established in 1986, a bursary to be granted to a mature female student who demonstrates financial need and who is a resident of Hamilton-Wentworth or Halton Region, preferably from the Burlington area. (90545 223)

THE CANADIAN FEDERATION OF UNIVERSITY WOMEN’S (HAMILTON) BURSARY
Established in 1987 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 programme who demonstrates financial need. (90828 784)

THE CITY OF HAMILTON BURSARIES
Established in 1959 by the City of Hamilton to commemorate the visit of Her Majesty Queen Elizabeth II and His Royal Highness Prince Philip to Hamilton in July 1959. To assist Hamilton students who demonstrate financial need. (90515)

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 421)

THE DUNDAS BURSARIES
Established in 1996 from funds donated anonymously for the purpose of providing students with an opportunity to achieve their educational goals. To provide assistance to McMaster students in financial need. Preference will be given to students from the Dundas area. (90599 423)

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 programme who demonstrates financial need. Preference will be given to students from Nova Scotia. (90644)

FIRSTONTARIO CREDIT UNION
Established in 1966 by members in celebration of 50 years of service in the Hamilton area. Two or three bursaries to be granted to students in any programme who are from the Regional Municipality of Hamilton-Wentworth, City of Burlington or Town of Haldimand-Norfolk and who have demonstrated financial need. Value: $700 each (90504 199)

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 programme who demonstrate financial need. Preference will be given to students graduating from a high school in the Hamilton-Wentworth Region. (90725 687)

THE HAMILTON CITIZENS’ MEMORIAL BURSARIES
Established in 1947 by the Hamilton Citizens’ Committee for War Services. Proceeds to be used to assist undergraduate students who are residents of the Hamilton-Wentworth Region. (90516 207)

HAMILTON COMMUNITY FOUNDATION BURSARIES
Established in 1996-97 by Hamilton Community Foundation from the income of funds generously donated by citizens of the community, notably the late sisters Genevieve Cheney and Cordelia Ensleg, and the late Mr. Ross F. Webb. A variable number of bursaries to be awarded to full-time students, registered in any year of any undergraduate programme, who have graduated from publicly-funded secondary schools in Hamilton-Wentworth and who demonstrate financial need. The criteria established for these bursaries are consistent with the intention of the original donors. (90725 685)

THE MARY A. HILL BURSARY
Established in 1997 by bequest of Mary A. Hill. To be granted to a female student in any programme who demonstrates financial need. Preference to be given to one who has graduated from a secondary school in Hamilton. (90521 837)

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 programme who demonstrate financial need. Preference will be given to children and grandchildren of employees and retirees of The Hamilton-Wentworth Regional Police. (90737 693)

THE KIWANIS CLUB OF HAMILTON EAST BURSARY
Established in 1997 by the Kiwanis Club of Hamilton East under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in any programme who demonstrates financial need. Preference to be given to members and former members of the Hamilton East Kiwanis Boys’ and Girls’ Club. (90749 711)

THE LEFLAR FOUNDATION BURSARY
Established in 1997 by The Leflar Foundation in support of its belief that all students should be able to pursue their educational goals. To be granted to students enrolled in any programme who demonstrate financial need. Preference to be given to students who are from the Owen Sound area. (90753 715)

THE PAUL R. MacPherson Bursary
Established in 1998 by Paul R. MacPherson (Class of ’57) in support of his belief that all students should be able to pursue their educational goals. A variable number of bursaries to be granted to students in any programme who demonstrate financial need. Preference to be given to students from Muskoka Lakes Secondary School. (90838 810)

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 programme who demonstrate financial need. Preference to be given to students from the Hamilton-Wentworth Region who demonstrate financial need. Preference to be given to students in Faculty of Science. (90766 749)

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 programme who demonstrate financial need. Preference will be given to students who permanently reside in the Hamilton-Wentworth Region. (90794 757)

THE ROSA MAUDE SHEARDOWN BURSARY
Established in 1997 by Gordon R. Baker, Q.C, in honour of his foster mother, Rosa Maude Sheardown, and her belief in the importance of education and providing a helping hand to others. To be granted to students in any Faculty or School. Preference to be given to students from single-parent families, foster or group homes, disadvantaged backgrounds or King/ Township. (90967)

THE ELEANOR AND WILFRED RYDER BURSARY
Established in 1999 by Marvin Ryder in honour of Eleanor and Wilfred Ryder. To be granted to students enrolled in any programme who demonstrate financial need. Preference will be given to students from Oxford County or Norfolk County. (90894)

FACULTY-SPECIFIC BURSARIES

ARTS AND SCIENCE PROGRAMME

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 Programme. Preference to be given to students who are studying Environmental Studies or Environmental Science. (90610 629)
THE LOUIJA DRAYFORD MEMORIAL BURSARY Established in 1998 by Mrs. Janet Leemaara in memory of her late mother, Mrs. Louila Drayford (nee Bingham, Class of ’34). To be granted to a student enrolled in the Arts and Science Programme who demonstrates financial need. Preference will be given to a student enrolled in a course in Mathematics. (90839 811)

THE GERALDINE LORETTA COSFORD GENERAL BURSARIES Established in 1998 by Geraldine Loretta Cosford (Class of ’35 & ’39). To be granted to students enrolled in the Arts and Sciences Programme, the Faculties of Business, Engineering, Humanities, Science and Social Sciences who demonstrate financial need and have attained a minimum Grade of C in each course. (90870 865)

THE GORDON H. DEAN BURSARIES Established in 1996 by Gordon H. Dean of Stoney Creek. Two or more bursaries to be granted based upon financial need: a) one to a student enrolled in Level III of a programme in Arts and Science and b) one to a student enrolled in Level II of a programme in the Faculty of Humanities. Preference given to students currently on the Deans’ Honour List. (90934 416)

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 Sciences Programme who has demonstrated financial need. Preference will be given to the student who wins the George P. Gilmour Memorial Scholarship. (90714 676)

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 Sciences Programme who demonstrate financial need. (90568 432)

THE TRADEPORT INTERNATIONAL CORPORATION BURSARY Established in 1997 by TradePort International Corporation, operator and developer of the John C. Munro Hamilton International Airport. To be granted to a student who has demonstrated financial need and is enrolled in a programme in Engineering, Geography, Business or Economics and has demonstrated an interest in a career in transportation. Preference to be given to a student who elects to undertake a fourth year thesis on a topic related to the study of transportation. (90646 495)

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 Programme or any of the Faculties of Business, Engineering, Humanities, Science and Social Sciences. Value: $2,000 (90840 812)

FACULTY OF BUSINESS

THE GARY ALLEN MEMORIAL BURSARY Established in 1987 by friends and family of the late Gary Allen (Class of ’84) and augmented in 1996 in conjunction with the McMaster Student Opportunity Fund initiative, to assist a Commerce student in Years III or IV whose major area of study is accounting and who demonstrates financial need. Preference will be given to a mature student. (90501 234)

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 MBA Programme in the Finance stream. (90681 643)

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 programme in Commerce who demonstrate financial need. Preference to be given to students demonstrating interest in Asian Studies. (90568 412)

THE GERALDINE LORETTA COSFORD GENERAL BURSARIES Established in 1999 by Geraldine Loretta Cosford (Class of ’35 & ’39). To be granted to students enrolled in the Arts and Sciences Programme, the Faculties of Business, Engineering, Humanities, Science and Social Sciences who demonstrate financial need and have attained a minimum Grade of C. (90870 865)

THE AUBREY DALGLEISH BURSARY Established in 1985. To be granted to a student in any programme 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 417)

THE MICHAEL G. DEGroote SCHOOL OF BUSINESS ADVISORY BURSARIES Established in 1997 by the Michael G. 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 MBA Programme at the Michael G. DeGroote School of Business. (90699 661)

THE GEORGE AND MARGARET EDUPT BURSARY Established in 1997 by George and Margaret Edrupt of the John C. Munro Hamilton International Airport. To be granted to a student who demonstrates financial need and is enrolled in either the Faculty of Business or the Computer Science programme in the Faculty of Science. (90701 663)

THE FACULTY OF BUSINESS BURSARIES Established in 1997 under the McMaster Student Opportunity Fund initiative with funds donated 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 667)

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 III of Commerce who demonstrates financial need, has attained a minimum CA of 6.0 and who plans to major in Accounting and/or Finance. The bursary is renewable for up to two additional years on condition that the student continues to demonstrate financial need and maintains a minimum CA of 6.0 in the Commerce programme. (90829 785)

THE WAYNE C. FOX BURSARIES Established in 1998 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 programme at the McMaster Student Opportunity Fund initiative. Preference to be given to BBA students or Level III and/or IV Commerce students with a minimum CA of 6.0. (90793 953)

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 achieve 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 MBA Co-op students. (90716 678)

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 MBA Programme at the Michael G. DeGroote School of Business. (90717 679)

THE HAMILTON CHAPTER OF THE HUMAN RESOURCES PROFESSIONALS ASSOCIATION BURSARY Established in 1999 by the Hamilton Chapter of the Human Resources Professionals Association under the McMaster Student Opportunity Fund Initiative. To be granted to a Level III or Level IV Commerce student taking two or more of the Human Resource and Management Area courses who demonstrates financial need. (90568 297)

THE M.A. (JACK) HASSAL BURSARY Established by the Hamilton and District Chartered Accountants’ Discussion Group in 1992 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. (90568 027)

THE HARISH JAIN HUMAN RIGHTS IN EMPLOYMENT BURSARIES Established in 1996 by Professor Harish C. Jain. To be granted to a student enrolled in Level III or Level IV of a Commerce programme who demonstrates financial need. (90739 701)

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 813)
THE JAN KELLEY MARKETING BURSARY
Established in 1997 by Kelley Advertising Inc., founded in Hamilton in 1913. This bursary is to be granted to a student enrolled in Business I, or in the first year of the MBA Programme at the Michael G. DeGroote School of Business who demonstrates financial need. (90745 707)

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 is to be granted to students enrolled in the Faculty of Business who demonstrate financial need. (90007 451)

THE 3M CANADA INC. BURSARIES
Established in 1980. Two bursaries to be granted annually; one to an M.B.A. student and one to a student in Business or Science. (90525 220)

THE MANULIFE FINANCIAL BURSARIES
Established in 1997 by Manulife Financial under the McMaster Student Opportunity Fund Initiative. A variable number of bursaries is to be granted to students who demonstrate financial need and are enrolled in the Faculty of Business or the Faculty of Health Sciences. (90762 724)

THE McMaster MBA ALUMNI ASSOCIATION BURSARIES
Established in 1996 by the McMaster MBA Alumni Association. A variable number of bursaries is to be granted to students enrolled in the first year of the Michael G. DeGroote School of Business MBA programme who demonstrate financial need. (90626 450)

THE MICHIN FAMILY BURSARIES
Established in 1996 by E. A. Michin and family. A variable number of bursaries is 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. (90626 452)

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 747)

THE DR. ALFRED AND LAURA OAKIE BURSARIES
Established in 1996 by Dr. Alfred J. Oakie. A variable number of bursaries is to be granted to students enrolled in Business I who demonstrate financial need. (90631 455)

THE PROCOR BURSARIES
Established in 1997 by Procyr 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 466)

THE RICH CANADA INC. BURSARIES
Established in 1996 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 is to be granted to students who demonstrate financial need and are enrolled in the Faculty of Business or the Faculty of Engineering. (90639 488)

THE ROBERTSON-YATES CORPORATION BURSARIES
Established in 1998 by the Robertson-Yates Corporation of Hamilton in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries is to be granted to students enrolled in a programme in Business or Engineering who demonstrate financial need. (90640 489)

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 763)

THE REBECKAH SCHNUR BURSARY
Established in 1998 by Rebeckah Schnurr, Financial Advisor for the Berkshire Group, in the belief that all students should be able to realize their educational goals. To be granted to a student who demonstrates financial need. Preference to be given to a female student pursuing her studies in the Faculty of Business or the Faculty of Health Sciences who, because of extenuating family or personal circumstances, would be unable to continue her studies without such assistance. (90843 815)

THE SCOTIABANK BURSARIES
Established in 1997 by Scotiabank in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries is to be granted to students who demonstrate financial need. Preference to be given to students enrolled in the Faculty of Business. (90602 850)

THE TERRY SEWRIGHT BURSARY
Established in 1996 by Terry Sewright, Lecturer in the Faculty of Business. To be granted to a student in the Commerce Programme 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 492)

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 493)

THE TRADEPORT INTERNATIONAL CORPORATION BURSARY
Established in 1997 by TradePort International Corporation, operator and developer of the John C. Munro Hamilton International Airport. To be granted to a student who has demonstrated financial need and is enrolled in a programme in Engineering, Geography, Business or Economics and has demonstrated an interest in a career in transportation. Preference to be given to a student who elects to undertake a four-year thesis on a topic related to the study of transportation. (90646 495)

MOSSADIQ AND YASMIN UMEDALY BURSARIES
Established in 1995 by Mossadik (MBA '74) and Yasmin Umedaly under the McMaster Student Opportunity Fund Initiative. To be granted to students who have demonstrated financial need and who have completed their second year with a Cumulative Average of at least 8.0 in the Arts and Science Programme or any of the Faculties of Business, Engineering, Humanities, Science and Social Sciences. Value: $2,000 (90840 812)

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 is to be granted to students in a programme in the Faculty of Business and the Faculty of Engineering who demonstrate financial need. (90868 864)

THE ZONTA CLUB OF HAMILTON I BURSARIES
Established in 1997 by the Zonta Club of Hamilton in support of the McMaster Student Opportunity Fund Initiative and in the belief that all students, particularly women in non-traditional fields, should have the opportunity to pursue their educational goals. To be granted to a student who demonstrates financial need and is enrolled in the Faculty of Engineering, or in Business or is enrolled in a course in Indigenous Studies. Preference to be given to female students. (90550 097)

FACULTY OF ENGINEERING

THE ANDREW FOUNDATION BURSARIES
Established in 1997 by the Andrew Foundation under the McMaster Student Opportunity Fund Initiative. A variable number of bursaries is to be granted to students enrolled in a programme in Engineering who demonstrate financial need. Preference to be given to students who are studying Electrical Engineering or Mechanical Engineering. (90806 624)

THE A.H. ATKINSON BURSARIES
Established in 1990 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 is to be awarded to undergraduate students in a full-time programme in Engineering who demonstrate financial need. Value: $700 each (90500 282)

THE BARTEK BURSARIES
Established in 1996 by Bartek Ingredients Inc. of Stoney Creek in support of McMaster students. A variable number of bursaries is 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 489)
THE CANADA TRUST BURSARIES
Established in 1996 by Canada Trust in support of its belief that 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 Environmental Science Programme in the Environmental Studies Programme or the Engineering and Society Programme. (90067464)

THE CANADIAN SOCIETY FOR MECHANICAL ENGINEERING BURSARY
Established in 1997 by The Canadian Society for Mechanical Engineering in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to a student enrolled in the Faculty of Engineering who demonstrates financial need. Preference will be given to a student enrolled in Mechanical Engineering. (90619641)

THE CANON CANADA INC. - DIRECT SALES DIVISION BURSARIES
Established in 1997 by Canon Canada Inc. - Direct Sales Division in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries will be granted annually to McMaster students who demonstrate financial need and are enrolled in the Environmental Science Programme, the Environmental Studies Programme or an Engineering and Society Programme. (90820642)

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 programme in Computer Science or Computer Engineering. (90741703)

THE GERALDINE LORETTA COSFORD GENERAL BURSARIES
Established in 1989 by Geraldine Loretta Cosford (Class of ‘35 and ’39). To be granted to students enrolled in the Arts and Sciences Programme, the Faculties of Business, Engineering, Humanities, Science and Social Sciences who demonstrate financial need and have attained a minimum CA of 7.0. (90870866)

THE CRS ROBOTICS CORPORATION BURSARIES
Established in 1997 by CRS Robotics Corporation Inc. in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to students enrolled in the Faculty of Engineering who demonstrate financial need. (90866658)

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. (90866650)

THE GENERAL CONTRACTORS ASSOCIATION OF HAMILTON BURSARIES
Established in 1997 by the General Contractors Association of Hamilton under the McMaster Student Opportunity Fund initiative. A variable number of bursaries to be granted to students enrolled in the Faculty of Engineering who demonstrate financial need. (90710672)

THE GENNUM CORPORATION BURSARIES
Established in 1997 by the Gennum Corporation in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to students who are enrolled in the Faculty of Engineering and who demonstrate financial need. (90712674)

THE GRAY FAMILY BURSARY
Established in 1997 by Donald Gray (Class of ’70) and Glenn Gray (Class of ’73) and Kerry Gray (Class of ’77 and ’82 (MBA)) under the McMaster Student Opportunity Fund initiative. To be granted to a third year student enrolled in the Engineering and Management programme who demonstrates financial need. Preference to be given to students who permanently reside in the Hamilton-Wentworth Region. (90718680)

THE HATCH ASSOCIATES BURSARY
Established in 1997 by Hatch Associates in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to a student enrolled in the Faculty of Engineering who demonstrates financial need. (90730692)

THE INGLIS BURSARIES
Established in 1996 by Paul F. Inglis of Mississauga. A variable number of bursaries to be granted to students enrolled in a programme in Commerce or Engineering Management who demonstrate financial need. Preference to be given to students enrolled in Engineering Management. (90608430)

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. (90841813)

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. (90752714)

THE LIBURDI ENGINEERING LIMITED BURSARY
Established in 1997 by Liburdi Engineering Limited under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in an Engineering programme who demonstrates financial need. (90754718)

THE RONALD E. MATERICK BURSARY
Established in 1996 by Ronald E. Materick (Class of ’70). To be granted to a student enrolled in the Faculty of Engineering who demonstrates financial need. Preference to be given to a student enrolled in Civil Engineering. (90665462)

THE NEIL D. McARTHUR BURSARIES
Established in 1997 by the Ante and Neil McArthur Foundation in memory of Mrs. McArthur’s parents, Joseph and Josephine Hryniszak. To be granted to students in any programme who demonstrate financial need. Preference to be given to students enrolled in either the Faculty of Science or the Faculty of Engineering. (90765727)

THE MCPHERSON FAMILY BURSARIES
Established in 1997 by Jean McPherson in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to students enrolled in the Faculty of Engineering who demonstrate financial need. (90765762)

THE OLM AN FAMILY BURSARIES
Established in 1997 by The Olman Family in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to students enrolled in the Faculty of Engineering who demonstrate financial need. (90765785)

THE RONALD R. MORRIS BURSARIES
Established in 1996 by the graduating class in Engineering under the McMaster Student Opportunity Fund initiative. To be granted to a third year student enrolled in the Faculty of Engineering who demonstrates financial need. Preference to be given to students who permanently reside in the Hamilton-Wentworth Region. (90765848)

THE ROBERT JOHN MORRIS BURSARIES
Established in 1997 by Robert John Morris. A variable number of bursaries to be granted to students who demonstrate financial need and are enrolled in the Faculty of Engineering. Preference will be given to in-course recipients and/or entrance level recipients of The Robert John Morris Awards in the year they receive the award. (90630654)

THE ARCHIE MOUGHALIAN BURSARIES
Established in 1997 by Robert John Morris. A variable number of bursaries to be granted to students enrolled in the Faculty of Engineering who demonstrate financial need. (90682641)

THE NCR (WATERLOO) BURSARY
Established in 1997 by NCR (Waterloo) under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in an Engineering and Management programme who demonstrates financial need. (90842814)

THE ORLICK INDUSTRIES LIMITED BURSARIES
Established in 1997 by Orlick Industries in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to students enrolled in a Mechanical Engineering programme who demonstrate financial need. (90765746)

THE OTIS CANADA BURSARIES IN ENGINEERING AND MANAGEMENT
Established in 1998 by CTIS Canada Inc., the world’s largest elevator company with over 50,000 employees and more than 1,700 worldwide locations. A variable number of bursaries to be granted to students enrolled in Level II of a programme in Engineering and Management who demonstrate financial need. Preference to be given to students who demonstrate a lively interest in the university and community through their involvement in extracurricular activities. (90632481)

THE PATRIOT FORGE INC. BURSARY
Established in 1997 by Patriot Forge Inc. in support of McMaster students. To be granted to a student enrolled in the Faculty of Engineering who demonstrates financial need. Preference will be given to a student enrolled in Mechanical, Chemical or Materials Engineering. (90798751)
THE MARC ANDRE ADRien PINEault Bursary
Established in 1995 by family and friends in memory of Marc Pineault and augmented in 1998 in conjunction with the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in a programme in Engineering who has demonstrated financial need and involvement in university activities including the McMaster Choir, varsity wrestling, karate club and issues related to the environment and social justice. (90576 822)

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. (9068 466)

THE RICOH CANADA INC. BURSARIES
Established in 1996 by RICOH Canada Inc. in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to students enrolled in a programme in Business or Engineering who demonstrate financial need and are enrolled in the Faculty of Business or the Faculty of Engineering. (90539 488)

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 programme in Business or Engineering who demonstrate financial need and are enrolled in the Faculty of Business or the Faculty of Engineering. (90663 460)

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 Faculty of Business, Engineering or Science. Preference will be given to students who are enrolled in the Department of Materials Science and Engineering. (90664 495)

THE TRANSPORT INTERNATIONAL CORPORATION BURSARIES
Established in 1997 by Transport International Corporation, operator and developer of the John C. Munro Hamilton International Airport. To be granted to a student who has demonstrated financial need and is enrolled in a programme in Engineering, Geography, Business or Economics and has demonstrated an interest in a career in transportation. Preference to be given to a student who elects to undertake a fourth year thesis on a topic related to the study of transportation. (90646 495)

THE TURKSTRA LUMBER CO. LTD. BURSARIES
Established in 1996 by the Turkstra Lumber Company Limited. A variable number of bursaries to be granted to students enrolled in either the Faculty of Engineering or the Faculty of Humanities who demonstrate financial need. Preference to be given to students meeting a Sessional Average of at least 7.0 at the most recent review. (90647 496)

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 Programme or any of the Faculties of Business, Engineering, Humanities, Science and Social Sciences. Value: $2,000 (90640 612)

THE WESTINGHOUSE CANADA INC. BURSARIES
Established in 1996 by Westinghouse Canada Inc. in support of students who, without financial support, would be unable to pursue their educational goals. A variable number of bursaries to be granted to students in a programme in the Faculty of Business and the Faculty of Engineering who demonstrate financial need. (90652 501)

THE ZONTA CLUB OF HAMILTON I BURSARIES
Established in 1997 by the Zonta Club of Hamilton I in support of the McMaster Student Opportunity Fund initiative and in the belief that all students, particularly women in non-traditional fields, should have the opportunity to pursue their educational goals. To be granted to a student who demonstrates financial need and is enrolled in the Faculty of Engineering, or in Business or is enrolled in a course in indigenous Studies. Preference to be given to female students. (90550 097)

FACULTY OF HEALTH SCIENCES

THE DOUGLAS IAN BROWN BURSARY
Established in 1997 by Douglas A. and Lois Aileen Brown in honour of their son Douglas Ian Brown. To be granted to a McMaster student enrolled in the Faculty of Health Sciences who demonstrates financial need. (90815 635)

THE ED BUFFETT BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in a programme in Health Sciences who demonstrate financial need. Preference will be given to students who have demonstrated leadership in their school and community. (90816 636)

COMMUNITY NURSING REGISTRY - HAMILTON BURSARIES
Established in 2000 by the Community Nursing Registry - Hamilton in support of students pursuing a professional career in nursing. A variable number of bursaries to be granted to students enrolled in Level II in the School of Nursing in the Faculty of Health Sciences who demonstrate financial need. Preference will be given to students who demonstrate volunteer service in the area of health care. (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 840)

THE MARGO AND FRASER FELL BURSARIES
Established in 1999 by Margot (Class of '52) and Fraser Fell (Class of '49). A variable number of bursaries to be granted to students enrolled in the School of Nursing in the Faculty of Health Sciences who demonstrate financial need. (90545)

THE JACK AND THELMA HEATH MEMORIAL BURSARIES
Established in 1997 by Porton Canada Inc. in memory of Jack and Thelma Heath, former employees of the Company, who were tragically killed in a boating accident. The fund provides up to four awards to assist students, with demonstrated financial need, in Level III or IV of the B.Sc.N. programme (basic and/or post-diploma stream). (90519 838)

THE HAZEL MAY HINKS BURSARIES
Established in 1996 by bequest of Hazel May Hinks of Burlington, Ontario. A variable number of bursaries to be granted to students enrolled in a programme 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 428)

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 faculties of Medicine and Rehabilitation Science in the Faculty of Health Sciences who demonstrate financial need. (90841 813)

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 709)

