

2007-2008

McMASTER UNIVERSITY

Undergraduate Calendar

◆ This Calendar covers the period from September 2007 to August 2008.

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

ARTS AND SCIENCE
BUSINESS
ENGINEERING
HEALTH SCIENCES
HUMANITIES
SCIENCE
SOCIAL SCIENCES
INDIGENOUS STUDIES

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Using the Calendar

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

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

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

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

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

Directory for Correspondence and Enquiries

Mailing Address

McMaster University
Hamilton, Ontario, L8S 4L8
Canada

Telephone: (905) 525-9140

Web Address: <http://www.mcmaster.ca>

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

Admissions Office (Undergraduate Studies)

Associate Registrar (Admissions): Lynn Giordano.
Gilmour Hall, Room 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
Gilmour Hall, Room 120, L8S 4L8, ext. 24319

Transcripts and Records

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

Examinations, Schedules and Classroom Reservations

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

Office of the Associate Vice-President

(Student Affairs) and Dean of Students
Associate Vice-President

(Student Affairs and Dean of Students): Philip Wood
Gilmour Hall, Room 207, L8S 4L8, ext. 27455

School of Graduate Studies

Dean of Graduate Studies: Fred L. Hall
Gilmour Hall, Room 212, L8S 4L8, ext. 23679

Centre for Continuing Education

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

Alumni Association

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

Housing and Conference Services

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

Off-Campus Resource Centre

McMaster University Student Centre, Room B112, L8S 4S4, ext. 24086

Hospitality Services

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

Centre for Student Development

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

Services for Students with Disabilities

Manager, Disability Services and University Advisor
on Disability Issues: Tim Nolan

Program Coordinator (Learning Specialist) Learning
Disabilities: Indrani Reddy

McMaster University Student Centre, Room B107, L8S 4S4, ext. 24711

Career Services

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

Advice for Overseas and Exchange Students

International Student Services Supervisor/Advisor: Marcos Costa
Gilmour Hall, Room 104, L8S 4L8, ext. 24748

Grievances

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

Other Publications for McMaster Students

◆ Undergraduate Studies

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

◆ Graduate Studies

- Calendar of the School of Graduate Studies
(Available from the School of Graduate Studies.)
- McMaster Divinity College Calendar
(Available from Divinity College.)
- Graduate Studies in Business (MBA and Ph.D. programs)
(Available from the DeGroote School of Business.)

- Teaching departments that offer graduate studies also provide information booklets about their programs. These may be requested directly from the departments.

◆ Certificate and Professional Studies

- The Centre for Continuing Education (CCE) Handbook which describes certificate and diploma programs and affiliated professional associations, as well as the CCE Timetable are available at <http://www.mcmastercce.com>

◆ Professional Development and Non-Credit Studies

- Brochures about non-credit programs, such as languages, computer training, professional development workshops and managerial and leadership training, as well as the CCE Timetable are available at <http://www.mcmastercce.com>

Ombuds Office

Ombuds: Shelley Lancaster, Carolyn Brendon

McMaster University Student Centre, Room 210, L8S 4S4, ext. 24151; Fax: (905) 529-3208; Email: ombuds@mcmaster.ca

The Ombuds provides information and advice relating to problems, complaints and appeals involving members of the McMaster community.

The Ombuds Office is a service provided by the MSU and the University.

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

McMaster University

McMaster University, through its continued dedication to innovative education and ground-breaking research, has earned its reputation as one of the leading post-secondary institutions in Canada.

McMaster is a medium-sized, full-service university offering educational programs through six Faculties. The extensive activity in research, supported by approximately \$345 million in grants and contracts, means there are first-class libraries and sophisticated facilities. Undergraduate teaching is conducted through the De Groote School of Business, the Faculties of Engineering, Health Sciences, Humanities, Science and Social Sciences, and the distinctive Arts and Science Program. The Department of Kinesiology and the School of Social Work are part of the Faculty of Social Sciences.

DISCIPLINES AND DEGREES

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

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

The Faculty of Engineering offers the Bachelor of Engineering degree in Chemical Engineering, Civil Engineering, Computer Engineering, Electrical and Biomedical Engineering, Electrical Engineering, Engineering Physics, Materials Engineering, Mechanical Engineering, Mechatronics Engineering, Software Engineering, Software Engineering and Embedded Systems and Software Engineering and Game Design. In addition, a Bachelor of Applied Science is offered in Honours Computer Science and Honours Business Informatics.