THE PHILLIP GORDON KETTLE BURSARY
Established in 1998 in memory of Phillip Gordon Kettle. To be granted to a student enrolled in a Nursing programme who demonstrates financial need. Preference to be given to a student studying herbal medicine as alternative therapies. (90678 475)

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 724)

THE JANET McKNIGHT MEMORIAL BURSARIES
Established in 1996 in memory of Janet McKnight by the Pember Family. A variable number of bursaries to be granted to students enrolled in the final level of the Nursing programme who demonstrate financial need. (90629 447)

THE KATHERINE M. COLLIVER McNALLY BURSARY
Established in 1997 by Katherine M. Colliver 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 programme. (90774 736)
THE McMASTERS 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
students pursuing undergraduate education in the University's Bachelor of Science in Nursing
programme. (90531 291)

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 737)

THE O'SHAUGHNESSY BURSARY
Established in 1996 by the family and friends of the late Margaret O'Shaughnessy, RN, this bursary is to be used to alleviate financial need for students pursuing a course in Nursing (basic or post-diploma stream) in Level II, III, or IV. (90535 21B)

THE PASSI FAMILY BURSARY
Established in 1997 by Chitra and Narendar Passi under the McMaster Student Opportunity Fund Initiative in the belief that all students should have the opportunity to pursue their educational goals. To be granted to a student who demonstrates financial need and is enrolled in the Faculty of Health Sciences. Preference to be given to students enrolled in the Child Life Studies Full-Time Diploma Programme. (90767 750)

THE DR. SUSAN BEVERLEY PLANK MEMORIAL BURSARY
Established in 1997 by the family and friends of Dr. Susan Beverley Plank, Class of '90. To be granted to a student who demonstrates financial need and is enrolled in the Faculty of Health Sciences, School of Medicine. (90791 754)

THE SALENA FAMILY BURSARY
Established in 1997 under the McMaster Student Opportunity Fund Initiative by Dr. Bruno Seiena (Class of '81), full-time faculty member in the Faculty of Health Sciences, and his family. To be granted to a student who demonstrates financial need and is enrolled in the Faculty of Health Sciences, School of Medicine. (90801 764)

THE REBECAH SCHNURR BURSARY
Established in 1998 by Rebechah Schnurr, Financial Advisor for the Berkshire Group, in the belief that all students should be able to realize their educational goals. To be granted to a student who demonstrates financial need. Preference to be given to a female student pursuing her studies in the Faculty of Business or the Faculty of Health Sciences, who, because of extenuating family or personal circumstances, would be unable to continue her studies without such assistance. (90843 815)

THE SYLVIA AND BRIAN WALKER BURSARIES
Established in 1996 by Sylvia (Hunt) and Brian Walker. Two bursaries to be granted to students demonstrating financial need: a) one to a student enrolled in Humanities I and; b) one to a student enrolled in Nursing I. Preference to be given to students who have demonstrated leadership and involvement in university and community activities. (90650 499)

THE AUDREY AND BOB WAUGH BURSARY
Established in 1997 by Audrey and Bob Waugh under the McMaster Student Opportunity Fund Initiative. To be granted to a student enrolled in the Faculty of Health Sciences who demonstrates financial need. Preference to be given to a student involved in Gerontological research. (90796 759)

FACULTY OF HUMANITIES

THE JENNIFER AND THEODORE ARCAD BURSARIES
Established in 1997 by Theodore Arcad (Class of '57), in memory of his wife, Jennifer (Class of '57), whose interest was Baroque English poetry. To be granted to an undergraduate or graduate student enrolled in a programme in English, who demonstrates financial need. (90807 625)

THE MARJORIE E. (WATSON) BEATTIE BURSARY
Established in 1997 by William W. Beattie (Class of '68) in honour of his mother, Marjorie E. (Watson) Beattie (Class of '33), under the McMaster Student Opportunity Fund Initiative. To be granted to a student enrolled in any programme who demonstrates financial need. Preference to be given to students enrolled in the Faculty of Humanities. (90811 631)

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 programme in English who demonstrate financial need. (90683 407)

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 Programme who demonstrates financial need. (90940)

THE NORMAN NATHANIEL CASKEY BURSARIES
Established in 1996 by June Caskey of Hamilton in memory of her father. A variable number of bursaries to be granted to students enrolled in a programme in Music who demonstrate financial need. (90589 409)

THE GERALDINE LORETTA COSFORD BURSARIES
Established in 1997 by Geraldine Loretta Cosford under the McMaster Student Opportunity Fund Initiative. A variable number to be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. Preference to be given to students who have completed Level I. (90692 654)

THE GERALDINE LORETTA COSFORD GENERAL BURSARIES
Established in 1999 by Geraldine Loretta Cosford (Class of '35 and '39). To be granted to students enrolled in the Arts and Sciences Programme, the Faculties of Business, Engineering, Humanities, Science and Social Sciences who demonstrate financial need and have attained a minimum CA of 7.0. (90670 866)

THE SUSANNE 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 650)

THE EARL FRANKLIN DAMUDE BURSARY
Established in 1993 by Dr. Christopher Damude, 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 programme in English or History. (90570 346)

THE GORDON H. DEAN BURSARIES
Established in 1996 by Gordon H. Dean of Stoney Creek. Two or more bursaries to be granted based upon financial need: a) one to a student enrolled in Level III of a programme in Arts and Science and b) one to a student enrolled in Level III of a programme in the Faculty of Humanities. Preference given to students currently on the Dean's Honour List. (90594 419)

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 652)

THE ENERSYSTEM INSULATION LTD. BURSARY
Established in 1997 by Enersystem Insulation Ltd. in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to a student enrolled in the Faculty of Humanities who demonstrates financial need. (90544 650)

THE FESTITALLA CORPORATION BURSARY
Established in 1997 by the Festitalla Corporation under the McMaster Student Opportunity Fund Initiative. To be granted, in alternating years, to a student who demonstrates financial need and is enrolled in the Department of Modern Languages and Literatures, specializing in Italian, or is enrolled in the School of the Arts. (90706 668)

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. To be granted to a student enrolled in the Faculty of Humanities who demonstrates financial need. (90724 666)

THE MARGARET HARGEAVES BURSARIES
Established in 1967 by Susan Hargeaves Walker in loving memory of her mother, Margaret Hargeaves. 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 691)

THE HARMWOOD BURSARIES
Established in 1990 by bequest of Dr. William Harwood of Hamilton in memory of his beloved wife Grace and devoted daughter Wilia 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 058)
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 and a Humanities programme who demonstrate financial need. (90734 666)

THE JULIA HURITG BURSARY
Established by family and friends of the late Julia Hurtig in 1985. 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. (90622 211)

THE IVEY 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 Ivey Scholarship. (90872)

THE STUART AND MARJORIE IVISON BURSARIES
Established in 1997 by Donald Ivson (Class of '53) and Betty Ivson (Class of '52) in honour of his parents Stuart and Marjorie Ivson (Class of '28(Arts)). A variable number of bursaries to be granted to students who demonstrate financial need. Preference will be given to students enrolled in a programme in the Department of English who demonstrate a lively interest in English studies and involvement in extra-curricular activities. (90736 698)

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 programme 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. (90862)

THE HAROLD J.L. KRUGEL BURSARY
Established in 2000 by Mrs. J. Beverly Krugel (Class of '53) in honour of her husband, Harold J.L. Krugel. To be granted to a student enrolled in the Department of Modern Languages and Linguistics who demonstrates financial need. Preference will be given to a student in German Studies. (90947)

THE JAMES R.A. LANGS BURSARIES IN THE ARTS
Established by family in memory of James R.A. Langs (Class of '37), a Hamilton business leader and great supporter of the Hamilton Community. A variable number of bursaries to be granted to students enrolled in a programme in Art, Theatre & Film Studies (formerly Drama) or Music who demonstrate financial need. (90612 436)

THE DR. ALBERT MARTIN BURSARIES
Established in 1996 by Joyce Beverley Krugel, a former student of Dr. Albert Martin who was a Professor of German in the Faculty of Arts and Science from 1939 to 1961. A variable number of bursaries to be granted to students enrolled in a programme in Modern Languages who demonstrate financial need. (90620 444)

THE McMaster HISPANIC SOCIETY BURSARY
Established in 1999 by the McMaster Hispanic Society under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in a Modern Languages programme and enrolled in Hispanic Studies courses who demonstrates financial need. Preference will be given to students who demonstrate a lively interest in the University and community through their involvement in extra-curricular activities. (90664 860)

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. (90566 339)

THE DR. HOLLAND AND MRS. ELVIRA PETERSON BURSARY
Established in 1997 by Dr. Holland and Mrs. Elvira Peterson under the McMaster Student Opportunity Fund initiative. To be granted to a student who demonstrates financial need and is enrolled in Level II or higher of a Spanish Studies or German programme in the Department of Modern Languages and Linguistics. (90799 752)

THE ELVIRA AND HOLLAND PETERSON BURSARY
Established in 2000 by Mrs. Elvira Peterson (Class of '59) and Dr. Holland Peterson. To be granted to a Level III student enrolled in the Honours Art History or Combined Honours Art History Programme who demonstrates financial need. (90948)

THE LILLIAN PLUMB BURSARY
Established in 1998 by David Plumb in honour of his mother, Lillian Plumb. To be granted to a student enrolled in a programme in the Department of English and who demonstrates financial need (90853 842)

THE MARY ROMEO BURSARY IN ART HISTORY
Established in 1987 by Mary Romeo, a lifelong patron of the arts. To be granted to undergraduate and graduate students who have demonstrated financial need and are enrolled in a programme in Art History. (90668 465)

THE SYMNS BURSARY
Established in 1996 by Dr. and Mrs. W. Symns. To be granted to students who are Canadian citizens or permanent residents who demonstrate financial need and are in good academic standing in any undergraduate programme of the Faculty of Humanities above Level I. (90681 4158)

THE H.B. SYMONS BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative. Preference will be given, if financial need is demonstrated, to the recipient of TH.B. Symns Scholarship in Canadian Studies. (90982)

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 in the Faculty of Humanities who demonstrate financial need. (90645 494)

THE DR. JOHN THOMAS MEMORIAL BURSARY
Established in 1996 in memory of Dr. John Thomas by family, friends and colleagues. This bursary fund is used to assist undergraduate or graduate students who are enrolled in a Philosophy programme, show interest in the field of applied ethics and demonstrate financial need. Undergraduate: Must have taken at least six units from applied ethics courses and have shown, in the view of the Department of Philosophy, promise in the field of applied ethics. Graduate: Must be working on a research thesis which, in the view of the Department of Philosophy, is making or promises to make, a useful contribution to the field of applied ethics. (90735 697)

THE GRAHAM RONALD TOOP BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative. Preference will be given, if financial need is demonstrated, to the recipient of The Graham Ronald Toop Scholarship. (90983)

THE ROBERTA GRAY TROXEL BURSARY
Established in 1997 by Roberta Gray Troxel under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in the Faculty of Humanities who demonstrates financial need. Preference to be given to a female undergraduate student enrolled in a History programme. (90755 697)

THE TRESSIL A TRUBY MEMORIAL BURSARY
Established in 1992 from the bequest of Tressia Truby (M.C.S.P) and Past-President of the Zonta Club of Hamilton II. To be granted to a female student who has completed Level II of a programme in Music. (90556 200)

THE TURKSTRA LUMBER CO. LTD. BURSARIES
Established in 1996 by the Turkstra Lumber Company Limited. A variable number of bursaries to be granted to students enrolled in either the Faculty of Engineering or the Faculty of Humanities who demonstrate financial need. Preference to be given to students attaining a Sessional Average of at least 7.0 at the most recent review. (90647 496)

THE CATHERINE VASAS-BROWN BURSARIES
Established in 1996 by J. Allan Brown in honour of Catherine Vasas-Brown. A variable number of bursaries to be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. (90649 498)

THE SYLVIA AND BRIAN WALKER BURSARIES
Established in 1998 by Sylvia (Hunt) and Brian Walker. Two bursaries to be granted to students demonstrating financial need: a) one to a student enrolled in Humanities; and b) one to a student enrolled in Nursing. Preference to be given to students who have demonstrated leadership and involvement in university and community activities. (90560 499)

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 Science Programme or any of the Faculties of Business, Engineering, Humanities, Science and Social Sciences. Value: $2,000 (90840 812)

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 programme 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 promise that has normally been at the upper second-class level or higher. If sufficient applicants are not eligible in the Honours English programme, the bursaries are available, under similar conditions, to students in the Honours French programme. (90559 336)
THE MARY DRYDEN WILLIS BURSARY
Established in 1997, in memory of Mary Willis (Class of ’26) by her daughter, Mary Lou Dingle and son-in-law Allan (both Class of ’59), under the McMaster Student Opportunity Trust Fund initiative. To be granted to a student 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. (90869 865)

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 Bnai Brith Sports Celebrity Dinner, to be awarded to a student with financial need enrolled in a programme in Theatre & Film Studies (formerly Drama) at McMaster University. (90764 726)

FACULTY OF SCIENCE

THE BIRGIT AND ROBERT BATEMAN BURSARY
Established in 1997 by Birgit and Robert Bateman under the McMaster Student Opportunity Fund initiative. To be granted to a student who demonstrates financial need and is enrolled in the Arts and Science Programme, 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 629)

THE CANADA TRUST BURSARIES
Established in 1996 by Canada Trust in support of its belief that 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 Environmental Science Programme, the Environmental Studies Programme or the Engineering and Society Programme. (90667 464)

THE CANON CANADA INC. - DIRECT SALES DIVISION BURSARIES
Established in 1997 by Canon Canada Inc. - OE Division in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries will be granted annually to McMaster students who demonstrate financial need and are enrolled in the Environmental Science Programme, the Environmental Studies Programme or an Engineering and Society Programme. (90820 642)

THE COMPUSMART BURSARIES FUND
Established in 1997 by JMG Compsmart in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries will be granted annually to McMaster students who demonstrate financial need and are enrolled in the Environmental Science Programme, the Environmental Studies Programme or an Engineering and Society Programme. (90701 663)

THE GERALDINE LORETTA COSFORD GENERAL BURSARIES
Established in 1999 by Geraldine Loretta Cosford (Class of ’35 and ’39). To be granted to students enrolled in the Arts and Sciences Programme, the Faculties of Business, Engineering, Humanities, Science and Social Sciences who demonstrate financial need and have attained a minimum CA of 7.0. (90870 866)

THE GEORGE AND MARGARET EDRUP BURSARY
Established in 1997 by Sandra Edrup in honour of her husband 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 programme in the Faculty of Science. (90701 663)

THE JAMES EDWARD GRADER MEMORIAL BURSARY
Established in 1964 by his sister. To be granted to a student specializing in Geology. Application should be made to the Department of Geology. (90513 839)

THE ASM AHAN HAF EZ MEMORIAL BURSARY
Established in 1997 by her family in memory of Asmahan Hafez. To be granted to a student enrolled in Level I of the Faculty of Science who demonstrates financial need. (90721 683)

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 who has attained a minimum Level II standing who demonstrates financial need. Preference to be given to a student registered in a co-op programme in the Faculty of Science. (90740 702)

THE NORMAN D. LANE BURSARIES
Established in 1996 by family and friends in honour of Dr. Norman D. Lane, distinguished geometer and member of the Department of Mathematics and Statistics from 1962 to 1987, and now Professor Emeritus. A variable number of bursaries to be granted to students enrolled in a programme in Mathematics who demonstrate financial need. (90610 434)

THE 3M CANADA INC. BURSARIES
Established in 1980, two bursaries to be granted annually; one to an M.B.A. student and one to a student in Business or Science. (90525 220)

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 programme in Geology or Chemistry. (90621 445)

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 Hrynizsak. To be granted to students in any programme who demonstrate financial need. Preference to be given to students enrolled in either the Faculty of Science or the Faculty of Engineering. (90765 727)

THE ERIC SCHLICHTING MEMORIAL BURSARY
Established in 1966 by his family, classmates and friends. To assist a student in a programme in Geology or other field of Science, in that order of preference. Application should be made to the Department of Geology. (90539 219)

THE STELCO UNDERGRADUATE BURSARIES
Established in 1998 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 Faculty of Business, Engineering or Science. Preference will be given to students who are enrolled in the Department of Materials Science and Engineering. (90644 493)

THE BROOKE P. TOWNSEND BURSARY
Established in 1998 by Brooke P. Townsend. To be granted to a student in any programme who has demonstrated financial need. Preference to be given to a female student enrolled in the Faculty of Science. (90670 467)

THE SAM AND IRENE WATSON BURSARY FUND
Established in 1988 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 Programme or any of the Faculties of Business, Engineering, Humanities, Science and Social Sciences. Value: $2,000 (90840 812)

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 Programme who demonstrates financial need. (90790 758)

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 programme who demonstrates financial need. (90844 816)

FACULTY OF SOCIAL SCIENCES

THE ANTHROPOLOGY BURSARY
Established in 1996 by faculty, alumni and other friends of the Department of Anthropology. To be granted to students who have completed Level II of a programme in Anthropology and who demonstrate financial need. Preference will be given to students entering Level III. (90579 403)

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 Programme, 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 629)

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 programme in Labour Studies. (90812 632)
THE SIDNEY L. BLUM BURSARY
Established in 1989 by friends and associates in memory of Sidney L. Blum. To be granted on the recommendation of the Director of the School of Social Work to any student in good standing in Levels I or II of the Bachelor of Arts/Social Work programme or Level II of the Bachelor of Social Work programme. (90506288)

THE DR. RICHARD A. BRYMER MEMORIAL BURSARY
Established in 1998, under the McMaster Student Opportunity Fund initiative, by Mrs. Isabelle Brymer in memory of her husband, Dr. Richard Brymer, who served as a faculty member in the Department of Sociology at McMaster University from 1969 to 1986. To be granted to a student enrolled in a programme in Sociology or Anthropology who demonstrates financial need. (90845617)

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. (90673470)

THE CANADA TRUST BURSARIES
Established in 1996 by Canada Trust In support of its belief that 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 Environmental Science Programme, the Environmental Studies Programme or the Engineering and Society Programme. (90667464)

THE CANON CANADA INC. - DIRECT SALES DIVISION BURSARIES
Established in 1997 by Canon Canada Inc. - OE Division In support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries will be granted annually to McMaster students who demonstrate financial need and are enrolled in the Environmental Science Programme, the Environmental Studies Programme or an Engineering and Society Programme. (90820642)

THE ELEANOR TURNER CARMENT BURSARY
Established in 1997 by Eleanor Turner Carment 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 programme in Women's Studies. (90884)

THE CLASS OF '46 BURSARIES
Established by the Class of '46 in honour of their 40th class reunion. To be granted to a student in a programme in Gerontology. (90821766)

THE GERALDINE LORETTA COSFORD GENERAL BURSARIES
Established in 1999 by Geraldine Loretta Cosford (Class of '35 and '39). To be granted to students enrolled in the Arts and Sciences Programme, the Faculties of Business, Engineering, Humanities, Science and Social Sciences who demonstrate financial need and have attained a minimum CA of 7.0. (90807866)

THE BEN F. DESROCHES BURSARIES
Established in 1996 as a tribute to Ben F. Desroches, Stelco employee from 1949 to 1956 and elected Municipal Councillor for Seltllef 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 programme in Labour Studies who demonstrate financial need. The value of this award shall not be less than $300. (96255419)

PATRICIA ANNE DICICCO MEMORIAL BURSARY
Established in 1988 this bursary is to be granted to a student or students enrolled in a programme which includes Gerontology as a major, who is a Canadian citizen or permanent resident and who exhibits financial need. (90517204)

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 Programme as a Tutor and, subsequently, a Senior Class Assistant. A variable number of bursaries will be granted annually to students enrolled in a Gerontology course who demonstrate financial need. (90646616)

THE WAYNE C. FOX BURSARIES
Established in 1989 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 programme at the Michael G. DeGroote School of Business. (90657853)

THE WILLIAM J. FULLER BURSARY
Established in 1996 in memory 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 1961. To be granted to students enrolled in any programme who demonstrate financial need. Preference to be given to students enrolled in a Labour Studies programme. (90601425)

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 programme in Labour Studies who demonstrate financial need. (90715677)

THE HAMILTON DIPRITB 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 Programme who demonstrates financial need. (90726688)

THE HAMILTON FOLLIES INC. (GERIOL FOLLIES) BURSARIES
Established in 1997 by the Hamilton Follies Inc. (Geritol Follies) under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in any programme who demonstrates financial need. Preference to be given to a student who has completed at least 30 units in the Gerontology programme. (90722284)

THE MARGARET HAREGRAVES BURSARIES
Established in 1997 by Susan Haregraves Walker in loving memory of her mother, Margaret Haregraves. A variable number of bursaries to be granted to students enrolled in Social Sciences and Humanities who demonstrate financial need. Preference will be given to mature, female students. (90722691)

THE JOHN B. ISBISTER BURSARY
Established in 1996 under the McMaster Student Opportunity Fund initiative, by John B. Isbister of Stoney Creek, valued member of the United Steelworkers of America for 39 years and honoured war veteran by Canada and the navy on four occasions. To be granted to a student enrolled in a programme in Economics who demonstrates financial need. (90605629)

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 to be granted to students in a degree programme in Economics who demonstrates financial need. (90742704)

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 programme 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. (90362)

THE KELLY DAWN LAPP MEMORIAL BURSARY
Established in 1997 by family and friends under the McMaster Student Opportunity Fund initiative in memory of Kelly Dawn Lapp who received her BA/BSW degree from McMaster University in 1996. To be granted to a student enrolled in the Social Work programme who demonstrates financial need. Preference will be given to a student who has volunteered or worked in programmes 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. (90847819)

THE LIONN BROTHERS BURSARY
Established in 1997 under the McMaster Student Opportunity Fund as a tribute to Brian, Bill and John Lionn, valued Stelco employees and members of the United Steelworkers of America. To be granted to a student enrolled in the Labour Studies programme who demonstrates financial need. (90756718)

THE JOHN A. 'JACK' MACDONALD BURSARIES
Established in 1998 as part of the Hamilton Sesquicentennial Celebrations in honour of John A. 'Jack' MacDonald for his 45 years of outstanding service and leadership to Hamilton and the region. A variable number of bursaries to be granted to students enrolled in a Political Science programme who demonstrate financial need and interest in extracurricular or community activities. (90616440)
THE EWAN MACINTYRE BURSARIES
Established in 1999 by the Social Work Alumni Branch, the Citizen Action Group, the Social Work Students Association, faculty (past and present), staff, friends, alumni, and various organizations associated with McMaster’s School of Social Work as a tribute to Dr. Ewan Macintyre for his 29 years of service to the School, including 12 years of service as the School’s Director. A variable number of bursaries to be granted to students who demonstrate financial need and are enrolled in a Bachelor of Social Work programme. (90681 857)

THE BOB MacKENZIE BURSARY
Established in 1996 under the McMaster Student Opportunity Fund initiative, by Bob MacKenzie, political organizer for the United Steelworkers Union and valued MPP for Hamilton East for twenty years. To be granted to a student enrolled in a programme in Labour Studies who demonstrates financial need. (90617 441)

THE JAMES HENRY MANNELLI BURSARIES
Established in 1989 by the Labours’ International Union of North America, Local 837 in honour of Enrico James Mannelli, LLUANA Canadian Director and Vice President and Local 837 President. Two bursaries to be granted to students enrolled in a programme in Labour Studies who demonstrate financial need. Preference to be given to students attaining a Sessional Average of at least 7.0 at the most recent review. (90619 443)

THE R. CRAIG McIVOR BURSARIES
Established in 1996 as a tribute to Professor R. Craig McIvor by his family, friends, colleagues and students. A variable number of bursaries to be granted to students enrolled in an Honours programme in Economics who demonstrate financial need. Preference to be given to students in Level II. (90662 446)

THE GARY JAMES MINNETT BURSARY
Established in 1993 in memory of Gary James Minnett (BA/BPE ’72) by his wife, Barbara, and daughters, Samantha and Erin. To be awarded to a student enrolled in a Kinesiology programme who demonstrates financial need. Preference will be given to a student enrolled in Kinesiology I from a high school in the Hamilton area. (90686 861)

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. (90566 329)

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 programme in Political Science who demonstrate financial need. (90848 820)

THE CAROLE AND ALEXANDER NAKEFF BURSARIES
Established in 2000 by Carole Anne Nakeff (Class of ’69) and Dr. Alexander Nakeff. A variable number of bursaries to be granted to students enrolled in a Political Science or Environmental Studies programme who demonstrate financial need. (90946)

THE NEWCASTLE CAPITAL MANAGEMENT INC. BURSARIES
Established in 1997 by Newcastle 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 programme who demonstrate financial need. Preference to be given to students who have participated in a conference or workshop on Gerontology. (90783 746)