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

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

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

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

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

Bachelor of Science programs are available in the Faculty of Science at the B.Sc. and B.Sc. Honours levels. Programs are offered in Biochemistry, Biology, Chemistry, Computational Biology, Computer Science, Earth and Environmental Sciences, Geo-

science, Kinesiology, Life Science, Mathematical Science, Mathematics and Statistics, Materials Science, Medical and Health Physics, Medical Radiation Sciences, Molecular Biology, Origins, Physical Science, Physics and Psychology.

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

THE UNIVERSITY

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

More than 22,000 full-time students attend McMaster University, 2,500 of whom are pursuing advanced degrees offered through the School of Graduate Studies. In addition, over 3,800 part-time students are registered in the Fall/Winter session, from September to April, and 6,200 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 1,200 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 programs are supported by some fine, and even unique, facilities. The University Library is a member of the Association of Research Libraries and contains more than two million volumes and has 4,725 current print journal titles, 21,100 current electronic journal titles and more than 58,000 e-books. The Library has an extensive special collections section which includes the Bertrand Russell Archives, 18th Century materials and major Canadian collections. Facilities for programs in the Humanities include modern language laboratories, music rehearsal rooms, art studios and seminar rooms. The work of the Faculties of Science and Engineering is supported by sophisticated facilities, which includes a nuclear reactor. There are four general purpose Student Computing Centres on campus using MS Windows XP Pro Operating System based PCs and a variety of Windows software. As well there are numerous departmental computing clusters which operate a mixture of Windows, Linux or Solaris environments. Students in residence have convenient access to the McMaster network and the internet from their rooms.

The recreation, fitness and intramural programs offer more than 30 different sports in which over 14,000 students participate. The Interuniversity Athletic Program features 34 varsity sport opportunities. The department also offers a full range of instructional and outdoor education programs throughout the calendar year. The athletic facilities include a new athletics and recreation complex featuring one of the largest collegiate fitness centres in Canada, seven gymnasiums, a 50-metre swimming pool, a 400-metre outdoor track, a 200-metre indoor track, squash courts and indoor climbing wall.

McMaster's campus, which is restricted to pedestrian traffic, is adjacent to the Royal Botanical Gardens at the western end of Lake Ontario. On-campus co-educational and single-sex residences are available for approximately 3,683 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 2007-2008 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.

SESSIONS	TERMS	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.
FALL/ WINTER SESSION	Term 1	6			19								
	Term 2					7			29				
	Term 3	6							29				
SPRING/ SUMMER SESSION	Term 1									5	20		
	Term 2										23	8	
	Term 3									5		8	

CONVOCATIONS

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

Tuesday, July 31, 2007

- ◆ Last day to file a Graduation Information Card and declare a minor for Fall 2007 Convocations

Friday, November 16, 2007

- ◆ Fall 2007 Convocations (all Faculties)

Friday, February 29, 2008

- ◆ Last day to change programs for Spring 2008 Convocations

Friday, February 29, 2008

- ◆ Last day to file a Graduation Information Card and declare a minor for Spring 2008 Convocations

Friday, May 23, 2008

- ◆ Health Sciences Convocation (excluding Nursing)

Monday, June 9 to Friday, June 13, 2008

- ◆ Spring Convocations

Thursday, July 31, 2008

- ◆ Last day to file a Graduation Information Card and declare a minor for Fall 2008 Convocations

Friday, November 21, 2008

- ◆ Fall 2008 Convocations (all Faculties)

Academic Commitments

Students should expect to have academic commitments Monday through Saturday but not on Sunday or statutory holidays. Students who require accommodations to meet a religious obligation or to celebrate an important religious holiday should make their requests as soon as possible after the start of term to their Faculty/Program office.

Release from Liability

McMaster University reserves the right to change or revise information contained in this Calendar, including the alteration of fee structures, schedules and/or courses. The University reserves the right to limit enrolment in, or admission to, any course or program at any level.

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

Course Enrolment Limits: The University reserves the right to limit enrolment in any course which is oversubscribed, even if the course description and registration literature do not indicate an enrolment limit.