THE MARION PEARCE BURSARIES
Established in 1993 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 programme who have demonstrated financial need. (90536 228)

THE PENVINC NERS BURSARIES
Established in 1996 by David Harnafood (Class of ’64). A variable number of bursaries to be granted to students enrolled in the penultimate year of an Honours programme in Economics who demonstrate financial need. (90676 473)

THE GEORGE PLUMB MEMORIAL BURSARY
Established in 1996 by Devia Plumb in memory of his father George Plumb. To be granted to a student enrolled in a programme in Gerontology who demonstrates financial need. Preference to be given to a mature student. (90636 465)

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 programmes in the country. To be granted to a student enrolled in a Gerontology programme who demonstrates financial need. (90798 761)

THE WILLIAM F. SCANDLAN BURSARIES
Established in the 50th anniversary year of the historical Stelco steel strike of 1946 by William F. Scandlan, valued member of the United Steelworkers of America for 44 years including terms as International Representative (1953) and Area Supervisor (1976 to 1986), Alderman to the City of Hamilton (1964-1976) and Regional Councillor (1973-1976). To be granted to students enrolled in any programme who demonstrate financial need. Preference to be given to students enrolled in a Labour studies programme. (90642 491)

THE GERALD AND VERA SIMPSON BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative. Preference will be given, if financial need is demonstrated, to the recipient of The Gerald and Vera Simpson Scholarship. (90886)

THE SOCIAL SCIENCES SOCIETY BURSARIES
Established in 1999 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 programme involving Anthropology, Economics, Geography, Gerontology, Labour Studies, Political Science, Psychology, Religious Studies, Social Work or Sociology and who demonstrate financial need. (90542 229)

THE F. H. SYMONS BURSARY
Established in 1993 under the McMaster Student Opportunity Fund initiative. Preference will be given, if financial need is demonstrated, to the recipient of The F. H. Symons Scholarship in Canadian Studies. (90882)

THE TRADEPORT INTERNATIONAL CORPORATION BURSARY
Established in 1997 by TradePort International Corporation, operator and developer of the John C. Munro Hamilton International Airport. To be granted to a student who has demonstrated financial need and is enrolled in a programme in Engineering, Geography, Business or Economics and has demonstrated an interest in a career in transportation. Preference to be given to a student who elects to undertake a fourth year thesis on a topic related to the study of transportation. (90646 496)

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 Science Programme or any of the Faculties of Business, Engineering, Humanities, Science and Social Sciences. Value: $2,000 (90640 812)

THE LYNN R. WILLIAMS BURSARY
Established in 1997 as a tribute to Lynn R. Williams (Class of ’44), International President of the United Steelworkers of America from 1983-1994, in recognition of his outstanding contributions to labour and labour studies. To be granted to a student who demonstrates financial need and who is enrolled in a programme in Labour Studies. The value of this bursary shall be no less than $300. (90793 756)

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 programme who demonstrates financial need. (90790 753)

THE ZONTA CLUB OF HAMILTON I BURSARIES
Established in 1997 by the Zonta Club of Hamilton I in support of the McMaster Student Opportunity Fund initiative and in the belief that all students, particularly women in non-traditional fields, should have the opportunity to pursue their educational goals. To be granted to a student who demonstrates financial need and is enrolled in the Faculty of Engineering, or in Business or is enrolled in a course in Indigenous Studies. Preference to be given to female students. (90550 097)
SUPPLEMENTARY BURSARY AID FOR AWARD RECIPIENTS

Several donors to McMaster's Undergraduate Scholarships Programme, 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 Programme:

• The Betty Taylor Campbell Scholarship
• The George P. Gilmore Memorial Scholarship
• The Gary Lautens Memorial Scholarship (90888)
• The Dr. F.A. Mirza Scholarship
• The Somerville Scholarships (90861)
• The T.H.B. Symons Scholarship in Canadian Studies (90862)
• The Tynowski Scholarship
• The Gladya A. Young Scholarship (90878)

TRAVEL BURSARY PROGRAMME

Travel bursaries assist students taking a McMaster course during the Spring/Summer semester which includes a placement requirement in a community outside Ontario. To apply, students must complete a McMaster bursary application, available in Gilmour Hall, Room 120, or on our website at: http://access.mcmaster.ca/financial_aid. Please note that travel bursaries do not apply to programmes 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 studies in the Faculty of Engineering. To be granted to a student who demonstrates financial need and is enrolled in the Bursary's Faculty of Engineering. Applications will be reviewed by the Director, Engineering and Society and the Office of Student Financial Aid & Scholarships. (90863)

EXCHANGE PROGRAMME BURSARIES

Bursary support may be available to students participating in McMaster approved exchange programmes. To be considered for this bursary support students must complete all application requirements for the exchange programme and submit an application to the Student Exchanges Officer, Gilmour Hall, Room 104 by their deadline.

Final decisions regarding potential bursary support are contingent upon acceptance to participate in an exchange. For further information about exchange programmes, please refer to International Study in the General Academic Regulations section and Student Exchanges in the Academic Facilities, Student Services and Organizations section of this Calendar.

THE BEALE-LINCOLN-HALL EXCHANGE PROGRAMME 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 Harry H. Hall, U.S.N. To be granted to a student who demonstrates financial need and is enrolled in a programme in Commerce, Biochemistry, Biology, English, Chemistry, Geology, History, Material Science, Mathematics, Physics, Engineering Physics or Religious Studies who is participating in one of McMaster's formal exchange programmes. Preference will be given to students who have demonstrated a lively interest in the humanities and the social implications of scientific developments. (90677 474)

THE CHANYIN 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 for Level III Commerce students or MBA students, who demonstrate financial need, and are participating in one of the international exchange programmes at the Michael G. DeGroote School of Business. (90862 844)

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. (90681 640)

Value: Up to a maximum of $16,000 for graduate, $10,000 for undergraduate, and $3,000 for summer students.

THE JAMES R.A. LANGS STUDENT EXCHANGE PROGRAMME 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 programme in Humanities who demonstrate financial need and who are participating in a formal McMaster Exchange Programme. (90655 503)

THE LIVV POLYTECHNIC STATE UNIVERSITY EXCHANGE PROGRAMME BURSARY

Established in 2000 by the Hamilton Ukrainian Community. To be granted to visa students who have demonstrated financial need and are attending McMaster as participants in the Livv Polytechnic State University Exchange Programme. (90864)

THE MCLAY BURSARY

Established in 1997 by David and Jean McIay under the McMaster Student Opportunity Fund initiative. To be granted to a student in any programme who demonstrates financial need and who is participating in one of McMaster's formal exchange programmes. Preference to be given to students who have been active in international clubs and associations. (90757 729)

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 programmes, who demonstrate financial need and who are enrolled in Level II or III of a programme. Preference to be given to international exchanges, for students from the Faculty of Engineering or the Faculty of Humanities with a GPA above 7.0 at the most recent review and who have shown leadership and involvement in university and/or community activities. (90849 821)

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 Programme. Preference will be given to a McMaster student participating in an international exchange programme. (90654 850)

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 Programme. (90779 742)

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<td>R. Craig McIvor Bursaries (SS)</td>
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<td>McMaster Men's Basketball Bursary (AT)</td>
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<td>McMaster Squash and Golf Bursary (AT)</td>
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<td>McMaster Students' Union Bursaries (U)</td>
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<td>McMaster University Association Bursary (U)</td>
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THE COMMUNITY CONTRIBUTION AWARDS

The Community Contribution Awards represent recognition for contribution to the University or the community-at-large. To be eligible for consideration for the Community Contribution Awards, full-time and part-time students must be registered in Level II, III, IV or V of a first baccalaureate programme. 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.

These awards have a corresponding bursary for which students may apply by demonstrating financial need.

The Community Contribution Awards are awarded by a Selection Committee based on an application. For application forms and information regarding deadlines, contact the Office of Student Financial Aid & Scholarships, Gilmour Hall, Room 120.

THE ATKINSON CHARITABLE FOUNDATION AWARD
Established in 1996 by The Atkinson Charitable Foundation. To be awarded to a student enrolled in any programme who participates in activities displaying superior leadership or innovative skills and demonstrates service to the community-at-large. Preference to be given to a student enrolled in the Faculty of Social Sciences. (80022 541)

THE AUBURN INDUSTRIAL SERVICES LTD. AWARDS
Established in 1997 by Auburn Industrial Services Ltd. To be awarded to students enrolled in any programme who display superior leadership or innovative skills. (80007 568)

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 programme 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. (90940)

THE BRINSON PARTNERS INC. AWARDS
Established in 1997 by Brinson Partners Inc. under the McMaster Student Opportunity Fund initiative. To be awarded to a student enrolled in any programme who demonstrates one or all of the following: service to McMaster University or the community-at-large; superior leadership or innovative skills; outstanding athletic or artistic participation. (80036 555)

THE ELVA CARROL AWARD
Established in 1996 by Elva Carrol. To be awarded to a student enrolled in any programme who demonstrates outstanding athletic participation. Preference to be given to an athlete who participates on an inter-university women's team and has demonstrated leadership and fair play. (80026 547)

THE EDWARD FRANK DAVIS MEMORIAL AWARD
Established in 1996 by bequest in memory of Edward Frank Davis. A variable number of awards to be granted to students entering any programme who have shown commitment and contribution to their community through volunteer work. (80000 500)

THE DAMIAN MIGUEL HEADLEY AWARDS
Established in 1997 by family and friends in memory of Damian Miguel Headley (Class of '98). To be awarded to students enrolled in any programme who demonstrate one or more of the following: service to McMaster University or the community-at-large; outstanding athletic or artistic participation or display superior leadership or innovative skills. (80050 576)

THE RUDY 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 programme who, in the judgment of a selection committee, has made a significant contribution to the university life of his/her fellow students. (80004 520)

THE JAMES A. JOHNSON COMMUNITY CONTRIBUTION AWARD
Established in 1997 by the McMaster Social Sciences Society Executive Committee to recognize Dr. James A. Johnson, Dean of Social Sciences (1989-97), for his outstanding service to the Faculty of Social Sciences and the broader campus community. One award to be granted annually to a Social Sciences student enrolled in a programme 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 undertaken within the Faculty of Social Sciences at McMaster University. (80023 542)

THE JUNIOR LEAGUE OF HAMILTON-BURLINGTON, INC. COMMUNITY CONTRIBUTION AWARD
Established in 1997 by the Junior League of Hamilton-Burlington, Inc. under the McMaster Student Opportunity Fund initiative. To be awarded to a student in any programme who has demonstrated service to the community-at-large. (80032 551)

THE MAC/WIAC 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 programme who demonstrates outstanding athletic participation. Preference will be given to students in Level II or higher who exhibit leadership and dedication to sport and prove to be an overall asset to their team(s). (80033 552)

THE ALLAN ROY STANTON MAC MILLAN MEMORIAL AWARDS
Established in 1996 by his family in memory of Allan John Royston MacMillan. Three awards to be granted upon completion of Level I: a) one to a student in any programme; b) one to a student enrolled in the Faculty of Business, Humanities or Social Sciences; and, c) one to a student enrolled in the Faculty of Engineering, Health Sciences or Science who, in the judgment of a selection committee, demonstrate qualities of innovation, leadership and service to the community through participation in campus and community programmes including athletics. (80012 531)

THE ROBERT JOHN MORRIS AWARDS
Established 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 programme in Engineering, and three to be granted to students upon completion of Level II or higher of a programme in Engineering Physics who, in the judgment of the appropriate selection committee in the Faculty of Engineering, have demonstrated leadership or innovative skills in the field of Engineering or, through their participation in campus and community activities, have had a significant influence on the lives of Engineering students at McMaster University. (80024 543)

THE HELEN K. MUSSALEM AWARD
Established in 1996 by Dr. Heltn K. Mussalem (C.C., B.N., Ed.D., LL.D (Queen's), D.Sc., D.S.J., F.R.C.N., M.R.S.H,) to stimulate interest in professional nursing affairs through participation in meetings, conferences, professional associations and societies related to the field of nursing. A variable number of awards granted to students who have completed Nursing I and who, in the judgment of the School of Nursing, have demonstrated notable involvement in extracurricular activities. (80009 528)

THE ONCOLOGY NURSING PROGRAMME AWARDS
Established in 1997 in recognition of the contribution of McMaster students. To be awarded to students enrolled in the Oncology Nursing Programme 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 Programme. (80040 566)

THE PIONEER GROUP INC. LEADERSHIP AWARDS
Established in 1997 by the Pioneer Group of Companies Inc. in recognition of the community contributions of McMaster students. A variable number of awards to be granted to students enrolled in any programme who, in the judgment of a selection committee, have demonstrated leadership and community service. (80025 544)

THE GORDON AND JANE PRICE AWARDS
Established in 1997 by their sons in honour of Gordon and Jane Price. To be awarded to students in the Arts and Science programme or in the Faculty of Social Sciences who display leadership service to the community-at-large, outstanding athletic participation or who display superior leadership and innovative skills. (80048 574)

THE GORDON RAYMOND AWARD
Established in 1996 by the McMaster Association of Part-time Students and other friends and colleagues in honour of Gord Raymond in recognition of his 27 years of service to McMaster University including 15 years as Coordinator of Part-time Degree Studies. To be awarded to the part-time student who, in the judgment of a selection committee, demonstrates enthusiasm for life-long learning and/or had an influence on the lives of part-time students. (80011 590)
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 programme who demonstrates commendable service to the community-at-large. Preference to be given to a student enrolled in an Environmental Science Programme. (80044 570)

THE ROTARY CLUB OF BURLINGTON CENTRAL COMMUNITY CONTRIBUTION AWARD
Established in 1997 by the Rotary Club of Burlington Central in keeping with Rotary’s mission to foster the ideal of service within the community. To be awarded to a student enrolled in any programme who demonstrates involvement in extra-curricular or community activities. Preference will be given to a student from the Burlington area. (80041 567)

THE ROTARY CLUB OF HAMILTON A.M. COMMUNITY CONTRIBUTION AWARD
Established in 1997 by the Rotary Club of Hamilton A.M. in keeping with Rotary’s mission to foster the ideal of service within the community. To be awarded to a student enrolled in any programme who demonstrates outstanding service to the community-at-large. (80042 558)

THE ROTARY CLUB OF HAMILTON COMMUNITY CONTRIBUTION AWARD
Established in 1997 by the Rotary Club of Hamilton in keeping with Rotary’s mission to foster the ideal of service within the community. To be awarded to a student enrolled in any programme who demonstrates involvement in extra-curricular or community activities. Preference will be given to a student enrolled in an Environmental Science Programme. (80043 559)

THE SATURN OF HAMILTON EAST ACHIEVEMENT AWARDS
Established in 1996 by SATURN of Hamilton East. To be awarded to a student enrolled in any programme who demonstrates superior leadership or innovative skills. Preference to be given to a student enrolled in the Faculty of Engineering who display superior leadership or innovative skills. Preference will be given to a student enrolled in Materials Engineering. (80051 577)

THE ALLAN AND JOY WILLIAMS AWARD
Established in 1996 by Mary Williams (Class of ’87), Anne Williams (Class of ’89) and Ellen and Dan Walker in honour of their parents. To be awarded to a student enrolled in any programme who, in the judgment of the Department of English, has made a notable contribution to campus and community life and demonstrates a lively interest in English studies. (80019 539)

THE ZENON ENVIRONMENTAL AWARDS
Established in 1997 by Zenon Environmental Inc. in recognition of the contributions of McMaster students. To be awarded to students enrolled in the Faculty of Engineering who display superior leadership or innovative skills. Preference to be given to students enrolled in the Manufacturing Engineering and Society programme. (80051 577)

THE ZOOM MEDIA AWARDS
Established in 1997 by Zoom Media Inc. in support of McMaster students. A variable number of awards to be granted to students enrolled in any programme who, in the judgment of a selection committee, have demonstrated superior leadership and innovative skills through participation in either university and/or community activities. (80029 548)

THE ROGER TRULL AWARD
Established in 1997 by friends and colleagues in recognition of Roger Trull’s ten years of outstanding service and commitment to the Advancement area and the McMaster University community in general. The award will be granted annually to a student who demonstrates solid academic standing and superior leadership in extra-curricular activities in the McMaster community. (80053 579)

THE SAM WATSON MEMORIAL AWARD
Established in 1996 by his wife Irene M. Watson and friends of Samuel Watson. One or two awards to be granted to students enrolled in a programme in Arts and Science who, in the judgment of the Arts and Science Programmes Admissions, Awards and Review Committee, have made a notable contribution in the community-at-large through participation in extra-curricular activities. (80022 546)

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 is involved in activities displaying superior leadership or innovative skills. Preference will be given to a student enrolled in Materials Engineering. (80047 573)

THE MEENA AND NARESH SINHA AWARD
Established in 1996 by Meena and Naresh Sinha. To be awarded to a student enrolled in the Faculty of Science who, in the judgment of a selection committee, has demonstrated leadership, innovativeness and/or community service. Preference will be given to students entering Level III or IV. (80020 539)

THE SCIENCE CLASS OF '97 LEGACY AWARD
Established in 1997 by the Science Class of '97. To be awarded to a student enrolled in the Faculty of Science who, in the judgment of a selection committee, has demonstrated leadership, innovativeness and/or community service. Preference will be given to students entering Level III or IV. (80030 549)

THE LORNA AND DAVID SOMERS AWARD
Established in 1997 by Lorna Somers (Class of '81) and David Somers (Class of '88) under the McMaster Student Opportunity Fund initiative. To be awarded to a student enrolled in the Faculty of Humanities who, in the judgment of a selection committee, has demonstrated one or more of the following: service to McMaster or the community-at-large; superior leadership or innovative skills; outstanding athletic or artistic participation. Preference will be given to a student enrolled in Art and Art History. (80031 550)

THE ADAM SUDAR PRINTMAKING AWARD
Established in 1997 in memory of Adam Sudar by his friends, this award fund will be used to assist students entering Level III or IV of the Honours Art Programme at McMaster who, in the judgment of the School of the Arts, have demonstrated outstanding achievement or promise in the area of printmaking, and who have contributed significantly to the School's cultural presentations within the community. (80044 559)

THE STEPHEN F. H. THRELKELD AWARD
Established in 1997 by friends and colleagues of Stephen F. H. Threlkeld. To be awarded to a student entering Level IV of an Honours programme in Biology who has demonstrated leadership or innovative skills through participation in either university and/or community activities. Preference will be given to students who have taken at least nine units of Genetics courses. (80026 545)

THE TKK INC. AWARDS
Established in 1997 by TKK Inc. in recognition of the contributions of McMaster students. To be awarded to students enrolled in the Faculty of Engineering who demonstrate outstanding athletic participation and display superior leadership or innovative skills. (80046 572)
UNDERGRADUATE ACADEMIC AWARDS

WEB ADDRESS: http://access.mcmaster.ca/financial_aid
E-MAIL ADDRESS: awards@mcmaster.ca

Director, Student Financial Aid & Scholarships
Elizabeth Seymour
For information, please contact:
Office of Student Financial Aid & Scholarships
Gilmour Hall, Room 120
McMaster University
Hamilton, Ontario, L8S 4L8
Telephone: (905) 525-9140, ext. 24319

The University Senate, acting on behalf of generous benefactors and donors to the University, bestows academic awards on entering, in-course and graduating students to encourage and recognize high levels of scholarship. In recognizing such scholastic achievement, the University requires all recipients of academic awards to fulfill a set of general conditions, in addition to meeting the particular terms attached to individual academic awards. The general conditions and terms have been established to ensure equity in competition and a high academic standing. Any interpretation of the conditions attaching to academic awards is solely the prerogative of the Undergraduate Council.

TERMINOLOGY

An explanation of the terminology used to describe Academic Awards is provided in the sections of the Calendar described below. Please refer to the Glossary section of this Calendar for definitions of Continuing Students, Cumulative Average (CA), Level, Full-time Students, Post-Degree Students, Review and Reviewing Period.

Baccalaureate Degrees are those listed in the Degrees and Programmes 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 Load is calculated for Undergraduate In-Course Academic Awards and is the number of units specified in the Calendar for an individual level of a programme (e.g., Electrical Engineering, Level II: 37 units). If the Calendar does not specify the programme requirements by individual levels, divide the total units for all levels by the number of levels, discarding the remainder. Full-time students must carry a full load of McMaster courses to be eligible for Undergraduate In-Course Academic Awards. A full load is not required to be eligible for graduate awards.

Graduand Awards are offered to eligible students on the completion of their graduating session.

In-Course Awards are granted to eligible students based on academic achievement in other than their graduating session.

Part-time Studies Awards are referred to under Category C. To be eligible for these awards, students must have been registered in at least 50% of all units attempted at McMaster, while fulfilling the University's definition of a part-time student as described in the Glossary section of this Calendar.

Session, for scholarship purposes, refers to the Fall/Winter session. The Fall/Winter session is the period from September to April as defined in the Sessional Dates section of this Calendar.

Full-load Average (FA) is the weighted average computed for Undergraduate In-Course Academic Awards. It is based on the successful completion of a full load of course units, as defined by programme and level. It includes only those courses taken in the Fall/Winter session. Overload courses (courses over and above full load) and Extra courses taken during the Fall/Winter session are included in the Full-load Average.

Reviewing Period for scholarship purposes, normally refers to work completed during the Fall/Winter session. Please refer to the Glossary section of this Calendar.

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 programmes at McMaster University. Continuing Students, Post-degree Students, and students registered in the McMaster Medical programme are not eligible for these awards.

2. To ensure a wide distribution of the limited number of awards, there are restrictions on the number of awards that a student may receive. An eligible student may be granted:
   a) travel scholarships and awards such as books and medals; and
   b) awards continued from a previous year (including entrance scholarships), except as provided by the particular terms of an award; and
   c) either one award greater than or equal to the value of a Senate Scholarship ($900 in 2000-2001) and one award of less than the value of a Senate Scholarship, or two awards of less than the value of a Senate Scholarship. When a student is named the winner of an award but may not retain it because of the conditions listed above, the next eligible student will be granted the award.

3. The monetary benefits of travel scholarships, awards won by graduating students, and awards such as books and medals will be disbursed directly to the student.

4. The monetary benefits of other awards will be disbursed only if the recipient is registered in a baccalaureate degree programme, or a specific programme when explicitly required by terms of award, at McMaster University in the next Fall/Winter session after the award was earned and will be allocated in the following manner:
   a) the monetary benefits of award(s) will be credited to the student's academic fees account up to the value of the academic fees prescribed for a full load of work as specified in the Calendar for the level and programme in which the student is registered.
   b) the monetary benefits of award(s) which exceed the value of academic fees as prescribed for a full load of work for the level and programme in which the student is registered will be credited to one or more of the student's other University accounts (e.g., residence and/or bookstore, etc.). Amounts in excess of the student's monetary obligation to the University will be disbursed directly to the student in November or December.
   c) either one award greater than or equal to the value of a Senate Scholarship, or two awards of less than the value of a Senate Scholarship, or two awards of less than the value of a Senate Scholarship, or two awards of less than the value of a Senate Scholarship.

5. Awards credited to the student's academic fees account are not refundable in any circumstances.

6. Awards credited to the student's academic fees account may be used only to defray academic fees for baccalaureate degree courses taken during the Fall/Winter session in which the account is credited with the awards. Students wishing to defer the benefits of an award to a later session should apply to the Office of Student Financial Aid & Scholarships. Approval of applications is not automatic, and deferments are not normally granted for more than one calendar year.

7. Students holding four-year, full-fees scholarships who choose to accelerate their programme 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 when there are too few suitable candidates. The University also reserves the right to withdraw, or amend the terms of, any award.

9. The particular terms for University Academic Awards are listed in TERMS OF AWARDS.

CATEGORIES OF AWARDS

1. Awards for Entering Students (page 318)

   Awards Not Requiring an Application:
   • McMaster Scholar Awards
   • Awards Not Requiring an Application:
     • The Honour Awards
     • Music Awards
     • Other Awards
     • Awards Open to International Students

2. In-Course, Graduand and Second Degree Awards (page 319)

3. Summary of In-Course and Graduand Scholarships and Prizes by Faculty (page 337)

INDEX OF AWARDS (page 345)

To find a specific award, use the Index of Awards.
TERMS OF AWARDS

Awards for Entering Students (A)

1. These awards are provided exclusively for students qualifying for admission to Level I of a first baccalaureate degree in a full load programme in the Fall/Winter session. Note: Students who have registered at a post-secondary institution after or prior to their last year of secondary school will not be considered for an entrance award.

2. Canadian students (including permanent residents) are eligible for any entrance award regardless of where they complete their secondary school education. Any other student completing the final year of secondary school in Canada is also eligible, including prospective students entering Level I. International students studying outside Canada are not eligible for any entrance awards administered by the Office of Student Financial Aid & Scholarships.

3. To be considered for an entrance award, students must obtain at least a first-class average in the secondary school credits required for University admission. All students who meet this requirement and who apply for admission to the University not more than two years after completion of their secondary school studies will automatically be considered as applicants for entrance awards, unless a separate application is explicitly required by the particular terms of the award. Note: Summer courses completed after June 30, 2002 will not be used to calculate the final average for scholarship purposes.

4. Where explicitly required by the particular terms of an award, recipients must register and remain registered in a full course load in the Faculty/Programme specified. Registration in, or transfer to, another programme of study at any time may result in forfeiture of the award. Students are advised to consult with the Office of Student Financial Aid & Scholarships about making any changes to their programme of study or course load.

5. Students who withdraw or drop units before November 8, 2002, which is the last date for withdrawal without failure or default, will lose the scholarship.

6. In addition to meeting the General Conditions, entrance award recipients will begin their studies in the next Fall/Winter session. Students wishing to defer the benefits of an award to a later session should apply to the Office of the Registrar (Admissions) for deferral of both admission and scholarship. Approval of applications is automatic, and deferrals are not normally granted for more than one calendar year.

7. Unless otherwise specified, recipients may retain an entrance award which provides for awards beyond Level I while registered in a first baccalaureate degree programme and until graduation or for four years (five years if registered in a five-level programme), whichever is less. In order to retain such awards, students must complete during each successive Fall/Winter session at the University a full load corresponding at least to:
   a) either the minimum number of units specified in the Calendar for their level and programme;
   b) or, if the Calendar does not specify the programme work by individual levels, the average number of units per level; and must maintain a Full-load Average of at least 8.0 and obtain no failures.

Awards for Full-Time, In-Course Students (Full-Load) (B)

These awards are based on competition across the University or within a Faculty or programme.

1. These awards, which are granted in June or November, are provided exclusively for first baccalaureate degree students registered for a full load qualifying on the basis of work included at the May review (or deferred examinations resulting therefrom) in other than graduating session. Students choosing to graduate at the subsequent Fall convocation forfeit any awards that they have been named to receive.

2. In addition to meeting the General Conditions, a student must complete, during the Fall/Winter session immediately prior to the May review, a full load of work corresponding at least to:
   a) either the minimum number of units specified in the Calendar for their level and programme;
   b) or, if the Calendar does not specify the programme work by levels, the average number of units per level; and
   c) a Full-load Average of 8.0 and no failures.

3. For students who complete a full load of work in the Fall/Winter session as described above a Full Load Average will be computed, which is the weighted average of the grades in all courses taken during that session. Overload courses (courses over and above a full load) and Extra courses taken during the Fall/Winter session are included in the Full-load Average. The Full-load Average will be used to determine academic standing for the awards listed below, unless otherwise stated in the terms of a particular award.

4. The Full-load Average will be used to break any tie in the competition or awards which are based on another criterion.

5. Co-op/internship students are eligible for full-course load awards provided they meet the minimum course load requirement for their programme of study as defined in the Calendar.

Awards for Part-Time In-Course Students (Part-Time Studies) (C)

The following awards are based on competition across the University or within a Faculty or programme.

1. These awards, which are granted in June or November, are provided exclusively for part-time first baccalaureate degree students who qualify on the basis of work included at the most recent review in other than their graduating session.

2. In addition to meeting the General Conditions, a student must obtain, at the most recent review, a Cumulative Average of at least 8.0 and no failures.

3. The Cumulative Average will be used to break any tie in the competition for awards.

Specific Achievement Awards for Full-Time and Part-Time Students (D)

The following awards are granted based on competition across the University or within a Faculty or programme.

1. These awards, which are granted in June or November, are provided for either full-time or part-time first baccalaureate degree students qualifying on the basis of achievement during the Spring/Summer or Fall/Winter sessions immediately preceding the May review (or deferred examinations resulting therefrom). 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.

4. An award name ending with an * indicates that the award is open to both full-time and part-time second baccalaureate degree students.

Awards for Graduating Students (E)

The following awards are based on competition across the University or within a Faculty or programme.

1. These awards, which are granted in May, are provided exclusively for graduating students qualifying on the basis of achievement in their first baccalaureate degree programme.

2. In addition to meeting the General Conditions, a student must obtain:
   a) Cumulative Average of at least 8.0;
   b) no failures in the courses last taken equal to:
      i) either the number of units specified in the Calendar for the final level of their programme;
      ii) or, if the Calendar does not specify the programme work by individual levels, the final 30 units of work.

Awards for Second Baccalaureate Degree Students (F)

The following awards are granted based on competition across the University or within a Faculty or programme.

1. These awards, which are granted in June or November, are provided for either full-time or part-time second baccalaureate degree students qualifying on the basis of achievement during the Spring/Summer or Fall/Winter sessions immediately preceding the May review (or deferred examinations resulting therefrom).

2. In addition to meeting the General Conditions, a student must obtain, at the most recent review, a Cumulative Average of at least 8.0 and no failures.

3. The Cumulative Average will be used to break any tie in the competition for these awards.
AWARDS FOR ENTERING STUDENTS

AWARDS REQUIRING AN APPLICATION

◆ The McMaster Scholar Awards

These are McMaster’s most prestigious scholarships. Students must demonstrate strong academic achievement (average of 90% or higher) and a variety of extracurricular activities, and submit a 500-word essay for consideration. We offer:

- Seven McMaster Scholar Awards (one per Faculty or programme) of $20,000 over four years plus a guaranteed room in residence and regular meal plan in first year. The McMaster Scholar Award may be won in conjunction with the renewable Honour Award.
- The McMaster Scholar Award is the only entrance award requiring an application. The application deadline is February 14, 2002. Please note that McMaster Scholar recipients must have a minimum final admission average of 85% to retain a Scholar Award.

The McMaster Scholar Awards are supported by the following:

- THE ASHBAUGH SCHOLARSHIPS
  Established in 1983 by bequest of Frederick K. Ashbaugh of St. Petersburg, Florida, in memory of Mary Eliza Kingston. (20026)
- THE DUNDAS SCHOLARSHIPS
  Established in 1979 by bequest of Mr. and Mrs. Charles W. Dundas donated anonymously. A variable number of scholarships to be awarded to students from Dundas and surrounding area entering a full-time programme of study. (20019)
  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 GEORGE AND NORA ELWIN SCHOLARSHIPS
  Established in 1979 by bequest of George and Nora Elwin of Hamilton. (20029)
- THE EILEEN GRAY FALRLEY SCHOLARSHIP
  Established in 1998 by Eileen Gray Farley (Class of ’43 and winner of the D.E. Thomson Scholarship) in memory of Mr. D.E. Thomson who exemplified a generous spirit of giving throughout his life and established the D.E. Thomson Scholarship in 1999. To be awarded every four years to a student entering the Faculty of Humanities. (2002 824)
- THE MOUNTOL FAT ENTRANCE SCHOLARSHIP
  Established in 1980 from funds originally subscribed by the Alumnae of Moulton College during the years 1946 to 1949. To be awarded to a woman student entering a full-time programme of study. (20013 1 17)
- 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 programme of study. (20040)

AWARDS NOT REQUIRING AN APPLICATION

◆ The McMaster Honour Awards

McMaster University will reward students with high academic standing in their final year of secondary school based on their final admission average.

- THE CHARLES MURRAY BALL ENTRANCE SCHOLARSHIPS
  Established in 1993 by bequest of May Alexandra Ball in memory of her brother. A variable number of scholarships to be awarded to students entering a full-time programme of study. (20044)
- THE CHANCELLOR’S SCHOLARSHIPS
  (FACTORY OR PROGRAMME-SPECIFIC)
  A variable number to be awarded to students entering a Level I Programme in the Faculties of Business, Health Sciences, Humanities and Social Sciences. (20041)
- THE COCA-COLA SCHOLARSHIP
  Established in 1998 by Coca-Cola Bottling Ltd. To be awarded to a student entering a full-time programme of study. (20010 801)
- THE HELEN M. CURREY SCHOLARSHIP
  Established in 1941 by bequest of Helen Maud Currey of Drumbo, Ontario. To be awarded every four years; the 15th award was made in 2000. (20009)
- THE FORTINOS SCHOLARSHIP
  Established in 1930 by John Fortino. To be awarded to an outstanding full-time student entering the School of Business. (20034 233)
- THE H.P. FRID SCHOLARSHIP
  Established in 1982 by the family of H.P. Fried in memory of her. To be awarded to a promising student entering a full-time programme of study. (20020 062
- 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. (20018 877)
- THE DR. HARRY LYMAN HOOKER ENTRANCE SCHOLARSHIPS
  Established in 1981, and resulting from the bequest of Dr. H.L. Hooker. (20001)
- THE GOVERNORS’ SCHOLARSHIPS
  A variable number to be awarded to students entering a full-time programme of study. (20007)
- 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. (2002 1 078)
- THE NELLIE P. HOGG SCHOLARSHIP
  Established in 1965 by bequest of Nellie P. Hogg of Hamilton. One scholarship to be awarded to a woman student entering a full-time programme of study. (20014)
- THE LLOYD MEMORIAL SCHOLARSHIP
  Established in 1956 in memory of Henry Hayes and Lizzie Lloyd by their children. OAC (or U or U/C) subjects to be included are: Physics, Chemistry, two credits of Mathematics, and either Biology or a third credit of Mathematics. (20015)
- 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. (20012)
- THE ALBERT MATTHEWS SCHOLARSHIP
  Established in 1920. OAC (or U or U/C) subjects to be included are Latin and a language other than English. (20004)
- THE HAROLD MATTHEWS MEMORIAL SCHOLARSHIP
  Established in 1917. OAC (or U or U/C) subjects to be included are French and either German or Spanish. (20008)
- THE ISABELLA CAMPBELL McNEE SCHOLARSHIP
  Established in 1915 and augmented in 1926. OAC (or U or U/C) subjects to be included are three credits of Mathematics and Physics. (20010)
- THE ALVIN I. OGLIVIE SCHOLARSHIPS
  Established in 1984 by bequest of Alvin I. Oglivie of Hamilton. Five scholarships to be awarded to students entering a full-time programme of study. (20017)
- THE LILLIAN AND LEROY PAGE SCHOLARSHIP
  Established in 1982 by donation of the Lillian and Leroy Page Foundation for a student from the Hamilton area entering the Faculty of Science. (20030)
- THE D.E. THOMSON SCHOLARSHIP
  Established in 1909 and augmented in 1915. OAC (or U or U/C) subjects to be included are English and either Latin or French. (20006)
- THE TYNOWSKI SCHOLARSHIP
  Established in 1989 by the University, friends and colleagues of Olga Tynowski, for her outstanding contributions to McMaster University during 40 years of service. To be awarded to an outstanding student entering a full-time programme of study. (20003)
  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 WALLINGFORD HALL ENTRANCE SCHOLARSHIP
  Established in 1983. To be awarded to a student entering a full-time programme of study.
- THE WHEELER SCHOLARSHIP
  Established in 1915. OAC (or U or U/C) subjects to be included are: History, English and a language other than English. (20016)

◆ Music Awards

- THE JOAN FRANCES BOWLING ENTRANCE SCHOLARSHIPS
  Established in 1997 from the estate of Marie Bowling in memory of her daughter, Joan Frances Bowling. Two scholarships to be awarded to students entering Music, the only Music programme in the School of the Arts, who have demonstrated excellence in classical music.
  Value: $1,800 each (20059 559)
THE MERRILL FRANCIS GAGE ENTRANCE SCHOLARSHIP
Established in 1961 by the Ontario Professional Engineers Foundation for Education. Two scholarships to be awarded to students entering the Faculty of Engineering.
Value: $1,200 each (20027 232)

THE A.H. ATKINSON EDUCATION FUND HONOUR AWARD
Established in 2001 by the A.H. Atkinson Education Fund. To be awarded to a student entering any programme.
Value: $2,000 (20124)

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 programme.
Value: $1,000 each (20116)

THE COCA-COLA MERIT AWARDS
Established in 1998 by Coca-Cola Bottling Ltd. Two awards to be granted to students entering any programme.
Value: $1,000 each (20101 802)

THE DEVILLIERS - MAHAFFY MERIT AWARDS
Established in 1991 in memory of Nina De Villiers and Leslie Mahaffy of Burlington, by contributions from the local community and the employees of several area companies including Searle Beecham, Monsanto and the Royal Bank. Two scholarships to be awarded to outstanding students graduating from a secondary school in the Halton Region; (a) one to a student entering a full-time programme 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.
Value: $1,000 each (20039 251)

THE CATHRYN E. KAAKE MERIT AWARD
Established in 1988 in memory of Cathryn E. Kaake (Class of ’78) by family and friends.
Value: $1,000 (20022 010)

THE RAYMOND C. LABARGE MERIT AWARDS
Established in 1990 in memory of Raymond C. Labarge (Class of ‘36) of Ottawa.
Value: $1,000 (20035 235)

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 programme of study who presents an outstanding final admission average.
Value: $2,000 (20111)

THE AMELIA MORDEN, PAARDEBURG CHAPTER, IODE, SCHOLARSHIP
Established in 1968 by the Paardeburg Chapter, IODE. To be awarded to a first-year student from a secondary school in Hamilton who attains a good standing in his or her final year of secondary school.
Value: $200 (200032682)

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.
Value: $6,000 each ($3,000/yr) (20109 878)

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.
Value: $1,000 each (20024 139)

OTHER AWARDS NOT REQUIRING AN APPLICATION

THE ANGUS A. PRINCE MERIT AWARDS
Established in 1982 from the estate of Angus A. Prince of Hamilton. To be awarded to a student entering any programme.
Value: $1,200 (20031)

THE FRANKTHOROFSON MEMORIAL SCHOLARSHIPS
Established in 1978 in memory of Professor Frank Thorofson, 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 outstanding musical proficiency.
Value: $1,100 each (20026)

OTHER AWARDS NOT REQUIRING AN APPLICATION

THE DAVE HYLAND AWARD
Established in 1982 by Dave and Rowena Hyland in memory of Dave Hyland who was a student in the Mechanical Engineering programme.
Value: $2,000 (20011)

THE CATHRYN E. KAAKE MEMORIAL SCHOLARSHIP
Established in 1988 in memory of Cathryn E. Kaake of Hamilton. To be awarded to a student entering the final year of a programme in or related to Music.
Value: $1,000 (20022 010)

THE E. KAAKE MEMORIAL SCHOLARSHIP
Established in 1982 in memory of E. Kaaake of Hamilton, by contributions from family and friends.
Value: $800 (20027 235)

THE M. L. TAYLOR MEMORIAL SCHOLARSHIP
Established in 1982 in memory of Mrs. M. L. Taylor in memory of her husband, by contributions from family and friends.
Value: $1,000 (20022 010)

THE WILLIAM THOMPSON MEMORIAL SCHOLARSHIP
Established in 1982 in memory of William Thompson of Hamilton by contributions from family and friends.
Value: $1,000 (20022 010)

THE DAVE G. WEAVER MEMORIAL SCHOLARSHIP
Established in 1982 in memory of Dave G. Weaver of Hamilton by contributions from family and friends.
Value: $1,000 (20022 010)

THE 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.
Value: $1,000 each (20024 139)

LIST OF IN-COURSE, GRADUAND AND SECOND DEGREE AWARDS

NOTE
An award name ending with an * indicates that the award is open to both full-time and part-time second baccalaureate degree students.

THE ACI (ONTARIO CHAPTER) SCHOLARSHIP
Established in 1982 by the American Concrete Institute (Ontario Chapter). To be awarded to a student entering Level IV of the Civil Engineering programme who, in the judgment of the Department of Civil Engineering, has demonstrated outstanding academic achievement and knowledge of concrete technology.
Value: $300 (30215 319)

THE AIR LIQUIDE CANADA INC. SCHOLARSHIPS
Established in 1999 by Air Liquide Canada. Two scholarships to be awarded to students in a Level II or III programme in Chemical Engineering, Material Sciences and Engineering and/or Mechanical and Manufacturing Engineering who, in the judgment of the Faculty of Engineering, have demonstrated outstanding academic achievement. The recipients must attain a minimum Sessional Average of 9.5 at the most recent Fall/Winter session.
Value: $1,250 each (30258)

THE A.G. ALEXANDER SCHOLARSHIPS
Established in 1938 and augmented in 1946 by Sir Douglas Alexander, and members of his family; in memory of Archibald Grieg Alexander. Two scholarships to be awarded to students who have completed Level I and 30 to 75 units on the basis of excellence in an Honours programme 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)

THE W.K. ALLAN MEMORIAL SCHOLARSHIP
Established in 1994 in memory of William Kellock Allan (Class of ’31) by his wife. To be awarded to a student entering the final level of a programme in Mathematics or Physics who attains the highest Full-load Average.
Value: $900 (30221 355)
### THE CAMERON D. ALLEN BOOK PRIZE
Established in 1978 in memory of Cameron D. Allen. To be awarded to a student graduating from an Honours programme in Geography who, in the judgment of the School of Geography and Geology, shows outstanding achievement in studies in climatology.

Value: $150 (50009 267)

### 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: $400 (60000)

### 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 2HC3 (Canada).

Value: $175 (40001 004)

### THE ALUMNI SOCIAL WORK PRIZE
Established in 1991 by the Social Work Branch of the McMaster Alumni Association. To be awarded to the student who attains the highest standing in SOC WORK 2B33.

Value: $75 for books (40056 275)

### THE AMBASSADOR OF SPAIN BOOK PRIZE
Established in 1982. To be awarded to a graduating student in a programme in the Department of Modern Languages and Linguistics who, in the judgment of the Department, has achieved notable proficiency in Spanish. (50002 005)

Value: $1,500 (30023 658)

### 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 programme in Commerce who, on the basis of scholarship and leadership, is judged to be the outstanding member of the class. (50014 006)

### THE AMERICAN-STANDARD PRIZE
Established in 1978. To be awarded to the student in the Ceramics stream of the Materials Engineering programme who attained the highest grade in GEO 2K03.

Value: $75 for books (40002 007)

### THE ANATOMY PRIZE
Established in 1992. To be awarded to a student who has completed Level III (or equivalent), has studied biological structure and who, in the judgment of the Education Programme in Anatomy, has demonstrated excellence in Anatomy.

Value: $400 and a medal (40088 847)

### THE ANTHROPOLOGY PRIZE
Established in 1982. To be awarded to the graduating student who has completed a programme in Anthropology primarily on a part-time basis and who, in the judgment of the Department of Anthropology, has demonstrated outstanding academic achievement.

Value: $50 (50004 789)

### THE HERBERT S. ARMSTRONG MEMORIAL FUND
Established in 1997 in memory of Herbert S. Armstrong. To be awarded to a student who has completed at least 30 units beyond Level I who, in the judgment of the School of Geography and Geology, has achieved notable academic standing and who has made a significant contribution to university life through extra-curricular activities.

Value: $75 for books (30234 658)

### THE ARTS & SCIENCE PROGRAMME BOOK AWARD
Established in 1985. To be awarded from time to time to an Arts & Science student who, in the judgment of the Arts & Science Programme Awards Committee, has demonstrated outstanding academic achievement in both arts and science.

Value: $75 (40076 390)

### THE EDGAR R. ASHALL SCHOLARSHIP
Established in 1965 by bequest of his wife, Edith M. Ashall.

Value: $800 (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 30-85 units of the Honours Materials Science or Materials Engineering programme and who attain the highest Full-load Average (at least 9.5). Value: $1,000 each (30003 003)

### THE ASSOCIATION OF PROFESSIONAL ENGINEERS GOLD MEDAL
Established in 1961 by the Ontario Professional Engineers Foundation for Education. To be awarded to the gradand of a programme in Engineering who attains the highest Cumulative Average. (50005 008)

### THE ASSOCIATION OF PROFESSIONAL ENGINEERS UNDERGRADUATE SCHOLARSHIPS
Established in 1961 by the Ontario Professional Engineers Foundation for Education. Four scholarships: two to be awarded to students with the highest Cumulative Average after completion of Engineering I, and two to be awarded to students with the highest Full-load Average in engineering programmes after completion of Engineering I and 35-80 units.

Value: $800 each (30006)

### THE A.H. ATKINSON PRIZE
Established in 1980 by Atkinson Engineering Consultants Limited. To be awarded to the student in a Civil Engineering programme who achieves the highest average in CIV ENG 3G03 and 3J04, taken in one session.

Value: $200 (30001 009)

### 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 (30277 1544)

### THE MAQBOOL AZIZ MEMORIAL SCHOLARSHIP
Established in 2001 by family, friends and colleagues in memory of Maqbool Aziz. Professor of English from 1969 to 2000. To be awarded to a student in an English programme who attains the highest grade in ENGLISH 2106 (Modern British Literature).

Value: $500 (40105 1513)

### THE MURRAY BALL SCHOLARSHIPS IN GEOLOGY
Established in 1991 by May A. Ball in memory of her brother Murray Ball. Four scholarships to be awarded to students entering Level I, II, III, IV or V of a B.Sc. programme in the School of Geography and Geology who, in the judgment of the School of Geography and Geology, have attained notable standing. Ordinarily, not more than one scholarship will be awarded to any one programme.

Value: $1,500 each (30182)

### THE BANK OF MONTREAL HUMANITIES MULTIMEDIA SCHOLARSHIPS
Established in 1999 by the Bank of Montreal. Ten scholarships to be awarded to students entering Level II, III or IV of the Humanities Combined Honours programme who, in the judgment of the School of the Arts, demonstrate outstanding academic achievement in the Humanities Multimedia programme or great promise in the area of Humanities multimedia.

Value: $1000 each (30259)

### THE M. BANKIER BATES SCHOLARSHIP
Established in 1975 by Dr. M. Bankier Bates and augmented in 1978 in his memory by his family, friends and colleagues. To be awarded to the student who has completed Level I and 60-75 units of a programme in Commerce and who attains the highest Full-load Average.

Value: $350 (30102 257)

### 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 programme in the Department of Mathematics and Statistics, who attains the highest Full-load Average and who in that session achieves a grade of at least B in STATS 3003 and 3F03.

Value: $300 (30076)

### THE WILLIAM AND LIDA BARNS MEMORIAL PRIZE IN HISTORY
Established in 1969 by their son, William D. Barns, of Morgantown, West Virginia. To be awarded to the gradand who, in the judgment of the Department of History, has attained notable standing in an Honours History programme.

Value: $200 (50005)

### 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 Level I and 60-75 units of the Honours Commerce Programme and who, in the judgment of the Faculty of Business, has achieved high standing in COMMERCE 3F03 and 3F03, taken in one session.

Value: $100 (30134 012)
THE BASU MEDAL
Established in 1984 in memory of Professor Sanjoy Basu by friends, colleagues and accounting organizations. To be awarded to the graduate student who, in the judgment of the School of Business, has displayed outstanding achievement in accounting and has attained an average of at least 10.0 in any four of COMMERCE 4AA3, 4AC3, 4AD3, 4AE3, 4AF3.
Value: Medal (5000BD03)

THE MARION BATES BOOK PRIZE
Established in 1967, Centennial Year, by the Alumnae members of the McMaster Alumni Association in honour of Marion Bates, Dean of Women from 1947 to 1965. To be awarded to a student graduating from an Honours programme in History who, in the judgment of the Department of History, has displayed outstanding achievement in Canadian history courses consistently throughout the degree programme.
Value: $50 for books (50034)

THE BATES RESIDENCE SCHOLARSHIP
Awarded to the student who resides in the residence with the highest full load average (at least 9.5) in an undergraduate programme, with the exception of those in their graduating session.
Value: $300 (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 programme in Gerontology and who, in the judgment of the Gerontology Committee of Instruction, has demonstrated notable academic achievement and qualities of leadership at McMaster or in the community.
Value: $500 (401061571)
Note: Application required (500 word essay outlining internship plans) to be submitted to the McMaster Centre for Gerontological Studies by October 15th of each year.