University Policies

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

Sessional Dates for 2007-2008

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

Fall/Winter Session 2007-2008

	Term 1	Term 2	Term 3
➤ Registration (All Levels) ➤ Classes begin ➤ Last day for registration and adding or dropping courses ➤ Thanksgiving Day: No classes ➤ Mid-term recess ➤ Last day for cancelling courses without failure by default ➤ Good Friday: No classes ➤ Test and Examination ban: No tests or examinations may be held ➤ Classes end ➤ Mid-Session Tests (Level I) ➤ Final Examinations ➤ Deferred Examinations	Thursday, September 6 Monday, September 17 Monday, October 8 — Friday, November 2 — Tuesday, November 27 to Tuesday, December 4 Monday, December 3 — Wednesday, December 5 to Wednesday, December 19 Monday, February 18 to Thursday, February 21	To Be Announced Monday, January 7 Wednesday, January 16 — Monday, February 18 to Saturday, February 23 Friday, February 29 Friday, March 21 Thursday, April 3 to Thursday, April 10 Wednesday, April 9 — Friday, April 11 to Tuesday, April 29 Monday, June 23 to Thursday, June 26	Thursday, September 6 Monday, September 17 Monday, October 8 Monday, February 18 to Saturday, February 23 Friday, February 29 Friday, March 21 Thursday, April 3 to Thursday, April 10 Wednesday, April 9 Wednesday, December 5 to Wednesday, December 19 Friday, April 11 to Tuesday, April 29 Monday, June 23 to Thursday, June 26

Spring/Summer Session 2008

	Term 1	Term 2	Term 3
➤ Classes begin ➤ Last day for registration and adding or dropping courses ➤ Victoria Day: No classes ➤ Last day for cancelling courses without failure by default ➤ Canada Day: No classes ➤ Civic Holiday: No classes ➤ Classes end ➤ Examinations ➤ Deferred Examinations	Monday, May 5 Friday, May 9 Monday, May 19 Wednesday, June 4 — — Friday, June 20 December 2008 Examination period	Monday, June 23 Friday, June 27 — Wednesday, July 23 Tuesday, July 1 Monday, August 4 Friday, August 8 During class time, as arranged by instructor December 2008 Examination period	Monday, May 5 Friday, May 9 Monday, May 19 Monday, July 7 Tuesday, July 1 Monday, August 4 Friday, August 8 December 2008 Examination period

DEGREES, PROGRAMS AND COURSES

DEGREES AND PROGRAMS

McMaster University offers the following undergraduate degrees:

FACULTY AND DEGREE	DURATION IN YEARS
ARTS & SCIENCE PROGRAM	
B.Arts Sc.	3
B.Arts Sc. (Honours)*	4
(*With the exception of the Combined Honours degrees in Biology and Physics which require five years of study.)	
DeGROOTESCHOOL OF BUSINESS	
B.Com.	4
B.Com. (Honours)	4
FACULTY OF ENGINEERING	
B.A.Sc.	4
B.Eng.	4
B.Eng.Mgt.	5
B.Eng.Society	5
B.Eng.Biosciences	5
B.Tech.	**1
B.Tech.	2 or 4
FACULTY OF HEALTH SCIENCES	
B.H.Sc. (Midwifery)	4
B.H.Sc. (Honours)	4
B.Sc.N.	4
B.Sc.N. (Diploma RN Stream)	**2
B.Sc.N. (Registered Practical Nurse Stream)	3
B.Sc.N. (Basic-Accelerated)	**2
M.D. (Doctor of Medicine)	**3
FACULTY OF HUMANITIES	
B.A.	3
B.A. (Honours)	4
B.Mus. (Honours)	4
B.A./B.S.W.	4
FACULTY OF SCIENCE	
B.Med.Rad.Sc. ***	4
B.Sc.	3
B.Sc. (Honours)	4
B.Sc. (Honours)	4
B.Sc.Kin.(Honours)***	4
(^These are Co-op programs.)	
(**. In these programs, an academic year extends beyond the regular Fall/Winter session.)	
(***) Degree designation subject to approval.)	
FACULTY OF SOCIAL SCIENCES	
B.A.	3
B.A. (Honours)	4
B.Kin. (Honours)	4
B.A./B.S.W.	4
B.S.W.	+2
(*Follows completion of prior undergraduate degree)	