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 a student who demonstrates high academic standing and is participating in one of McMaster’s formal exchange programmes. Preference will be given to students enrolled in a programme in Biochemistry, Biology, Chemistry, Commerce, Engineering Physics, English, French, Geography and Geology, 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 (30236561)

THE BEAUTY COUNSELORS OF CANADA SCHOLARSHIP
Established in 1956 by Beauty Counselors of Canada Limited. To be awarded to the student who has completed Science I with the highest Full-load Average and who is entering Level II of the Honours Biochemistry, Honours Chemistry or Honours Biochemistry and Chemistry programme.
Value: $300 (30008014)

THE BENTALL SCHOLARSHIPS
Established in 2001 by Dr. C. Howard Bentall (Class of ’37) and Dr. Shirley F. Bentall (Class of ’46). To be awarded to students in any Faculty who demonstrate outstanding academic achievement.
Value: $1,500 each (302611547)

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 programme 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 and an additional 30-75 units; (b) one to a keyboard student who has completed Level I and 30-75 units; and (c) one to a student who has completed Music I and who has demonstrated overall musical excellence.
Value: $400 each (30097015)

THE BINKLEY MEDAL
Established in 2000 by the University, friends and colleagues of Margaret Belloc (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 programme in Computer Science who has completed the programme primarily on a part-time basis and who attains the highest Cumulative Average.
Value: $350 and a medal (50085389)

THE ABE BLACK MEMORIAL PRIZES*
Established in 1982 by friends and colleagues of Dr. A.H. Black in memory of a distinguished member of the Department of Psychology from 1958 to 1978. Three prizes to be awarded: (a) one to the student who attains the highest Cumulative Average in an Honours B.A. programme in Psychology; (b) one to the student who attains the highest Cumulative Average in the Honours B.Sc. programme in Psychology; (c) one to the student who attains the highest Cumulative Average in the Honours Biology and Psychology (Life Sciences) programme.
Value: (a) $75; (b) $75; (c) $75 (50000107)

THE ABE BLACK MEMORIAL PRIZE
Established in 1982 by friends and colleagues of Dr. A.H. Black in memory of a distinguished member of the Department of Psychology from 1958 to 1978. To be awarded to the student who, in the judgment of the Department of Psychology, has demonstrated outstanding achievement in PSYCH 4D06 (Honours Thesis).
Value: $100 (40076381)

THE LEONE BETTY BLACKWELL MEMORIAL BOOK PRIZE
Established in 1999. To be awarded to a graduating student with the highest grade in GEO 3P03.
Value: $100 for books (40089871)

THE BRIAN BLAKEY MEMORIAL SCHOLARSHIP
Established in 1979 in memory of Dr. Brian Blakney, 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 Full-load Average on completion of Level I and 60 to 75 units of an Honours programme in Classics, Theatre & Film Studies (formerly Drama), English, French, or Modern Languages. Students in all programmes except Theatre & Film Studies must have achieved a B- in both LINGUIST 1A03 and 1A03.
Value: $600 (30013018)

THE HILDA DOROTHY BORMAN SCHOLARSHIP
Established in 1998 by bequest of Hilda Dorothy Borman. To be awarded to a student studying piano who, in the judgment of the School of the Arts, has attained high academic standing.
Value: $1,250 (30245795)

THE JOAN FRANCES BOWLING SCHOLARSHIPS
Established in 1997 from the estate of Marie Bowling in memory of her daughter, Joan Frances Bowling. Two scholarships to be awarded to outstanding classical music scholars registered in Level II and above of a Music programme and who, in the judgment of the School of the Arts, have demonstrated excellence in Music.
Value: $1800 each (30235559)

THE BRIEN SCHOLARSHIP IN PHILOSOPHY
Established in 1944 by Dr. J.W. Brien of Windsor. To be awarded to the student who has completed Level I and 30 to 45 units of an Honours programme in Philosophy and who, in the judgment of the Department of Philosophy, shows the most academic promise.
Value: $450 (30014)

THE JOSEPHINE STAPLES BRIEN SCHOLARSHIP
Established in 1936 by Dr. J.W. Brien of Windsor. To be awarded to a woman student who is entering her graduating session and who qualifies on the basis of academic standing and interest in undergraduate activities.
Value: $300 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 30 to 45 units of an Honours programme in Mathematical Sciences who attains the highest Full-load Average. Tenable in Levels III and IV provided that the recipient maintains satisfactory standing in an Honours programme in which mathematics, pure or applied, is the major subject of study.
Value: $1,500 ($750 each year) (30051019)

THE TEN BROEKE-BENSEN MEMORIAL SCHOLARSHIP
Established in 1990 in memory of Dr. James Ten Broeke and Dr. Roy C. Bensen, former Heads of the Department of Philosophy and Psychology. To be awarded to a student who has completed Level I and 30 to 75 units of an Honours Programme in Philosophy who, in the judgment of the Department of Philosophy, has demonstrated outstanding academic achievement.
Value: $1,100 (301915)

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. programme who is named to the Deans’ Honour List and who has made the most outstanding contribution to undergraduate activities. (50007)
THE CAE 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 programme 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: $2,500 (302921577)

THE CRISPIN CALVO SCHOLARSHIPS
Established in 1992 by Dr. J.S. Kirkaldy and Dr. W.W. Smeltzer. Two scholarships to be awarded, one to a student with the highest combined average in CHEM 2PA3 and 2PB3, the other to a student with the highest combined average in MATLS 2B03 and 2003.
Value: $1,500 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 medalist in 1936 and 1930. Inductee into the Athletics Hall of Fame. To be awarded to a student who has completed Level I in a programme in Kinesiology and who, in the judgment of the Department of Kinesiology, demonstrates academic excellence and outstanding athletic ability. The award is renewable for up to three years provided the recipient maintains a cumulative average of 8.0.
Value: $5,000 ($1,650 each year) (30246176)

THE ELA HALSTEAD CAMPBELL PRIZE
Established in 1978 by Mrs. Verna Caskey and Miss June Caskey in memory of Ella Halstead Campbell and augmented by Mrs. Edna M. Miller in 1987. 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 (30049023)

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 30 units of a programme 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 (40071349)

THE CANADIAN SOCIETY FOR CHEMICAL ENGINEERING PRIZE
Established in 1947 by the Chemical Institute of Canada. To be awarded to the student who has completed Level I and 70 to 85 units of a programme in Chemical Engineering and who attains the highest Full-Load Average.
Value: $50, medal and certificate (30016027)

THE CANADIAN SOCIETY FOR CHEMISTRY PRIZES
Established in 1947 by the Chemical Institute of Canada. Two awards to be made to students who have completed Level I and 60 to 90 units: (a) one to a student in an Honours programme in Chemistry or Honours Applied Chemistry who attains high standing in Chemistry; (b) one to a student in the Honours Biochemistry or Honours Biochemistry and Chemistry programme who attains high standing in biochemistry and organic chemistry.
Value: Medal and certificate (30017028)

THE CANADIAN SOCIETY OF CIVIL ENGINEERS (HAMILTON SECTION) PRIZE
Established in 1987. To be awarded to a student entering the final level of a programme 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 (30018029)

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 programme 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 (30018030)

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: $500 (302721544)

THE GRACE DOROTHY AND WILLIAM P. CARPENTER AWARD
Established in 2001 by the Hamilton Community Foundation. To be awarded to a student entering Level II in Mechanical Engineering who, in the judgment of the Department of Mechanical Engineering, demonstrates outstanding academic achievement. Preference will be given to a student who has graduated from a public school secondary school in the Hamilton or Burlington area.
Value: $1,500 (30203159)

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 2R03 or 2R03 (United States History).
Value: $500 (40025032)

THE NORMAN CASKEY MEMORIAL PRIZE
Established in 1983 by Miss June Caskey in memory of her father, William Caskey, a former student of the University of Toronto. To be awarded to a student who has completed 80 units in an Honours programme in Music and who, in the judgment of the School of the Arts, has demonstrated musical excellence.
Value: $100 (30115)

THE CFUW (HAMILTON) MEMORIAL PRIZE IN WOMEN'S STUDIES
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 programme 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 programme.
Value: $175 and book

THE CFUW (HAMILTON) PAST PRESIDENT'S PRIZE
Established in 1976 by the Past Presidents of the University Women's Club of Hamilton which became the CFUW (Hamilton) on the occasion of the Club's 50th anniversary. To be awarded to the woman student who has completed Level I and 70 to 90 units of a programme in Engineering with the highest Cumulative Average.
Value: $200 (30149020)

THE CFUW (HAMILTON) RUBY BROWN BOOK PRIZE IN ENGLISH
Established in 1970 by bequest of Mrs. Edgar Brown. To be awarded to a student in any Level I programme for the most creative essay in a Level I English course.
Value: $100 (40046248)

THE CFUW (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 Full-load Average in the penultimate level of any programme.
Value: $800 (30150373)

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 CGA Ontario, has displayed outstanding achievement in accounting and has attained an average of at least 10.0 in COMMERCE 2AB3, 3AB3, 3AC3 and 4AA3.
Value: $150 (50012033)

THE MARIA CHAN SCHOLARSHIP 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. Two scholarships to be awarded to students participating in one of McMaster's formal exchange programmes who, in the judgment of the Faculty of Business, demonstrate notable academic achievement.
Value: $2,000 each (302031579)

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 programme at the most recent spring review, and who ranks highest in scholarship, leadership and influence.
Value: Medal (30022)

THE CHEMICAL INSTITUTE OF CANADA (HAMILTON SECTION) PRIZES
Established in 1947 by the Hamilton Section. Two prizes to be awarded to students who have completed Level I and 30 to 50 units: (a) one to a student in an Honours programme in Chemistry who, in the judgment of the Department, shows particular promise in Chemistry; and (b) one to a student in a programme in Chemical Engineering who, in the judgment of the Department, shows particular promise in Chemical Engineering.
Value: $50 each (30023035)
THE CITIZEN ACTION GROUP PRIZE*
Established in 1984 by the Citizen Action Group, Hamilton, to honour Professor Harry L. Penny, founding Director of the School of Social Work and Board Member of Citizen Action Group. To be awarded to the student in a programme 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: $250 (40006031)  

THE HUGH CLARK SCHOLARSHIP
Established in 1989 by Hugh Clark in celebration of McMaster's fiftieth year since moving to Hamilton. To be awarded to the student who has completed Level I and 30 to 72 units of an Honours programme in Social Sciences and attains the highest Full-load Average.
Value: $1,200 (30068 239)  

THE CLASS OF '37 TRAVEL SCHOLARSHIP IN ARTS AND SCIENCE
Established in 1989 by the Graduating Class of 1937 in celebration of their 50th anniversary and augmented by friends of the Arts and Science programme. To be awarded to a student who has completed Level I and 30 to 72 units of an Honours programme in the Arts and Science Programme. 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: $900 (30175 037)  

THE CLASS OF '43 GOLDEN ANNIVERSARY SCHOLARSHIP
Established by the Class of '43 in celebration of their 50th anniversary. To be awarded to the student who has completed Level I and at least 60 units of an Honours programme in Theatre & Film Studies (formerly Drama) who, in the judgment of the School of the Arts, has achieved notable academic standing and has made a significant contribution to theatre on campus.
Value: $600 (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 programme who has attained the highest Full-load Average.
Value: $700 (30224 361)  

THE CLASS OF '50 SCHOLARSHIP IN HONOURS ECONOMICS
Established in 1985 by members of the Class of 1950 who graduated in Honours Economics. To be awarded to the student who has completed Level I and 30 to 45 units of an Honours programme in Economics, and who, in the judgment of the Department of Economics, has attained a high Full-load Average and has demonstrated leadership in undergraduate extracurricular activities.
Value: $600 (30027 008)  

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 enrolled in Level II and above in a programme in Arts and Science who, in the judgment of the Arts and Science Programme, have attained high academic standing and demonstrated community involvement.
Value: $500 each (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 programme, and participated in extra-curricular activities during his/her time at McMaster.
Value: $1,000 (50091 157)  

THE CLASSICS PRIZE
Established in 1978 by Professor D.M. Shepherd. To be awarded to the student who has completed Level I and 30 to 45 units of an Honours programme in Classics and who, in the judgment of the Department of Classics, shows most promise.
Value: $100 (30028 040)  

THE DENTON COATES MEMORIAL SCHOLARSHIP
Established in 1982 in memory of Denton E. Coates (Class of '70) by his friends. To be awarded to the graduating student who, in the judgment of the Department of Materials Science and Engineering, has demonstrated outstanding achievement in independent research as exemplified by the senior thesis in MATLS 4K04.
Value: $225 (50012)  

THE MARIO COLILLI MEMORIAL SCHOLARSHIP
Established in 2000 by family members in loving memory of Mario Colilli. To be awarded to a student who has completed Level I or an additional 30-75 units in the Honours Music Programme and who, in the judgment of the School of the Arts, has attained notable standing. Preference is to be given to a student with an interest in opera.
Value: $500 (30266 155)  

THE COMPARATIVE LITERATURE PRIZE*
Established in 1988. To be awarded to a student in an Honours programme in Comparative Literature who, in the judgment of the Comparative Literature Programme, has achieved notable standing in Level II.
Value: $225 (40006)  

THE CONSUL GENERAL OF ITALY BOOK PRIZE*
Established in 1982. To be awarded to in-course students for excellence in Italian studies.
Value: Book (40010 041)  

THE CONSULTING ENGINEERS OFONTARIO (CEO) SCHOLARSHIP
Established in 1990 by the Consulting Engineers of Ontario. To be awarded to a student who has completed Level III of a programme in Engineering who, in the judgment of the Faculty of Engineering, has demonstrated outstanding academic achievement and has made notable contribution to the campus or community by participation in extracurricular activities.
Value: $750 (30183 252)  

THE CONSUMERS' CLASS SCHOLARSHIP
Established in 1988. To be awarded to a student entering Level IV of an Engineering and Management programme who, in the judgment of the Department of Materials Science and Engineering demonstrates a strong interest in glass and/or ceramics.
Value: $1,000 (40098 345)  

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 Modern Languages and Linguistics, has achieved notable standing in Italian.
Value: $75 (40004)  

THE CRANSTON PRIZES*
Established in 1958 by William H. Cranston of Midland in honour of his parents, J. Herbert Cranston (Class of '05) and Eva Wilkins Cranston (Class of '07). Two prizes to be awarded for excellence in the study of Canadian literature: (a) one for the highest grade in ENGL 2G06, and (b) one for the highest grade in ENGL 2C03.
Value: (a) $150; (b) $150 (40011)  

THE CSEP/SCPE UNDERGRADUATE STUDENT AWARD
Established in 1993 by the Canadian Society for Exercise Physiology. To be awarded to the student from the Kinesiology programme who, in the judgment of the Department of Kinesiology, shows high standing in KINESIO 2C06 (Physiology of Exercise) and either KINESIO 4C03 or 4C33.
Value: Medal and Certificate (50068)  

THE EDWIN MARVIN DALLEY MEMORIAL SCHOLARSHIPS
Established in 1965 by bequest of Edwin Marvin Dalley of Hamilton.
Value: $800 each (30164)  

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 60 units of an Honours programme 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: $300 (40099 047)  

THE DEAN'S MEDAL FOR EXCELLENCE IN THE HUMANITIES
Established in 2000 by Donald T. Betzner (Class of '52). To be awarded to the graduating full-time student who attains the highest cumulative average in an Honours Humanities programme.
Value: $5,000 and medal (50083)  

THE DR. RUDOLF DE BUDA SCHOLARSHIP
Established in 1989 in memory of Professor de Buda by family, friends and colleagues. To be awarded to a student who has achieved high standing after completion of Level I and 71 to 73 units of Electrical or Computer Engineering programme and who elects to do a fourth-year thesis on a topic in the field of Information Theory.
Value: $1,000 (30041 240)  

The recipient of this award is eligible to receive additional aid through the corresponding Supplementary Bursary Aid Fund if his/her financial need. Please see the section on Supplementary Bursary Aid for Award Recipients in the Student Financial Aid section of this Calendar.

THE JOHN DEERE LIMITED SCHOLARSHIP
Established in 1992 by John Deere Limited. To be awarded to the student who has completed Level I and 60 to 75 units of the Honours Commerce programme who, in the judgment of the School of Business, has demon-
strated outstanding academic achievement in courses offered by the Human Resource/Labour Relations Area and has displayed leadership and self-motivation in extra-curricular activities.
Value: $2,000 (30207 305)

THE DELOITTE & TOUCHE HAMILTON SCHOLARSHIP
Established in 1982. To be awarded to the student who has completed Level I and 60 to 75 units of a programme in Commerce who attains a high Full-load Average and in that session attains an average of at least 10.0 in COMMERCE 3A3B and 3AC3.
Value: $500 (30148 177)

THE DELOITTE & TOUCHE SCHOLARSHIP
Established in 2000 by Deloitte & Touche. To be awarded to the student who has completed Level I and 60 to 75 units of the Honours Commerce programme who, in the judgment of the Faculty of Business, has achieved notable academic standing in COMMERCE 3A3B and 3AC3 (taken in one session), and has demonstrated qualities of leadership at McMaster University or in the community.
Value: $1,250 (30268 537)

THE AUDREY DIEMERT MEMORIAL BOOK PRIZE
Established in 1991 by family, friends and colleagues in memory of Audrey Diemert. To be awarded to a part-time student who attains the highest grade in ENGLISH 2B06 or 2B16.
Value: $125 for books (60065 258)

THE LAURA DODSON PRIZE
Established in 1985 by Laura Dodson (Class of '56). To be awarded to the student graduating from the Honours Arts and Science programme who has displayed outstanding achievement in both arts and science.
Value: $150 (50031 049)

THE ROSEMARY DOUGLAS-MERCER MEMORIAL PRIZE
Established in 1989. To be awarded to a student who has completed Level I and 30 to 45 units of an Honours programme in French and who has attained the highest average in FRENCH 2B3 and one of 2J03 or 2J13 and one of 2W03 or 2W3.
Value: $225 (30124)

THE HORACE A. DULMAGE PRIZE IN PHILOSOPHY
Established in 1976 in honour of Professor Horace A. Dulumage 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 programme in Philosophy who attained the most notable standing in his or her Level I programme.
Value: $150 (30066)

THE JOAN JACKSON DUNBAR TRAVEL SCHOLARSHIP
Established in 1960 by Mayor Lloyd D. Jackson (Class of '09), LL.D. (Class of '55) and Mrs. Jackson of Hamilton in memory of their daughter, Joan Jackson (Class of 40). To be awarded to a woman student who has completed Level I and 60 to 75 units of an Honours programme in English for excellence in the work of the programme (with emphasis on English). The winner must have secured all her secondary school education in Canada. The award is to be used for study and travel in the United Kingdom and Continental Europe during the vacation before the final Fall/Winter session.
Value: $3,500 (30177 053)

THE EDUCATION FOUNDATION FEDERATION OF CHINESE CANADIAN PROFESSIONALS (ONTARIO) SCHOLARSHIPS
Established in 1988 by the Foundation. Two scholarships to be awarded: (a) one to a student in a programme in Arts and Science, and (b) one, on a rotating basis, to a student in a programme in Chemistry, Mechanical Engineering, and Physics.
Value: $1,000 each (30163 056)

THE EMARDS HILL RESIDENCE SCHOLARSHIP
Awarded to the student who resides in the residence with the highest full load average (at least 9.5) in an undergraduate programme, with the exception of those in their graduating session.
Value: $300 (30156)

THE HELEN EMERY SCHOLARSHIPS IN ENVIRONMENTAL SCIENCE
Established in 1990 by Miss Helen Emery of Barrie, Ontario. Three scholarships to be awarded to students in Level II, III, IV or V of a B.Sc. Programme in the School of Geography and Geology who, in the judgment of the School of Geography and Geology, demonstrate leadership and influence in addressing environmental matters. Recipients must have attained a Full-load Average of 9.5 or greater.
Value: $1,500 each (30184 360)

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 ERNST & YOUNG SCHOLARSHIP
Established in 1982 by Clarkson Gordon. Renamed in 1989. To be awarded to the student who has completed Level I and 60 to 45 units of a programme in Commerce and who attains the highest Full-load Average and in the session attains a grade of at least A- in COMMERCE 2A3A.
Value: $350 (30050 241)

THE L.F. EULL PRIZE
Established in 1980 by Group Eight Engineering Limited. To be awarded to the student in a programme in Electrical Engineering who attains the highest average in ELEC ENG 3P14.
Value: $200 (30088 057)

THE EUROPEAN HISTORY PRIZE
Established in 1996 by Professor Ezio Cappadocia, on the occasion of his retirement from the Department of History, in memory of his mentor, Professor Frank H. Underhill. To be awarded to a student graduating from an Honours programme in History who, in the judgment of the Department of History, has displayed outstanding achievement in European history courses consistently throughout the degree programme.
Value: $100 (50017 368)

THE JOHN P. EVANSTRAVEL 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. To be awarded to a student who has completed at least 50 units beyond Level I of an Honours programme with notable academic standing and has demonstrated a scholarly interest in some aspect of Asian languages, history or cultures, with preference being given to a student wishing to study in China.
Value: $1,000 (30193 273)

THE FACULTY OF SOCIAL SCIENCES INQUIRY AWARD
Established in 2000 by the faculty of Social Sciences INQUIRY 1SS3 in recognition, 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 BARBARA M. FERRIER SCHOLARSHIP IN ARTS AND SCIENCE
Established in 2000 by students in the Arts and Science Programme, on the occasion of Dr. B.M. Ferrier’s retirement. One scholarship to be awarded to a student graduating from an Honours (Arts) programme who, in the judgment of the Arts and Science Programme, has demonstrated outstanding achievement in both the Arts and Sciences as well as exceptional leadership and service to the University community.
Value: $500 (60089 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 1990 and 1991, in recognition of his outstanding service to the steel castings industry. To be awarded to the student who attains the highest grade in MATLS 3D03.
Value: $100 (40067 121)

THE BARBARA FRANCIS SCHOLARSHIP
Established in 1985 by Laura Dodson (Class of '56) in memory of her sister. To be awarded to the student who has completed Level I and at least 50 units of an Arts and Sciences programme and who has demonstrated outstanding achievement in both arts and science.
Value: $350 (30007 372)

THE HAROLD AND GERTRUDE FREEMAN SCHOLARSHIP IN FRENCH
Established in 1981 by members of the Class of '43 as a grateful tribute to Harold A. and Gertrude Freeman; Professor Freeman was honorary president of the Class of '43 and was a long-time teacher of French at McMaster University. To be awarded to the student returned from completing Level III abroad as part of the Humanities Study Abroad Programme and entering the final session of an Honours programme 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 following entering the Humanities Study Abroad Programme.
Value: $1,200 (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 30 to 45 units of an Honours Chemistry programme with the highest Full-load Average.
Value: $150 (30096 063)

THE MERRILL FRANKS GAGE SCHOLARSHIP
Established in 1982 from the estate of Merrill Francis Gage of Hamilton. Two scholarships to be awarded to a student who has completed Level I and 30 to 75 units of an Honours programme in Music and who, in the judgment of the School of the Arts, has demonstrated excellence in performance on a keyboard or orchestral instrument.
Value: $500 each (30110)

THE SAMUEL GELLER MEMORIAL BOOK PRIZE
Established in 1999 by Libby Geller in memory of her husband Samuel Geller (Class of ’39). To be awarded to a student who has completed Level III of an Honours Programme in History and who, in the judgment of the Department of History, has attained notable academic standing.
Value: $500 for books (30261)

THE LOUIS GENTILCORE PRIZE
Established in 1989 by the family and friends of Professor R. Louis Gentilcore on the occasion of his retirement from the Department of Geography. To be awarded to a student in an Honours programme in the School of Geography and Geology who, in the judgment of the School, has demonstrated exceptional achievement in historical-cultural geography.
Value: $400 (40062 064)

THE GWEN GEORGE AWARD
Established in 1997 in loving memory of Gwen George by her family and friends. To be awarded to a student who has completed any Level I programme 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)

THE GERMAN EMBASSY BOOK PRIZE
To be awarded from time to time to in-course students for proficiency in Level II or III German.
Value: Book (40018)

THE J.L.W. GILL PRIZES
Established in 1944 by bequest of J.L.W. Gill, B.A., Principal of Hamilton Technical School. Nine scholarships to be awarded on the basis of Cumulative Averages to students who have completed Level I and 60 to 75 units of Honours B.Sc. programmes. Ordinarily, not more than one scholarship will be awarded in any one discipline.
Value: $300 each (30079)

THE GILMOUR MEMORIAL PRIZE
Established in 1927 by Year ’27, in memory of Dr. Joseph Leeming Gilmour, Honorary President of their first year in 1923, and subsequently enlarged by his children. To be awarded to the student who attains the highest standing in RELIG ST 2G3A or 2H3H.
Value: $100 (40019)

THE GEORGE P. GILMOUR MEMORIAL SCHOLARSHIP
Established in 1967 by the Graduating Class of 1965 in honour of Dr. G.P. Gilmour (Class of ’21), Chancellor of McMaster University from 1941 to 1950 and President and Vice-Chancellor from 1950 to 1961. To be awarded to a student who has completed Level I and 60 to 75 units of an Honours programme in the Arts and Science Programme and who, in the judgment of the Arts and Science Programme Admissions, Awards, and Review Committees, has demonstrated outstanding academic achievement and has made notable contribution to the campus or community by participation in extra-curricular activities.
Value: $300 (30058 067)

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 GOVERNOR GENERAL'S ACADEMIC MEDAL
Given by Her Excellency the Governor General of Canada. To be awarded to the student graduating from a first baccalaureate degree programme who, in the judgment of the selection committee, has attained the highest standing throughout the programme.
Value: Medal (50022)

THE DAPHNE ETHERINGTON GRAHAM MEMORIAL SCHOLARSHIP IN ENGLISH
Established in 1989, in memory of a former student and dedicated servant of the University, by her friends, family and Professor Emeritus R.P. Graham. To be awarded to the student, registered for a first degree after completing Level I, who attains the highest standing in 18 units of English, all taken in the same session, with an average standing of at least A+. Provided that the recipient is not the holder of another scholarship of equal or greater value.
Value: $1,000 (30034 242)

THE DAPHNE ETHERINGTON GRAHAM MEMORIAL SCHOLARSHIP IN HISTORY
Established in 1997 in memory of a former student and dedicated servant of the University, by her friends, family and Professor Emeritus R.P. Graham. To be awarded to the student, registered for a first degree after completing Level I, who attains the highest standing in 18 units of History, all taken in the same session, with an average of at least A+.
Value: $1,000 (30231 556)

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 programme primarily on a part-time basis.
Value: $500 (30229)

THE GREEK COMMUNITY OF BURLINGTON AND DISTRICT SCHOLARSHIP
Established in 1983. To be awarded to the student who obtains the highest standing in GREEK 1Z03 and 1ZZ3.
Value: $250 (40020 068)

THE H.B. GREENING BOOK PRIZE
Established in 1969 by bequest of Gladys Powie Greening in memory of her husband, Herald Benjamin Greening. To be awarded to the student who has completed Level I and 30 to 45 units of an Honours programme in Music and who, in the judgment of the School of the Arts, has demonstrated excellence in music.
Value: $100 for books (30209)

THE BILL AND HELEN HAIGHT AWARD
Established in 1999 by Bill and Helen Haight. To be awarded to a student who has completed at least Music I and who, in the judgment of the School of the Arts, has demonstrated outstanding performance in Music Lied or opera repertoire. Preference is to be given to a student demonstrating outstanding performance in German Lied.
Value: $500 (30251 943)

THE AMELIA HALL GOLD MEDAL
Established in 1985 by members of the Class of ’38 in recognition of Amelia Hall (Class of ’38), D. Lit. (Class of ’75), one of the great pioneers of Canadian theatre and a consummate actress, who performed on Canadian stage, screen, radio and television for 35 years. To be awarded to a graduating student who, in the judgment of the School of the Arts, has made a significant contribution to drama during the student’s University career.
Value: $500 (30033 070)

THE RUTH AND JACK HALL PRIZE
Established in 1983 by Jacke MacDonald in memory of her parents. To be awarded to a student who has completed Level I and 60 to 75 units of an Honours programme in Computer Science, or Level I and 70 to 90 units of a programme in Computer Engineering, and who attains the highest Full-load Average.
Value: $200 (30313)

THE RONALD K. HAM MEMORIAL PRIZE
Established in 1971 in memory of Professor R.K. Ham by his friends and former colleagues. Awarded to the student who has completed Level I and at least 60 units and who, in the judgment of the Department of Materials Science and Engineering, shows most promise as a materials scientist or engineer.
Value: $100 (30128)

THE BRUCE M. HAMILTON MEDAL
Established in 1999 by Bruce M. Hamilton. To be awarded to a student graduating from a Commerce programme who, in the judgment of the Faculty of Business, has made a significant contribution through extra-curricular activities to the benefit of McMaster University or the local community.
Value: $150 and a medal (50081 872)
THE HAMILTON CHEMICAL ASSOCIATION PRIZE
Established in 1953 by the Trustees of the Hamilton Chemical Association in memory of Dean C.E. Burke. To be awarded to the student who has completed Level I and 30 to 45 units of an Honours programme in Chemistry and who attains the highest Cumulative Average.
Value: $200 (30063)

THE HAMILTON ECONOMIC DEVELOPMENT COMMISSION SCHOLARSHIPS
Established in 1976. (a) Two scholarships to be awarded on the basis of Full-load Average to students entering Level II of a Commerce programme; (b) Four scholarships to be awarded on the basis of Full-load Average; two to students who have completed Level I and 30-45 units, and two to students who have completed Level I and 60 to 75 units of a programme in Commerce. Recipients must have obtained all their secondary school education in the Hamilton-Wentworth Region.
Value: $800 each (six awards) (30064 072)

THE HAMILTON INDUSTRIAL SCHOLARSHIPS
Established in 1958. 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 60-75 units of a programme in Commerce who, in the judgment of the Faculty of Business, has demonstrated outstanding academic achievement and involvement in the local community.
Value: $1,500 (30227 389)

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 30 to 45 units of a programme 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: $350 (30037 075)

THE HAWKRIIG FOUNDATION SCHOLARSHIPS IN BUSINESS
Established in 1999 by the Hawkriig 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 HAWKRIIG FOUNDATION SCHOLARSHIPS IN KINESIOLOGY
Established in 1999 by the Hawkriig Family. To be awarded to a student who, in the judgment of the Department of Kinesiology, has attained notable academic standing and demonstrated involvement in University or community activities and outstanding athletic ability. This scholarship is tenable for up to three years provided the recipient maintains a Cumulative Average of 8.0.
Value: $7,500 ($2,500 each year) (30256 866)

THE HEDDEN HALL RESIDENCE SCHOLARSHIP
Awarded to the student who resides in the residence with the highest full load average (at least 9.5) in an undergraduate programme, with the exception of those in their graduating session.
Value: $300 (30138)

THE HELLENIC PRIZE
Established in 1985 by the Greek communities of Hamilton and Burlington. To be awarded to a student entering Level IV who has completed at least 12 units in subjects pertaining to Greek studies and who, in the judgment of the Faculty of Humanities, demonstrates outstanding academic achievement in Greek studies.
Value: $1,000 (30225 386)

THE ANNA MARIE HIBBARD SCHOLARSHIP
Established in 1992 from the bequest of Anna Marie Hibbard. To be awarded to the student completing Level I who attains the highest Full-load Average. The recipient may not hold another scholarship of equal or greater value.
Value: $1,600 (30058 903)

THE ROSE HILL SCHOLARSHIP
Established in 1985 by the alumni, faculty and staff of the School of Physical Education and Athletics as a tribute to Professor Rose Hill, long-time teacher, coach and administrator in the School. To be awarded to a student who has completed 60 units of the Kinesiology programme and who, in the judgment of the Department of Kinesiology, best demonstrates 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 (30139 077)

THE DR. THOMAS HOBLEY PRIZE
Established in 1996 by bequest of Mrs. A. McNee of Windsor. To be awarded to a woman student on the basis of the Full-load Average obtained in the penultimate level of a programme in Economics or Political Science.
Value: $200 (30042)

THE DR. HARRY LYMAN HOOKER SCHOLARSHIPS
Established in 1981, and resulting from the bequest of Dr. H.L. Hooker. Awarded for overall academic excellence (Full-load Average of at least 9.5) to students in undergraduate programmes, with the exception of those in their graduating session and those retaining scholarships of $1,000 or greater.
Each year quotas are established for each Faculty and other academic units in proportion to the number of full-time undergraduate students who obtain a Full-load 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: $800 (30161)

THE NINA LOUISE HOOPER SCHOLARSHIP
Established in 1959 by bequest of Bertram O. Hooper.
Value: $800 (30200)

THE HUGHES SCHOLARSHIP
Established in 1993 by Helen Dickenson-Hughes in memory of her husband Peter Hughes (Class of '69). To be awarded to a student who has completed Level I and 30-75 units of the Music Programme who, in the judgment of the School of the Arts, has displayed outstanding achievement in Music Education.
Value: $225 (40069 030)

THE HUMAN RIGHTS AWARD
Established in 1998 by the Theme School on International Justice and Human Rights. To be awarded to the student who attains the highest grade in the Theme School.
Value: Medal (50026)

THE WILLIAM D.G. HUNTER PRIZE
Established in 1956 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 312.3.
Value: $200 (40080 394)

THE HURD MEDAL
Established in 1955 by Donald W. Hurd (Class of '49) in memory of his father, Dean William Burton Hurd. To be awarded to a student at graduation for distinguished achievement in an Honours programme in which economics is a major field of study.
Value: Medal (50227 079)

THE PAUL HYPHER PRIZE
Established in 1986 in memory of Paul F. Hyphre by his friends and classmates. To be awarded to the student in a programme in Commerce who attains the highest standing in COMMERCE 2MA3.
Value: $150 for books (40039 080)

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 programme who, in the judgment of the Department of Materials Science and Engineering has achieved notable academic standing and demonstrated qualities of leadership at McMaster or in the community.
Value: $2,500 (30274 1514)

THE 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 programme) in either the Honours Environmental Science or the Honours Earth and Environmental Sciences programmes who, in the judgment of the School of Geography and Geology has achieved notable academic standing and demonstrated qualities of leadership at McMaster or in the community.
Value: $2,500 (30275 1515)
UNDERGRADUATE AWARDS — IN-COURSE, GRADUAND AND SECOND DEGREE

THE INTERMETCO LIMITED SCHOLARSHIP
Established in 1977. To be awarded to the student who has completed Level I and 70 to 80 units of a programme in Mechanical Engineering and who, in the judgment of the Department of Mechanical Engineering, has attained notable standing.
Value: $500 (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 1995 by the McMaster Inter-Residence Council in recognition of the IRC's continued support of the University and its students. To be awarded to a student who has completed at least Level I of any programme who, in the judgment of an Awards Selection Committee of Undergraduate Council, has demonstrated notable academic achievement and has demonstrated leadership and influence in residence life.
Value: $500 (30228 392)

THE MUNICIPAL CHAPTER OF HAMILTON, IODE, PRIZE
Established in 1944 by the Municipal Chapter of Hamilton, Imperial Order Daughters of the Empire. To be awarded to the student who attains the highest standing in a Level I History course.
Value: $150 (40036 081)

THE IROQUOIS TROPHY
Established in 1970 by the Department of Mechanical Engineering. To be presented to a graduating mechanical engineer on the basis of academic excellence, participation in campus societies, clubs, or other activities, and general leadership. A replica of the Trophy is permanently held by each winner. (50028)

THE ITCA COMMUNITY INVOLVEMENT PRIZE
Established in 1982 by Italian Canadian Community Involvement Incorporated. To be awarded to the student who has completed at least 30 units beyond Level I of a programme in the Department of Modern Languages and Linguistics and who, in the judgment of the Department, has attained notable standing in at least six units of Italian courses above Level I. The recipient must have graduated from a secondary school in the Hamilton area.
Value: $150 (30070 086)

THE IVEY SCHOLARSHIP
Established in 1971 by Professor and Mrs. G.S. French in memory of Mr. and Mrs. J.E. Ivey, the parents of Mrs. French. To be awarded to the student who has completed Level I and 60-75 units of an Honours programme in Music and who, in the judgment of the School of the Arts, has attained notable standing.
Value: $125 (30074 087)

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 H.L. JACKSON MEMORIAL SCHOLARSHIP
Established in 1989 in memory of Professor H.L. Jackson by his friends and colleagues. To be awarded to the student who has completed Level I and at least 60 units of an Honours programme in the Department of Mathematics and Statistics, who in the judgment of the department has demonstrated achievement in Math 3A43.
Value: $400 (40023 311)

THE BURTON R. JAMES MEMORIAL PRIZE
Established in 1974 by his friends and colleagues in honour of Burton R. James (Class of '39), Controller, 1963-71, Assistant Vice-President - Administration, 1971-73, McMaster University. To be awarded to the student who, in the judgment of the Faculty of Business, has attained an outstanding Cumulative Average in a programme in Commerce.
Value: $150 (50008)

THEW. NORMAN JEEVES SCHOLARSHIP
Established in 1987 by the French Section, Department of Romance Languages, in honour of W. Norman Jeeves, Professor of French from 1965 to 1987. To be awarded to a graduate of an Honours programme in French who, in the judgment of the Department of French, has demonstrated outstanding academic achievement in the French component of the programme.
Value: $400 (50052 088)

THE HERBERT M. JENKINS PRIZE
Established in 1980 as a tribute to Dr. Herbert M. Jenkins, first Director of the Arts and Science Programme, by his many friends, colleagues and students on the occasion of his retirement from McMaster University. To be awarded to a student in an Arts and Science Programme whose work, in the judgment of the Arts and Science Programme Awards and Review Committee, best reflects scholarship and the spirit of inquiry.
Value: $175 (30186 449)

THE JENSEN MEDAL
Established in 1965 by friends and colleagues as a tribute to Dr. Doris E.N. Jensen in recognition of her contribution in developing Cooperative Education Programmes 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) Programme who, in the judgment of the Committee of Instruction, demonstrates outstanding academic achievement and excellence in co-op placements. (50075 387)

THE A.I. JOHNSON SCHOLARSHIP
Established in 1977 in memory of Dr. A.I. Johnson by his friends and former colleagues. To be awarded to a student who has completed Level I and 110 to 130 units of a programme in Engineering and Management. Award to be based on distinguished academic performance during the student's undergraduate career. Consideration will also be given to noteworthy contribution in extracurricular activities.
Value: $600 and certificate (30002 259)

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 LAWRENCE AND KATHLEEN MARY JOHNSTON MEMORIAL PRIZE
Established in 1963. To be awarded to the student who has completed Level I and 30 to 45 units of an Honours programme in Religious Studies and who attains the highest Full-load Average.
Value: $125 (30094 090)

THE FRANK E. JONES PRIZE
Established in 1982 in honour of Professor F.E. Jones for his outstanding contributions to the Department of Sociology. To be awarded to the full-time student with the highest Cumulative Average in an Honours programme in Sociology.
Value: $50 (50020)

THE JEAN JONES PRIZE*
Established in 1982 in recognition of the distinguished service of Professor Jones to the School of Social Work. To be awarded to the student who attains the highest grade in SOC WORK 2B03.
Value: $50 (40028 098)

THE JURY PRIZE
Established in 1941 by bequest of J.H. Jury of Bowmanville. To be awarded to the student who has completed Level I and 30-45 units of the Honours History programme and who attains the highest Full-load Average.
Value: $150 (30093)

THE STANFORD N. KATAMBALA GEOLOGY PRIZE
Established in 1985 by contributions from friends and associates of Stanford N. Katambala, a Year III Honours Geology student from Tanzania, killed in a mine accident in Northern Ontario in September 1984. To be awarded to a student who has completed Level I and 60 to 75 units of the Honours Geology programme and who attains high standing in Geology.
Value: $50 (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 programme in Biology, Biochemistry or Chemistry who, in the judgment of the Faculty, show outstanding academic achievement. Preference will be given to students who plan to continue in the field of medical research.
Value: $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 programme in Computer Science who attains the highest Cumulative Average. (50069 344)

THE ROBERT A. KENNEDY SCHOLARSHIP
Established in 1998 by Robert A. Kennedy. To be awarded to any student entering a Level II, III or IV programme in the Faculty of Business who, in the judgment of the Faculty, demonstrates outstanding academic achievement.
Value: $250 (30243 788)
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 programmes in those Departments: (a) one to a student who has completed Level I and 30 to 75 units of the Computer Science programme; (b) one to a student who has completed Level I and 60 to 75 units of a programme in Mathematics; and (c) one to a student who has completed Level I and 60 to 75 units of a programme in Statistics.
Value: $350 each (40037 091)

THE KARL KINNAN ALUMNI PRIZE IN GERONTOLOGY
Established in 1992 by the Gerontology Alumni of McMaster University in recognition of Karl Kinnan for his leadership in the development of Gerontological Studies at the University. To be awarded to a student graduating from a programme in Gerontology who, in the judgment of the Gerontology Committee of Instruction, has demonstrated high academic achievement and leadership in community activities.
Value: $100 (50064 317)

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: $50 (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 programme: (a) one to a student who, in the judgment of the Department of Kinesiology, has submitted an outstanding paper or project, and (b) one to the student who, in the judgment of the Department of Kinesiology, has demonstrated outstanding improvement in academic standing throughout the programme.
Value: $50 each (40041)

THE KIT MEMORIAL SCHOLARSHIP
Established in 1956 by the Hamilton Branch of the Canadian Women’s Press Club (now the Media Club of Canada, Hamilton Branch) in memory of the brilliant journalist and writer, the first president of the Canadian Women’s Press Club, Kathleen Blake Coleman, widely known on this continent as Kit. To be awarded to a woman student either on completion of Level I and at least 90 units on the basis of journalistic ability or on completion of Level I and 60 to 75 units of an Honours programme in English on the basis of Full-load Average.
Value: $175 (30095 092)

THE KPMG SCHOLARSHIP
Established in 1956 by Pettit, Hill and Bertram, Toronto, and continued after amalgamation of firms. To be awarded to an outstanding student on the basis of qualifications and academic record after the completion of Level I and 60 to 75 units of a programme 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 programme in Anthropology who, in the judgment of the Department of Anthropology, has demonstrated outstanding academic achievement.
Value: $50 (50048)

THE LATIN PRIZE*
Established in 1987 by Dr. John B. Clinard. To be awarded to a student who, in the judgment of the Department of Classics, has demonstrated notable achievement in LATIN 1203 and 12Z3
Value: $100 (40031 096)

THE GARY LAUTENS MEMORIAL SCHOLARSHIP
Established in 1992 by family, friends and colleagues in memory of Gary Lautens (Class of ’50), columnist and editor of the Toronto Star (1962–92), the Hamilton Spectator (1950–62) and the McMaster Silhouette (1948–50), remembered as a journalist with wit and insight. To be awarded to a student who has completed any Level I programme who, in the judgment of a Selection Committee, has achieved notable academic standing and has demonstrated journalistic skills in the written media. The scholarship is tenable for up to three years provided the recipient maintains a Cumulative Average of 8.0. Students who wish to be considered for this award should consult the Office of Student Financial Aid & Scholarships.
Value: $3,800 ($1,200 each year) (30212 321)

A 500 word 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 demonstrates 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: $2,000 (30101 361)

THE MEGAN LAWRENCE SCHOLARSHIP
Established in 1988 by the Zonta Club of Hamilton II in 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 programme 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)

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: $150 (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 12Z3 or 1BB3 in Level I or to a student who has completed GERMAN 2Z23 in Level II and who, in the judgment of the Department of Modern Languages and Linguistics, 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 on a German-speaking country and/or for other expenses associated with the student’s German studies.
Value: $500 (40090 820)

THE RAY LAWSON SCHOLARSHIPS
Established in 1975 by the Honourable Ray Lawson, O.B.E., D.C.L., LL.D., K.G.St.J., Lieutenant-Governor of Ontario from 1946 to 1952. Two scholarships to be awarded for the highest Full-load Averages in an Engineering and Management programme: (a) one to a student who has completed Level I and 70 to 90 units, and (b) one to a student who has completed Level I and at least 103 units beyond Level I.
Value: $400 each (30126 099)

THE ELEANOR LEES BOOK PRIZE
Established in 1994 in memory of Eleanor Lees by friends in Physiotherapy. To be awarded to a student graduating from the Physiotherapy programme who, in the judgment of the School of Rehabilitation Science, has demonstrated notable academic achievement and excellence in clinical fieldwork related to neurology. (50073 354)

THE SAKARKHANU K. LILA MEMORIAL SCHOLARSHIP*
Established in 2000 by the children and grandchildren of the late Sakarkhanu K. Lila, mother of ten. To be awarded to a full-time student who has completed Level II of the Midwifery Programme and who, in the judgment of the Midwifery Programme, 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 (40093 208)

THE LINGUISTICS PRIZE
Established in 1986. To be awarded to a student in an Honours programme in Modern Languages and Linguistics who, in the judgment of the Department of Modern Languages and Linguistics, has achieved notable standing in Level II courses in Linguistics.
Value: $225 (40032)

THE CLAUDE G. LISTER SCHOLARSHIP
Established in 1990 by bequest of Pauline Detwiler Lister in memory of her husband. To be awarded to a student in a programme in the School of Business.
Value: $800 (30119 262)

THE FELIKS LITKOWSKI MEMORIAL PRIZE IN POLITICAL SCIENCE
Established in 1987 by Albert Litkowski (Class of ’78) and Richard Litkowski (Class of ’86) in honour of their father. To be awarded to a full-time student graduating from an Honours programme in Political Science who, in the judgment of the Department of Political Science, has demonstrated outstanding academic achievement.
Value: $400 (50033 100)
UNDERGRADUATE AWARDS — IN-COURSE, GRADUAND AND SECOND DEGREE 329

THE MacGIBBON SCHOLARSHIP*  
Established in 1970 by bequest of Professor Duncan A. MacGibbon (Class of '08). To be awarded to the student in a programme in Economics who, in the judgment of the Department of Economics, stands highest in courses in economic history. 
Value: $350 (40034)

THE BERT MacKINNON MEMORIAL SCHOLARSHIP  
Established in 1996 in memory of Bert MacKinnon, B.A. (Class of '43), LL.D. (Class of '77), first Associate Chief Justice of Ontario (1978 to 1986). One scholarship to be awarded to a graduating student who enrols in a Bachelor of Laws degree programme in the academic session immediately following graduation. The student selected will have demonstrated high academic achievement and leadership in extracurricular activities. Applications and the name of two referees should be submitted to the Office of Student Financial Aid & Scholarships by the first Friday in April. 
Value: $700 (50061 286)  
Applications and the names of two referees should be submitted to the Office of Student Financial Aid & Scholarships by the first Friday in April.

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 2P03 (Globalization and Economic Development) or, in exceptional circumstances, for work in a related area. 
Value: $200 (40058 312)

THE BETTY MacMILLAN PRIZE  
Established in 1969 by her classmates in memory of Elizabeth Johnstone MacMillan (Class of '50). To be awarded to the student who has completed Level I and 60 to 75 units in an Honours programme in Sociology and who, in the judgment of the Department of Sociology, is the most promising student. 
Value: $100 (30010)

THE AGNES AND JOHN MacNEILL MEMORIAL PRIZE  
Established in 1946 by bequest of Annie May MacNeill (Class of '03). To be awarded to the student graduating from an Honours programme in English who has attained the most notable standing in English throughout the degree programme. 
Value: $150 (50001)

THE CATHERINE MacNeill PRIZE  
Established in 1946 by bequest of Annie May MacNeill (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: $150 (50011)

THE MAPS CENTENNIAL AWARD  
Established in 2000 by the McMaster Association of Part-Time Students. To be awarded to a part-time student who, in the judgment of the MAPS Association, ranks highest in qualities of scholarship and leadership. 
Value: $500 and a medal (60010 1933)

THE MAPS GOLD MEDAL  
Established in 1996 by the McMaster Association of Part-time Students. To be awarded to the graduating student completing studies primarily on a part-time basis and who attains the highest Cumulative Average. (50076 397)

THE LIANNE MARKS SCHOLARSHIP  
Established by her family, in 1980 as a bursary and in 1985 as a scholarship, in honour of Lianne Marks, a student at McMaster University (1977-80). To be awarded to a student who has completed Level I and 60 to 75 units of an Honours programme 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: $700 (30100 102)

THE ELEANOR DORBUSH MAPLES PRIZE IN ART HISTORY*  
Established in 1985 by Mrs. Barbara Niedermeier and her family in memory of her sister. To be awarded to a student who, in the judgment of the School of the Arts, has demonstrated outstanding achievement. 
Value: $100 (40015 103)

THE ELEANOR DORBUSH MAPLES PRIZE IN THEATRE & FILM STUDIES*  
Established in 1987 by Vaughan W. Maples in memory of his wife. To be awarded to the student who attains the highest grade in THTR&FLM 2C03. 
Value: $100 (40016 104)

THE RONALD E. MATERICK SCHOLARSHIP  
Established in 1987 by Ronald E. Materick (Class of '70). Two scholarships to be awarded to students who have completed Level I and 70 to 85 units of a programme in Civil Engineering and who, in the judgment of the Department of Civil Engineering, have attained notable academic standing. 
Value: $1,000 each (30127 106)

THE MATTHEWS HALL RESIDENCE SCHOLARSHIP  
Awarded to the student who resides in the residence with the highest Full-load Average (at least 9.5) in an undergraduate programme, with the exception of those in their graduating session. 
Value: $300 (30157)

THE JOHN MAYBERRY SCHOLARSHIPS  
Established in 1998 by John Mayberry. Two scholarships to be awarded to students who have completed Level II or III of a programme in Chemical Engineering, Mechanical Engineering or Materials Science Engineering who, in the judgment of the Faculty of Engineering, have demonstrated outstanding academic achievement. The recipients must attain a minimum Sessional Average of 9.5 at the most recent Fall/Winter session. 
Value: $1,000 each (30262 905)

THE WILLIAM J. McCALLION SCHOLARSHIPS  
Five scholarships named 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. To be awarded to part-time students who have attained the highest Cumulative Average at the most recent review. 
Value: $250 each (50004)

THE ESTHER McCANDLESS MEMORIAL PRIZE  
Established in 1984 by friends and colleagues in memory of Professor E.L. McCandless, a humanitarián 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 programme in Biology. 
Value: $225 (50016)

THE JOHN R. McCARThY SCHOLARSHIP  
Established in 1967 by John R. McCarthy LL.D. (Class of '65), former Deputy Minister of University Affairs and Deputy Minister of Education for the Province of Ontario. To be awarded to a student graduating from a programme in Arts and Science, Humanities, Science, or Social Sciences who enrols in the Faculty of Education of an Ontario university in the academic session immediately following graduation. The student selected will have made a contribution to the life of the University by displaying leadership in student government or student affairs and leadership and sportsmanship in athletic endeavours. 
Value: $750 (50030 107)

THE H.W. McCREADY PRIZE IN BRITISH HISTORY*  
Established in 1981 in memory of Professor H.W. McCready, a member of the Department of History from 1945 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 2N06. 
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 Neil McGregor, Lee Wilson Smith and George William Burr, and supplemented in 1944 by bequest from Professor R. Wilson Smith, father of LeeWilson Smith. To be awarded to the student who has completed Level I and 60 to 75 units of the Honours English and History programme and who has the highest Full-load Average. 
Value: $425 (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 graduants. (50043)

THE McKay HALL RESIDENCE SCHOLARSHIP  
Awarded to the student who resides in the residence with the highest Full-load Average (at least 9.5) in an undergraduate programme, with the exception of those in their graduating session. 
Value: $300 (30201)
THE A.G. McKay PRIZE IN CLASSICAL STUDIES
Established in 1990 by Professor Emeritus A.G. McKay. To be awarded to a graduating student from an Honours programme 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 1968 to 1973, to mark his retirement after 33 years of service at McMaster University. To be awarded to a student who has completed Level I and 60 to 75 units of an Honours Classics programme and who, in the judgment of the Department of Classics, has attained high academic standing. Preference will be given to students from the Regional Municipality of Hamilton-Wentworth.
Value: $350 (30118.263)

THE JANET McKNIGHT AWARD
Established in 1994 by friends, faculty 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 programme 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: $400 (40107.367)

THE A.B. McLAY SCHOLARSHIP IN PHYSICS
Established in 1991 by C. Lucy Mcary in memory of her late husband, A. Boyd Mcary (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 30 to 45 units of an Honours programme in Physics and who, in the judgment of the Department of Physics and Astronomy, has attained notable standing.
Value: $450 (30116.254)

THE BOYD McLAY SCHOLARSHIP IN PHYSICS
Established in 1977 to commemorate the contributions of Dr. A. Boyd Mcary (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 60 to 75 units of an Honours programme in Physics with a high Full-load Average.
Value: $350 (30111.109)

THEWALTER SCOTT McLAY PRIZE
Established in 1938 in honour of Dean Mcary, by his daughter, Mrs. R.R. McLaughlin (Marjorie Mcary 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 programme in English.
Value: $250 (50057.279)

THE McMASTER HUMANITIES SOCIETY SCHOLARSHIP
Established in 1999 by the McMaster Humanities Society. Two scholarships to be awarded to students who have completed Level I and 30 units and who, in the judgment of the Faculty of Humanities, have demonstrated an enthusiastic interest in the University through their involvement in extra-curricular activities.
Value: $250 each for books (30244.798)

THE McMASTER NURSING ALUMNI PRIZE
Established in 1984 and augmented in 2001 by the McMaster Nursing Alumni Branch to recognize graduates from the McMaster University School of Nursing. To be awarded to a student who, in the judgment of the School of Nursing, has demonstrated leadership while participating in undergraduate activities.
Value: $350 (50092.111)

THE McMASTER UNIVERSITY FUTURES FUND AWARD
Established in 2000. To be awarded to the child of a member of McMaster University's salaried pension plan who has demonstrated outstanding academic achievement. Recipient must obtain an average of 9.5 or greater. Students should apply to the Office of Student Financial Aid & Scholarships by April 15th.
Value: $500 (50064.1498)

THE McMASTER UNIVERSITY FUTURES FUND IN-COURSE AWARDS
Established in 2000. Three 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 Full-load Average of 9.5 or greater. Students should apply to the Office of Student Financial Aid & Scholarships by April 15th.
Value: $1,500 each (30279)

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 programme in Gerontology who attains the highest Full-load Average. The student must enrol in a programme in Gerontology for at least 30 units in the subsequent Fall/Winter session.
Value: $200 for books. (60007.364)

THE McMASTER UNIVERSITY RETIREES' ASSOCIATION SCHOLARSHIP
Established in 1991 by the McMaster University Retirees' Association. To be awarded to the student who has completed Level I and at least 30 units of a programme in Gerontology and who attains the highest Full-load Average. The student must enrol in a programme in Gerontology in the subsequent Fall/Winter session.
Value: $400 (30187.271)

THE DONALD G. McNABB SCHOLARSHIP
Established in 1989 in memory of Donald G. McNabb (Class of '37) by friends, family and business associates. To be awarded to the student who has completed Level I plus 60 to 75 units of an Honours programme 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: $1,000 (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 30 to 50 units of a programme in Civil Engineering. Awards are based on scholarship and evidence of practical engineering experience and background.
Value: $650 each (30139.112)

THE JOHN D. McNE 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: $500 (40107.1576)

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 60 to 75 units of a programme in Honours Art or Honours Art History and who, in the judgment of the School of the Arts, is outstanding.
Value: $500 (30119.114)

THE MEDICAL-SURGICAL EXCELLENCE IN CLINICAL NURSING AWARD
Established in 1996 by Professor Gerry Benson. To be awarded every two years to a student who has completed at least Level II of the Nursing Programme 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 (40086.739)

THE AUDREY EVELYN MEMP AH Award in Gerontology
Established in 2001 by Gordon W. Meph in loving memory of his wife Audrey Evelyn Meph. To be awarded to a student graduating from a programme in Gerontology who, in the judgment of the Gerontology Committee of Instruction, 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: $500 (50090.1586)

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 programme with an outstanding Full-load Average and a grade of at least A- in BIOLOGY 3E03 in Level III.
Value: $350 (30077.115)

THE DR. FA. 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 programme who achieves the highest average in CIV ENG 2C04 and ENGINEERING 2P04 taken in one session.
Value: $400 (40100.781)
THE MODERN LANGUAGE TRAVEL SCHOLARSHIP
Established in 1991 by the Department of Modern Languages and Linguistics. To be awarded to a student who has completed at least 30 units beyond Level I in a programme in Modern Languages and who, in the judgment of the Department of Modern Languages and Linguistics, has attained notable academic standing. The purpose of the scholarship is to assist with travel expenses to study and travel abroad. Priority will be given to a student participating in the Humanities Study Elsewhere Programme.
Value: $400 each (30188274)

THE MOFFAT KINOSHITA ARCHITECTS INC. PRIZES
Established in 1986 by Moffat Kinoshita Associates Inc. Two prizes to be awarded for: (a) the student who attains the highest grade in GEO 4H3; and (b) the student who attains the highest grade in GEO 4H23.
Value: $175 each (40060250)

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 programme in Geography and Environmental Studies, Earth and Environmental Sciences, Environmental Science, or Engineering and Society, who attains the highest Full-load Average.
Value: $700 (30213181)

THE E.S. MOORE PRIZE
Established in 1956 by Elwood S. Moore, LL.D. (Class of '56). To be awarded to the student graduating in an Honours programme in Geography who, in the judgment of the School of Geography and Geology, has attained the most notable standing in Geo.
Value: $150 (50015116)

THE JOHN F. MOORE PRIZE
Established in 1990 by the Steel Founders' Society of America in honour of John Moore's contributions to the Society over the past 25 years. To be awarded to the student who attains the highest grade in MATLS 4003.
Value: $100 (40060129)

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 60 to 75 units in an Honours programme in Chemistry and who, in the judgment of the Department of Chemistry, is outstanding in the field of inorganic chemistry.
Value: $150 for books (301111)

THE ELIZABETH MOSGROVE SCHOLARSHIP
Established in 1959 by bequest of John W. Mosgrove in memory of his mother. To be awarded to children of members of Her Majesty's Canadian Armed Forces on the basis of Full-load Average.
Value: $800 (300407)

THE MOTOROLA SOFTWARE ENGINEERING SCHOLARSHIPS
Established in 1999 by the Motorola Foundation. To be awarded to two students entering Level III in a Software Engineering programme who, in the judgment of the Department of Computing and Software, have achieved notable academic standing, displayed strong communication skills, demonstrated leadership and involvement in extra-curricular activities.
Value: $1000 each (30252844)

THE MOUTON COLLEGE SCHOLARSHIPS
Established in 1957 from funds originally subscribed by the Alumni of Mouton College during the years 1946 to 1949 for the expansion of Mouton College. Two scholarships are to be awarded to the women students of Mouton Hall with the highest Full-load Averages: (a) one after completion of Level I and 30 to 45 units, and (b) one after completion of Level I and 60 to 75 units.
Value: $1,000 each (30112577)

THE MOUTON HALL RESIDENCE SCHOLARSHIP
Awarded to the student who resides in the residence with the highest Full-load Average (at least 9.5) in an undergraduate programme, with the exception of those in their graduating session.
Value: $300 (30239)

THE ANNE MURRAY SCHOLARSHIP
Established in 1985 in memory of Anne M. Murray (Class of '82) by her family. To be awarded to a student who has completed at least 30 units beyond Level I in a programme in the Department of Modern Languages and Linguistics and who, in the judgment of the Department, has attained notable standing in at least 9 units of German courses above Level I.
Value: $300 (30005119)

THE ELAINE NARDOCCHIO MEMORIAL SCHOLARSHIP FUND
Established in 1998 by family, colleagues and many friends in memory of Dr. Elaine Nardocchio, a professor for over 23 years at McMaster University, Chair of the Department of French from 1990 to 1993 and President of the Canadian Federation for the Humanities from 1994 to 1996. To be awarded to an undergraduate student enrolled in a French programme who, in the judgment of the Department of French, has shown a strong interest in computer skills as applied to the Humanities.
Value: $250 (40101827)

THE NATIONAL ASSOCIATION OF CORROSION ENGINEERS PRIZE
Established in 1989 by the Toronto Section of the National Association of Corrosion Engineers. To be awarded to the graduate who, in the judgment of the Department of Materials Science and Engineering, has submitted an outstanding thesis 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 (50036120)

THE NOSID CERAMIC ENGINEERING PRIZE
Established in 1978 by Nosid (Canada) Limited. To be awarded to the student who has completed Level I and at least 75 units of the Ceramic Engineering Stream of the Materials Engineering programme and who attains the highest standing in MATLS 3603.
Value: $100 (40037122)

THE P.L. NEWBIGGING PRIZES
Established in 1982 in recognition of Dr. Lynn Newbiggin for his outstanding contributions to the Department of Psychology. Four prizes to be awarded to students with the highest Cumulative Average: (a) one to a full-time student in the three-level B.A. programme in Psychology; (b) one to a student in a B.A. programme in Psychology who has completed the programme primarily on a part-time basis; (c) one to a full-time student in the three-level B.Sc. programme in Life Sciences with a concentration in Psychology; and (d) one to a student in a B.Sc. programme in Life Sciences with a concentration in Psychology who has completed the programme primarily on a part-time basis.
Value: $50 each (50040280)

THE P.L. NEWBIGGING SCHOLARSHIP
Established in 1994 by family, friends and colleagues in memory of Dr. P.L. Newbigging, founding Chair of the Department of Psychology and member of the Faculty from 1955-1990, in recognition of his outstanding contributions to the Department and the University. To be awarded to the student entering Level II of an Honours programme in Psychology who has attained the highest average in PSYCH 1A03 and 1AA3.
Value: $300 (40072363)

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: $500 (40064308)

THE NIEMEIER SCHOLARSHIP
Established in 1998 and augmented in 1952 by Dr. O.W. Niemeyer. To be awarded to the student who attains the highest Full-load Average at the completion of Level I and 31 to 55 units of the Nursing programme.
Value: $500 (30114244)

THE ROBERT NIXON SCHOLARSHIP
Established in 1991 by the Brant-Haldimand Liberal Association in honour of Dr. Robert Nixon (Class of '50, LL.D. '81). 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: $650 (30203144)

THE NORTEL NETWORKS SCHOLARSHIPS IN INFORMATION TECHNOLOGY
Established in 1999 by Nortel Networks. Ten scholarships are to be awarded to students entering a programme in Electrical Engineering, Computer Engineering, Software Engineering, Engineering Physics or Computer Science.
Value: $1,000 each (30257870)

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 programme in Political Science who, in the judgment of the Department of Political Science, has achieved high standing in Level III courses in political theory or political philosophy.
Value: $350 (40012125)
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 60 to 75 units of an Honours programme in Chemistry and who, in the judgment of the Department of Chemistry, shows particular promise as an experimental scientist.
Value: $100 for books (50053)

THE ONTARIO ASSOCIATION OF SOCIAL WORKERS PRIZE
Established in 1986 by the Hamilton Branch. To be awarded to the graduating student who has completed SOC WORK 4DD and attains the highest grade in SOC WORK 4DO in the same session.
Value: $125 (50037 126)

THE ONTARIO ASSOCIATION OF SOCIAL WORKERS PRIZE
Established in 1992 by the Hamilton Branch. To be awarded to the graduating student who successfully completes SOC WORK 4DD6 and attains the highest grade in SOC WORK 4DO6 in the same session.
Value: $125 (50082)

THE CONNIE O'SHAUGHNESSY MEMORIAL PRIZE
Established in 1988 by family, friends and associates of Connie O'Shaughnessy (Class of '88), a part-time student who chose to return to complete her degree on a full-time basis. To be awarded to a student who has completed Level I and 30 to 60 units who, in the judgment of the Selection Committee for Part-Time Awards, has made a significant contribution to the University life of part-time students.
Value: $375 (40009 265)

THE GLADYS 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 programme in Classics who, in the judgment of the Department of Classics, demonstrates outstanding achievement in Greek or Latin.
Value: $50 (50060 133)

THE F.W. PAULIN SCHOLARSHIP
Established in 1961 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 70 to 85 units of the Civil Engineering programme, or Level I and 110 to 130 units of the Civil Engineering and Management programme. Award is based on scholarship Full-Load Average of at least 9.5 and evidence of leadership, self-motivation, and practical aptitude appropriate for a future in the construction industry.
Value: $1,100 (30002 134)

THE IRENE PEARCE SCHOLARSHIP
Established in 1994 by Centenary United Church of Hamilton in honour of Irene Pearce, organist and choir director for fifty-four years. To be awarded to a student who has completed Music 1 or 30-78 units of an Honours Music Programme who, in the judgment of the School of the Arts, has attained notable academic standing and demonstrated excellence in keyboard performance.
Value: $300 (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 programme.
Value: $50 (50023)

THE PEVENING SCHOLARSHIP
Established in 1987 by David C. Harraford (Class of '64). To be awarded to a student who has completed Level I and 60 to 75 units of an Honours programme in Economics and who, in the judgment of the Department of Economics, has attained notable academic standing.
Value: $500 (30120 135)

THE TONY PICKARD MEMORIAL SCHOLARSHIP
Established in 1973 by his wife and family, in honour of Captain Antony P. Pickard, O.B.E., C.D., R.C.N. (Ret'd).
Value: $800 (30172)

THE PIONEER GROUP INC. GERONTOLOGY PRIZES
Established in 1968 by the Pioneer Group Limited. Two prizes to be awarded (a) one to a full-time student and (b) one to a part-time student, both of whom are graduating from a programme in Gerontology who, in the judgment of the Gerontology Committee of Instruction, have demonstrated high academic achievement and leadership in extracurricular activities.
Value: $100 each (50021 056)

THE PIONEER GROUP INC. PRIZE
Established in 1990. To be awarded to a student in a Gerontology programme who, in the judgment of the Gerontology Committee of Instruction, has achieved notable academic standing, and demonstrates practical aptitude for a career in health care of the elderly.
Value: $400 (40058 270)

THE PIONEER GROUP INC. PRIZE IN NURSING
Established in 1983 by the Pioneer Group Limited in conjunction with the R. Samuel McLaughlin Centre for Gerontological Health Research. Two prizes to be awarded to students graduating from the Nursing programme who, in the judgment of the School of Nursing, have achieved notable standing and demonstrated practical aptitude for a career in the health care of the elderly.
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 30 units of a programme in Gerontology and who, in the judgment of the Gerontology Committee on Instruction, achieves high standing in 12 units of Gerontology courses (excluding GERONTOLOGY 1A00) and who, demonstrates leadership in the field of Gerontology.
Value: $350 (30121 371)

THE PITCHER-RATFORD AWARDS
Established in 2000 by Bruce Ratford (Class of '71) and Elda Ratford (Pitcher). To be awarded to students (one to a male and one to a female) to be awarded to students who have completed Level II of an Honours Geography programme and who, in the judgment of the School of Geography and Geology, have achieved notable academic standing and demonstrated qualities of leadership at McMaster or in the community.
Value: $500 each (30273 1386)

THE POLITICAL SCIENCE HONOURS ESSAY PRIZE
Established in 1982. To be awarded to the student who in the judgment of the Department of Political Science, has demonstrated outstanding academic achievement in POL SCI 4Z06
Value: $50 (50056)

THE POLITICAL SCIENCE PRIZE
Established in 1982. To be awarded to a graduating student who has completed a programme in Political Science primarily on a part-time basis and who, in the judgment of the Department of Political Science, has demonstrated outstanding academic achievement.
Value: $200 (50042)

THE PRICEWATERHOUSECOOPERS SCHOLARSHIPS
Established in 2000 by PriceWaterhouseCoopers. To be awarded to students entering Level III of the Honours Commerce programme enrolled in COMMERCCE 3AB3 and 3AC3 who, in the judgment of the School of Business, have achieved notable academic standing in COMMERCCE 2A13 and 2A14, and demonstrated qualities of leadership at McMaster or in the community.
Value: $2,000 (30271 074)

THE PSYCHOLOGY SOCIETY PRIZES
Established in 1985 by the Psychology Society and the Faculty and Alumni of the Department of Psychology. Three prizes to be awarded to students who have completed Level I and 60 to 75 units with the highest Full-load Average: (a) one in the Honours Psychology B.A. programme; (b) one in the Honours Psychology B.Sc. programme; and (c) one in a combined Honours programme in Psychology.
Value: $50 each (30123 141)

THE DR. 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 programme in History with the highest Full-load Average and who in that session achieves a grade of at least A- in HISTORY 2T03 and 2T13.
Value: $500 (30309 142)

THE RAND MEMORIAL PRIZE OF CLASS '96
Established by the Class of 1896 in Arts, on the occasion of the 25th anniversary of graduation, 1923, in memory of Chancellor Theodore Harding Rand, to encourage original literary work. To be awarded to the student who has completed Level I and 60 to 75 units and who, in the judgment of the Department of English, has made the most notable original contribution to student publications.
Value: $200 (40045)
THE LLOYD REEDS PRIZES
Established in 1983 in recognition of Dr. Lloyd G. Reeds for his outstanding contributions to the Department of Geography during 35 years of service. Four prizes to be awarded: (a) one to the student who attains the highest Cumulative Average in an Honours B.A. programme in Geography; (b) one to the student who attains the highest Cumulative Average in an Honours B.Sc. programme in Geography; (c) one to the student who attains the highest Cumulative Average in a three-level B.A. programme in Geography or B.Sc. programme in Geoscience with a concentration in Geo; and (d) one to the student who, in the judgment of the School of Geography and Geology, has demonstrated outstanding achievement in GEO 4R06.
Value: $50 each (50039)

THE SHARON REEVES SCHOLARSHIP
Established in 1987 by Kevin W. Reeves (Class of '80) in memory of his wife, Sharon (Class of '79). To be awarded to a student entering Level III or IV of an Honours programme in Music (Education) and who, in the judgment of the School of the Arts, has attained notable standing.
Value: $350 (30135 143)

THE RELIGIOUS STUDIES PRIZES
Established in 1982. Two prizes to be awarded to students who attain the highest Cumulative Average in a three- or four-level programme in Religious Studies: (a) one to a student who has completed the programme on a full-time basis, and (b) one to a student who has completed the programme primarily on a part-time basis.
Value: $50 each (50045)

THE RELIGIOUS STUDIES HONOURS ESSAY PRIZE
Established in 1982. To be awarded to the student who, in the judgment of the Department of Religious Studies, has demonstrated outstanding achievement in RELIG I ST 4R06.
Value: $50 (50044)

THE ELLA JULIA REYNOLDS SCHOLARSHIP
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 30 to 75 units of the Honours English or the Honours English and History programmes with a Full-load Average of at least 9.5. The recipients must not be holders of another scholarship.
Value: $900 each (30065 145)

THE HERBERT A. RICHER SCHOLARSHIP
Established in 1982 by bequest of Mrs. Edna Elizabeth Ross Reeves of Hamilton in memory of her husband, Herbert A. Richer. Four scholarships to be awarded on the basis of scholarship (Full-load Average of at least 9.5) and character to: (a) two to students who have completed Engineering I, or Level I and 35 to 90 units of a programme in Engineering, and (b) two to students who have completed Science I or Level I and 30 to 75 units of a programme in Science.
Value: $1,500 each (30065 145)

THE ROSART PROPERTIES INC. SCHOLARSHIP
Established in 1988 by John D. and Dominic J. Rosart of Burlington. To be awarded to a student who has completed Level I and 30 to 75 units of an Honours programme in Geography and, in the judgment of the School of Geography and Geology, has attained high academic standing.
Value: $325 (30129 146)

THE ABRAHAM ROSENBERG MEMORIAL PRIZE
Established in 1986 by bequest of Abraham I. Rosenberg (Class of '34) of Hamilton and Kitchener. To be awarded to the student who attains the highest standing in ENGLISH 3B03 or SOCIOL 2X03.
Value: $150 (40000 147)

THE MORRIS AND SARAH ROSENHEID MEMORIAL PRIZE
Established in 1989 by bequest of Sarah Rosenhead of Hamilton. To be awarded to the student who attains the highest standing in ENGLISH 1A03 and 1A13.
Value: $150 (40039 152)

ROTARY CLUB OF HAMILTON SCHOLARSHIP
Established in 1989.
Value: $800 (30168 263)

THE RTO PRIZE IN GERONTOLOGY
Established in 1987 by the Superannuated Teachers of Ontario, District 13. To be awarded to the student who attains the highest standing in GERONTOL 1A06.
Value: $100 (40047 163)

THE ELLEN BOUCHARD RYAN SCHOLARSHIP
Established in 2000 by the McMaster Centre for Gerontological Studies, and supported by family, in recognition of Dr. Ellen Bouchard Ryan's outstanding contribution to the field of aging. To be awarded to a student who, in the judgment of the Gerontology Committee of Instruction, has demonstrated high academic achievement and leadership in age-related community activities.
Value: $500 (40092 1130)

THE E.T. SALMON SCHOLARSHIP
Established in 1991 by Mrs. Edward Togo Salmon in memory of her husband, world-renowned Roman historian and member of the Faculty for 43 years. To be awarded to the student who has completed Level I and 60 to 75 units of any Honours Classics or Honours History programme, including at least 12 units of Ancient History and Archaeology, and who, in the judgment of a committee of the two Departments, shows outstanding achievement and promise. The purpose of the scholarship is to enable the winner to travel and study abroad during the vacation before the final Winter Session, and/or to fund the final year of study at McMaster; candidates should submit to the committee a statement of their aims and plans for study.
Value: $2,000 (30204 304)

THE E. TOGO SALMON PRIZE IN HISTORY
Established in 1973 by friends and colleagues of Professor E.T. Salmon on his retirement, in recognition of his outstanding contribution to the Department of History. To be awarded to the student who has completed Level I and 60 to 75 units and who, in the judgment of the Department of History, attains notable academic standing in at least nine units of History courses.
Value: $150 for books. (40075 359)

THE NOEL SANDUSKY MEMORIAL PRIZE
Established in 1994 by family and friends in memory of Noel Sandusky. To be awarded to a student who has completed Level I and 30-45 units of a programme in History who, in the judgment of the Department of History, attains notable academic standing in at least nine units of History courses.
Value: $100 for books. (40075 359)

THE HILDA SAVAGE MEMORIAL SCHOLARSHIP
Established in 1960 by bequest of Bertha Savage.
Value: $500 (30166)

THE LARRY SAYERS PRIZE IN CHINESE HISTORY
Established in 1983 in memory of Larry P. Sayers (Class of '82) by his friends. To be awarded to the student who, in the judgment of the Department of History, has demonstrated outstanding achievement in at least six units of courses work in Chinese history.
Value: $250 (40030 149)

THE DR. SINNA SAGAR MEMORIAL SCHOLARSHIP
Established in 1999 in memory of Dr. Sina Saggar (Hon. B.Sc. '93), a young, exceptionally gifted and caring medical doctor who tragically passed away on October 28, 1999. To be awarded to a student enrolled in an Honours Bachelor of Science programme who, in the judgment of the Faculty of Science, has demonstrated outstanding academic performance.
Value: $500 (30263 876)

THE REBECKAH SCHNURR AWARD
Established in 1998 by Rebeckah Schnurr to provide support to McMaster students. To be awarded to a student registered in a Bachelor of Commerce programme who, in the judgment of the Faculty of Business, has demonstrated outstanding academic achievement and leadership through community involvement.
Value: $500 (40094 793)

THE SCHOOL OF THE ARTS SCHOLARSHIP IN MUSIC
Established in 1993 by the Department of Music which later became part of the School of the Arts. To be awarded to a student who, in the judgment of the School of the Arts, has demonstrated academic excellence in Music.
Value: $1,000 (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 programme in Science who, in the judgment of the Faculty of Science, have demonstrated outstanding academic achievement and leadership.
Value: $500 each (30279 1533)

THE SHEILA SCOTT SCHOLARSHIP FOR BRANDON HALL
Awarded to the student who resides in the residence with the highest Full-load Average (at least 9.5) in an undergraduate programme, with the exception of those in their graduating session.
Value: $300 (30202)
THE SHEILA SCOTT SCHOLARSHIP IN ENGLISH
Established in 1983 by graduates of McMaster University and friends in honour of Sheila Scott, Dean of Women from 1965 to 1982, in recognition of her outstanding contributions to this University and her residence during 25 years of service. To be awarded to the student who has completed Level I and 60 to 75 units of the Honours English programme, and who attains the highest Full-load Average.
Value: $400 (30136 150)

THE SHEILA SCOTT SCHOLARSHIP FOR WALLINGFORD HALL
Awarded to the student who resides in the residence with the highest Full-load Average (at least 9.5) in an undergraduate programme, with the exception of those in their graduating session.
Value: $300 (30115)

THE LARRY SEFTON SCHOLARSHIPS*
Established in 1985 by the Hamilton Steelworkers Area Council in memory of Larry Sefton, area supervisor (1946-63) 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 programme, who, in the judgment of the Committee of Instruction for Labour Studies, have achieved notable standing in any level.
Value: $500 each (40037 151)

THE CHARLOTTE E. SEIDEL SCHOLARSHIP
Established in 1994 by Genevieve J. Heinz in memory of Charlotte E. Seidel. To be awarded to a student in a programme in Music who, in the judgment of the School of the Arts, has attained high academic standing and has made significant contributions to the campus or community.
Value: $550 (30223 367)

THE GRACE SENRA-FONTES MEMORIAL PRIZE*
Established in 1989, in the graduating class (Class of ’89) in association with the McMaster University Nursing Society and the McMaster Nursing Alumni Executive in memory of Grace Senra-Fontes (Class of ’89) of Toronto. To be awarded to a student who has completed Level I and 70 to 85 units of the Nursing programme and who, in the judgment of the School of Nursing, best demonstrates excellence in scholarship and leadership, and has served as a valuable role model for those qualities deemed important to success in a nursing career.
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 1A3.
Value: $125 (40059 277)

THE ALBERT SHALOM TRAVEL SCHOLARSHIP
Established in 1994 by family, friends and colleagues in memory of Albert Shalom, Professor of History at McMaster University from 1966 to 1991. To be awarded to a student who is enrolled in a programme in Philosophy, and has, in the judgment of the Department of Philosophy, attained notable standing. The award is to be used to help defray the costs of study overseas in Level III.
Value: $500 (30225 365)

THE LOUIS J. SHEIN SCHOLARSHIP
Established in 1990 by family and friends in memory of Dr. L.J. Shein, founding chair of the Russian Studies programme and faculty member from 1958 to 1990. To be awarded to a student who in the judgment of the Department of Modern Languages and Linguistics, has achieved notable standing in RUSSIAN 2A03, 3A03 or 3A3.
Value: $400 (30189 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 programme. Awards will be based on scholarship and on the quality and creativity shown in written communication.
Value: $225 each (30645 154)

THE SHELL CANADA SCHOLARSHIPS IN ENGINEERING AND MANAGEMENT
Established in 1983. Three scholarships to be awarded to students who have completed Level I and at least 110 units of a programme in Engineering and Management. Awards will be based on scholarship and on the quality and creativity shown in written and oral reports.
Value: $800 each (30645 384)

THE SHENSTONE PRIZE
Established in 1903 by the late John Shenstone of Toronto, and continued by members of his family. To be awarded to the student who has completed Science I and who attains the highest average in any four of the Level I courses in Chemistry, Physics and Biology.
Value: $125 (30138)

THE GERALD ANDERVERA 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 60 to 75 units of the Honours Physics or the Honours Chemistry and Physics programme with highest Full-load Average.
Value: $300 (30059 156)

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 Financial Aid section of this Calendar.

THE RICHARD SLOBOODIN SCHOLARSHIP
Established in 1982 in honour of Professor Richard Slubodin for his outstanding contributions to the Department of Anthropology. To be awarded to the graduating student in an Honours Anthropology programme who, in the judgment of the Department, has demonstrated outstanding academic achievement.
Value: $50 (50046)

THE PATRICIA L. SYME MEMORIAL PRIZES
Established in 1972 by the Patricia Syme Memorial Fund Committee. Two scholarships to be awarded to students who have completed Level I and 45 units and who attain the highest Full-load Average: (a) one in the three-level English programme and (b) one in the three-level Psychology B.A. programme.
Value: $250 each (30118)

THE SOCIAL WORK PRIZE
Established in 1982. To be awarded to the student who attains the highest grade in SOC WORK 2A06.
Value: $50 (40050)

THE SOCIETY OF CHEMICAL INDUSTRY MERIT AWARDS
Established in 1961. Three plaques to be awarded: (a) one to a Chemical Engineering graduand, (b) one to an Honours Biochemistry or Honours Biochemistry and Chemistry graduand, and (c) one to an Honours Chemistry, Co-op, Honours Chemistry or Honours Chemistry and Physics graduand, who have attained the highest Cumulative Average (at least 9.5) and have completed the programme in the normal number of years.

THE SOCIETY OF MANAGEMENT ACCOUNTANTS OF ONTARIO SCHOLARSHIP
Established in 1988. To be awarded to the student who has completed Level I and 60 to 75 units of a programme in Commerce and who obtains the highest Full-load Average and in that Session attains a grade of at least A-in-COMMERCE 3A03.
Value: $500 (30140 158)

THE SOCIOLOGY PRIZES
Established in 1982. Two prizes to be awarded to students with the highest Cumulative Average: (a) one to a student who has completed the three-level programme in Sociology on a full-time basis; and (b) one to a student who has completed a programme in Sociology primarily on a part-time basis.
Value: $50 each (50051)

THE SOMERVILLE SCHOLARSHIPS
Established in 1966 by bequest of William L. Somerville, architect of the McMaster University buildings of 1930.
Value: $800 (30169 159)

The recipient of this award is eligible to receive additional aid through the corresponding Supplementary Bursary Aid Fund if he/she demonstrates financial need. Please see the section on Supplementary Bursary Aid for Award Recipients in the Financial Aid section of this Calendar.

THE SONS OF ITALY OF ONTARIO SCHOLARSHIP
Established in 1971 by the Order Sons of Italy of Ontario. To be awarded to a student who has completed at least 30 units beyond Level I in a programme in the Department of Modern Languages and Linguistics and who, in the judgment of the department, has attained notable standing in at least six units of Italian courses above Level I.
Value: $500 (30141 168)

THE SOUTH ONTARIO ECONOMIC DEVELOPMENT COUNCIL SCHOLARSHIP
Established in 1973 by the South Ontario (formerly Niagara) Economic Development Council. Two scholarships to be awarded, normally one in each of the B.A. and B.Sc. programmes, to the students who have completed Level I and 60 to 75 units of the Honours Geography programme and who elect GEO 4R06 in their graduating session. Awards are based on scholarship and interest in undertaking studies relating to regional development and regional planning in the Niagara Peninsula.
Value: $1,200 each (30142 161)
THE MARNIE SPEARS SCHOLARSHIP
Established in 1993 by many friends, colleagues and alumni of McMaster University as a tribute to Marnie Spears (Class of '69), Executive Director, Development and Public Relations from 1986-93 and dedicated alumna who served as President by the McMaster Alumni Council in 1980, in recognition of her outstanding contribution to the University. To be awarded to the student who has completed Level I and at least 30 units of an Honours programme with notable academic standing and who, in the judgment of a Selection Committee, has demonstrated leadership in public, community or University alumna relations.
Value: $350 (35217 323)

THE S.L. SQUIRE SCHOLARSHIP
Established in 1938 by bequest of S.L. Squire of Toronto. Four awards are to be made to students in any Level I programme who attain the highest standing in any two of MATH 1A33, 1B03, 1H03, 1N33, and in other tests provided for this scholarship by the Department of Mathematics and Statistics.
Value: $400 each (30132)

THE CLARENCE L. STARR PRIZE
Established in 1948 in memory of Dr. C.L. Starr, M.D., L.L.D., F.A.S.S., Professor of Surgery at the University of Toronto, and an honorary alumnus of McMaster University (L.L.D. 1922). To be awarded to the student who has completed Nursing and who attains the highest Full-load 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 3D06 and attains the highest grade in SOC WORK 3C06 in the same session.
Value: $100 (60001)

THE ANNE STEIN MEMORIAL PRIZE
Established in 1971 by friends and colleagues of Anne Stein. To be awarded to the student who successfully completes SOC WORK 3D06 and attains the highest grade in SOC WORK 3D06 in the same session.
Value: $100 (40003)

THE LEONA ALLERSTON RYAN AND GORDON HENRY STEVENS MEMORIAL SCHOLARSHIP
Established in 1995 by Elaine Kellof in memory of Leona and Gordon Stevens. To be awarded to a student who has completed Level I and 30-75 units of an Honours programme in Music or Art who, in the judgment of the School of the Arts, has demonstrated outstanding achievement.
Value: $600 (30229 393)

THE MABEL STOAKEYL SCHOLARSHIP
Established in 1956 by the Young Women's Canadian Club of Toronto (now the Career Women's Canadian Club of Toronto). To be awarded to a woman student who has completed Level I and 30 to 45 units of any programme and who gives evidence of outstanding academic achievement and leadership.
Value: $425 for books (30103)

THE STOBO SCHOLARSHIP
Established in 1957 by bequest of William Q. Stoabo.
Value: $800 (30170)

THE MARIE L. STOCK SCHOLARSHIP
Established in 1987 by the French Section of the Department of Romance Languages in honour of Marie L. Stock, Professor Emeritus of French, and Chair of the Department of Romance Languages from 1962 to 1986. To be awarded to the student who has completed Level I and 60 to 75 units of an Honours programme in French and who, in the judgment of the Department of French, has achieved notable academic standing.
Value: $400 (30104 166)

THE MARK JOHN STOJIC SCHOLARSHIPS
Established in 1997 by bequest of Mark John StoJic. Two scholarships to be awarded to students who have completed Level III of a Materials Science and Engineering programme who, in the judgment of the Department of Materials Science and Engineering, demonstrate outstanding academic achievement.
Value: $1,000 each (30242 780)

THE SWISS MINISTERTO CANADA BOOK PRIZES
Established in 1950. To be awarded from time to time to in-course students for proficiency in French, German, or Italian.
Value: Book (40051)

THE JUANITA LEBARRE SYMINGTON SCHOLARSHIP
Established in 1981 by The Women's Art Association of Hamilton in memory of Juanita LeBarre J. Hamilton. To be awarded to the student entering the graduating session of the Honours Art programme with the highest Full-load Average. The recipient must be from the Hamilton-Wentworth Region.
Value: $300 (30092 169)

THE T.H.B. SYMONS PRIZE IN CANADIAN STUDIES
Established in 1976. To be awarded to the student who has completed Level I and 60 to 75 units of a programme in Political Science who, in the judgment of the Department of Political Science, has achieved notable standing in at least nine units of Canadian Politics courses.
Value: $250 (30144 170)

THE DR. ANDREW SZENDROVITS MEMORIAL SCHOLARSHIP
Established in 1999 by family, friends and colleagues in memory of Dr. Andrew Szendrovits, a former professor of Production and Management Science since 1982 and Dean of the Faculty of Business from 1979 to 1984 at McMaster University. To be awarded to the student enrolled in a Commerce programme who achieves the highest average in the operational/management science courses (COMMERCE 3C03 and 3Q03) taken in the same session.
Value: $225 (30092 321)

THE KENNETH W. TAYLOR BOOK PRIZE
Established in 1976 by his children in memory of Dr. Kenneth W. Taylor (Class of '21), L.D. (Class of '50). To be awarded to the student who, in the judgment of the Department of Economics, has demonstrated outstanding academic achievement in courses within the areas of monetary economics and financial institutions, and of public finance.
Value: $100 (40029 171)

THE THEATRE & FILM STUDIES BOOK PRIZE
Established in 1974 by Professor Ronald W. Vince. To be awarded to the student who attains the highest standing in THTR&FLM 1A00 and 1B00.
Value: Book (40014 053)

THE HUGH R. THOMPSON MEMORIAL PRIZE
Established in 1960 in memory of Dr. Hugh R. Thompson. To be awarded to the student who has completed Level I and 30 to 45 units of the Honours Geography or the Honours Geography and Geology programme with the highest Full-load Average.
Value: $200 (30069)

THE DR. R.A. THOMPSON PRIZE IN MATHEMATICS
To be awarded to the student who has completed Level I and 60 to 75 units of the Honours Computer Science, Honours Computer Science and Mathematics, Honours Computer Science and Statistics, Honours Mathematics or Honours Statistics programme, and who attains a high Full-load Average.
Value: $225 (30040)

THE MICHAEL THOMSON MEMORIAL BOOK PRIZES
Established in 1975 by the members of the Departments of German and Russian in memory of Michael Thomson, Supervisor of the McMaster University Language Laboratories from 1961 to 1976. Two prizes to be awarded: (a) one to the student who attains the highest standing in GERMAN 1Z2Z and (b) one to the student who attains the highest standing in RUSSIAN 3A43.
Value: $50 each (40035 266)

THE TINNERMAN PALNUT ENGINEERED PRODUCTS SCHOLARSHIP IN MECHANICAL ENGINEERING
Established in 2001 by Tinnerman Palnut Engineered Products. To be awarded to a student entering Level II of a Mechanical Engineering Programme who, in the judgment of the Department of Mechanical Engineering, has achieved notable academic standing and demonstrated qualities of leadership at McMaster or in the community.
Value: $3,750 (30279 1540)

THE GRAHAM RONALD TOOP SCHOLARSHIP
Established in 1989 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 programme 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: $300 (30190 256)

THE CORELENCE HELENTOSTEVIN SCHOLARSHIPS
Established in 1999 by bequest of Corelence Tostevin. Five awards to be granted to students who are registered in a Post-RN degree programme and who, in the judgment of the School of Nursing, have demonstrated notable academic achievement.
Value: $250 each (40083 791)
THE JOHNTOTH 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: $300 (40067 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: $300 (40104 179)

THE THOMASTRUMAN MEMORIAL PRIZE
Established in 1992 by friends and colleagues in memory of Professor Thomas Truman, a member of the Department of Political Science from 1966 to 1990. To be awarded to the student entering the final level of an Honours programme 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 (40068 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 (40052)

THE UNIVERSITY SCHOLARSHIPS
Made available from by authorization of the Board of Governors of the University.
Value: $800 each (30173)

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 (60063)

THE VALLEY CITY MANUFACTURING CO. LTD. SCHOLARSHIPS
Established in 1991 by the Valley City Manufacturing Co. Ltd. of Dundas, Ontario. Two scholarships to be awarded to the student enrolled in an Honours B.Sc. programme: one to the student entering Level II and one to the student entering Level III who attains the highest Full-load Average. Recipients may not hold another scholarship of equal or greater value.
Value: $1,500 each (30205 227)

THE VAREY SCHOLARSHIP
Established in 1978 by J.C. Varey, Dundas, in memory of Albert E. Varey. To be awarded to a student in an Honours Programme in Classics who, in the judgment of the Department of Classics has achieved notable academic standing.
Value: $200 (30151 182)

THE HARRY WAISGLASS BOOK PRIZE
Established in 1988 in honour of Harry Waisglass, the first Director of the Labour and Education Programme at McMaster. To be awarded to a student graduating from a programme in Labour Studies who, in the judgment of the Committee of Instruction for Labour Studies, has demonstrated outstanding achievement.
Value: $150 (50054)

THE MELINDA WAPSHAW ACHIEVEMENT AWARD*
Established in 1993 by the Labour Studies Student Association and the Labour Studies Programme. To be awarded to a student who has completed Level I and 60-75 units of an Honours Programme in Labour Studies and who, in the judgment of the Committee of Instruction, demonstrates outstanding achievement.
Value: $100 (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 Programme 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 programme 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 (49009 782)

THE MARKWATSON MEMORIAL PRIZE IN HISTORY
Established in 1997 by friends in the Department of History in memory of Mark A. Watson (Class of '66). To be awarded to a student graduating from a three-level programme in History who, in the judgment of the Department of History, has displayed outstanding achievement consistently throughout the degree programme.
Value: $100 (50035 183)

THE RALPH WEEKES SCHOLARSHIP*
Established in 1994 by the Investors Group Financial Services to recognize the accomplishments of Ralph Weeks (Class of '73). To be awarded to a student enrolled in a programme 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: $300 (40073 360)

THE WEISS FAMILY FOUNDATION SCHOLARSHIP
Established in 1982. To be awarded to the student who has completed Level I and 60 to 75 units of the Honours Commerce programme and who attains the highest Full-load Average (at least 9.5).
Value: $1,500 (30152 184)

THE HOWARD P. WHIDEN SCHOLARSHIP
Established in 1941 by the Honourable Jacob Nicol (Class of '00) of Sherbrooke, Quebec, in honour of Chancellor Howard P. Whidden, with a view to fostering relations of friendship and understanding between French-speaking and English-speaking Canadians. To be awarded to a student in his/her penultimate Level 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: $500 (30176)

THE WHIDDEN HALL RESIDENCE SCHOLARSHIP
Awarded to the student who resides in the residence with the highest Full-load Average (at least 9.5) in an undergraduate programme, with the exception of those in their graduating session.
Value: $300 (30159)

THE R.M. WILES MEMORIAL BOOK PRIZE*
Established in 1975 in memory of Professor Roy McKenWiles by his friends and colleagues. To be awarded to the student who, in the judgment of the Department of English, has written the best essay on a topic relating to English literature of the period 1660-1800.
Value: $200 for books (40044)

THE T. RUSSELL-WILKINS MEMORIAL SCHOLARSHIP
Established in 1963 by bequest of Mrs. T. Russell Wilkins (B.A. '18 Brandon, M.A. '38), daughter of former Chancellor Howard P. Wilkins, in memory of her husband, Dr. T. Russell Wilkins (Class of '11). To be awarded to a student entering the penultimate level of an Honours programme in Arts & Science, Health Sciences or Science who has demonstrated outstanding academic achievement. In addition, the student 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 winner to spend the summer before the final Fall/Winter session in travel and study outside Canada.
Value: $6,000 (30178)

THE MARJORIE AND CHARLES WILKINSON MARJORIE SCHOLARSHIP
Established in 1981 by the family in honour of Marjorie Wilkinson, author of many books and addresses on religion, and co-founder of the Hamilton Lay School of Theology at McMaster in 1966, and Charles Wilkinson, religion editor and writer for the Hamilton Spectator from 1963-1985. To be awarded to a student who has completed at least 30 units beyond Level I of an Honours programme 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: $425 (30191 584)

THE THOMAS E. WILLEY SCHOLARSHIP
Established in memory of Dr. Thomas E. Willey in 1996 by his family, colleagues and friends. To be awarded to an undergraduate student who, in the judgment of the History and Modern Languages departments, has demonstrated excellence in German studies.
Value: $250 (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 30 to 45 units of an Honours programme in Physics with the highest Full-load Average.
Value: $800 (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 programme (Level IV for Engineering students registered in a five-year programme) who, in the judgment of a Selection Committee, rank highest in scholarship, leadership and influence. These scholarships are tenable for up to two years provided the recipients maintain a sessional average of 9.5.
Value: $15,000 each ($7,500 per year for two years) (30280 1546)

**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 30 to 45 units of a programme in Honours Art or Honours Art History with the highest Full-load Average. The recipients must be from the Hamilton-Wentworth Region.
Value: $250 each (30153 185)

**THE WOODSTOCK HALL RESIDENCE SCHOLARSHIP**
Awarded to the student who resides in the residence with the highest Full-load Average. The recipients maintain a sessional average of 9.5.
Value: $200 (30075 189)

**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 I and 60 units of the Kinesiology programme and has demonstrated outstanding achievement in the programme.
Value: $200 (30075 189)

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### SUMMARY OF IN-COURSE AND GRADUAND SCHOLARSHIPS AND PRIZES BY FACULTY

#### Legend
- **AWARD CATEGORY:**
  - B: In-Course (Full-load) Awards
  - C: Part-time Awards
  - D: Specific Achievement Awards
  - E: Graduand Awards
  - F: Second Degree Awards
- **AWARD TYPE:**
  - J: Judgmentally Awarded
  - M: Mathematically Awarded

**Please look at the listings in relevant Faculties if you are in a combined programme.**

<table>
<thead>
<tr>
<th>Faculty/Programme</th>
<th>Award Type</th>
<th>Application Required</th>
<th>Award Category</th>
<th>Value</th>
<th>Name of Scholarship</th>
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<td>B</td>
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<td>The Hawkrigg Foundation Scholarship in Business</td>
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</tbody>
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**THE MARGUERITE Z. YATES SCHOLARSHIP**
Established in 1960 by bequest of Mrs. W.H. Yates of Hamilton.
Value: $900 (30167)

**THEYATES SCHOLARSHIPS**
Value: $800 each (30171)

**THE GLADYS A. YOUNG SCHOLARSHIP**
Established in 1991 by T.G. Harvey in honour of his wife, Gladys (B.Sc., '37, M.Sc.,'38), one of a group of researchers who commenced radio astronomy research with the National Research Council of Canada. To be awarded to the student who has completed Level I and 30 to 65 units of an Honours programme in Mathematics or Physics with the highest Full-load Average. The recipient must not hold another scholarship of equal or greater value.
Value: $1,600 (30206 363)

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 LILLIAN AND MANUEL ZACK SCHOLARSHIP**
Established in 1984 by Lillian and Manuel Zack (Class of '40) of Hamilton. To be awarded to a student who has completed Level I and 70 to 85 units of a programme 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: $900 (30101 190)
<table>
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<th>Faculty/Programme</th>
<th>Award Type</th>
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<th>Award Category</th>
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F.A. Hall, Assoc. Dipl., B.Mus., M.A., Ph.D.

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<td><strong>Chancellor</strong></td>
<td>Melvin M. Hawkrigg, B.A., LL.D., C.A., F.C.A., LL.D.(Hon.)</td>
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<td><strong>President and Vice-Chancellor</strong></td>
<td>Peter J. George, C.M., B.A., M.A., Ph.D., D.U.(Hon.), D.Hon., C.</td>
</tr>
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<td>Peter G. Sutherland, B.Sc., M.S., Ph.D. (Until December 31, 2001)</td>
</tr>
<tr>
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<td>Kenneth H. Norrie, B.A., M.Phil., Ph.D. (Effective January 1, 2002)</td>
</tr>
<tr>
<td><strong>Vice-President (Research and International Affairs)</strong></td>
<td>Mamdouh Shoukri, B.Sc., M.Sc., Ph.D., P.Eng.</td>
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<tr>
<td><strong>Dean and Vice-President (Health Sciences)</strong></td>
<td>John G. Kelton, M.D., F.R.C.P(C)</td>
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<tr>
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<td>Karen S. Beltane, B.A., C.G.A.</td>
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<tr>
<td><strong>Vice-President (University Advancement)</strong></td>
<td>Roger Trull, B.A.</td>
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<td>G. Martou</td>
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<td>N.D.O. Richmond</td>
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<tr>
<td>M.M. Ali, B.Sc., M.Sc.</td>
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<td>I.M. Delab, B.Sc., M.Sc.</td>
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<td>T. Jacobs, B.A., M.A.</td>
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<td>M.M. Hawkrigg</td>
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<td><strong>Chair</strong></td>
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