Second Undergraduate Degree

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

Combined Programs

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

ELECTIVE COURSES

AVAILABLE TO LEVEL I STUDENTS

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

ANTHROP	1A03, 1B03, 1Z03
ART HIST	1A03, 1AA3
* ASTRON	1F03
* BIOLOGY	1A03, 1AA3, 1K03
CAYUGA	1Z03
* CHEM	1A03, 1AA3, 1R03
CLASSICS	1A03, 1B03, 1M03
CMST	1A03
COMP LIT	1A03, 1AA3
* COMP SCI	1FC3, 1MA3, 1MD3, 1SA3, 1TA3
CSCT	1B03, 1BB3
ECON	1B03**
ENGLISH	1A03, 1AA3, 1B03, 1BB3, 1C06
* ENVIR SC	1A03, 1B03, 1G03
FRENCH	1A06, 1K06, 1Z06
GEO	1HS3, 1HU3
GERMAN	1B03, 1BB3, 1Z06
GERONTOL	1A03
GREEK	1Z03, 1ZZ3
* HTH SCI	1G03
HEALTHST	1A03
HISPANIC	1A03, 1AA3, 1Z06, 2D03
HISTORY	1A03, 1AA3, 1B03, 1BB3, 1M03
INDIG ST	1A03, 1AA3
INQUIRY	1HU3, 1SS3, 2HS3
* INQUIRY	1SC3
ITALIAN	1A03, 1AA3, 1Z06, 1ZZ6
JAPANESE	1Z06
* KINESIOL	1Y03, 1YY3
LABR ST	1A03, 1C03
LATIN	1Z03, 1ZZ3
LINGUIST	1A03, 1AA3
* MATH	1A03, 1AA3, 1B03, 1C03, 1D03, 1K03, 1M03
* MATLS	1M03
* MMEDIA	1A03, 1B03
MOHAWK	1Z03
MUSIC	1A03, 1AA3
OJIBWE	1Z03
PEACE ST	1A03, 1B03
PHILOS	1A03, 1B03, 1C03, 1D03, 1E03
* PHYSICS	1B03, 1BA3, 1BB3, 1F03, 1P03
POLISH	2A03, 2AA3
POL SCI	1G06
PSYCH	1A03, 1AA3
RELIG ST	1B06, 1D06, 1E03, 1I03
* SCIENCE	+1D03
SOC WORK	1A06
SOCIOL	1A06
* STATS	+1A03, 1CC3, 1L03
THTR&FLM	1A03, 1B03
WOMEN ST	1A03, 1AA3

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

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

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

COURSE AVAILABILITY

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

UPPER-LEVEL COURSES AVAILABLE TO ALL STUDENTS

ANTHROP	2B03, 2G03, 2H03, 2P03, 2U03, 2VV3, 2W03, 2X03, 3Y03
GEO	2HC3, 2HD3, 2HU3, 2QQ3, 3HR3
POLISH	2A03
POL SCI	2A06, 2B03, 2BB3, 2C03, 2D03, 2DD3, 2F03, 2H03, 2I03, 2J03, 2L03, 2N03, 2O06, 2XX3
RELIG ST	2B03, 2BB3, 2DD3, 2EE3, 2F03, 2GG3, 2H03, 2HH3, 2I03, 2I13, 2JJ3, 2K03, 2KK3, 2L03, 2MM3, 2P06, 2Q03, 2QQ3, 2SS3, 2TT3, 2U03, 2V03, 2VV3, 2W03, 2WW3, 2YY3, 2ZZ3, 3A03, 3AA3, 3B03, 3CC3, 3D03, 3DD3, 3E03, 3EE3, 3GG3, 3J03, 3K03, 3KK3, 3LL3, 3M03, 3MM3, 3N03, 3NN3, 3R03, 3RR3, 3T03, 3U03, 3UU3, 3Z03, 3ZZ3
SOC SCI	2O03, 2P03, 2Q03, 2R03
SOCIO	3KK3

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

ANTHROP	2L03
ART HIST	2A03, 2B03, 2D03, 2F03, 2G03, 2H03, 2I03, 2Z03, 3AA3, 3D03, 3I03, 3J03, 3S03
CLASSICS	2B03, 2D03, 2E03, 2K03, 2LA3, 2LB3, 2LC3, 2LD3, 2Y03, 2YY3
CMST	2E03, 2N03, 2O03, 2Q03, 2R03, 2RR3, 2T03, 3F03, 3U03
COMPLIT	2BB3, 2CC3, 2G03, 2J03, 2M03, 2Y03, 2YY3, 3EE3, 3F03, 3FF3, 3G03, 3H03, 3MM3, 3NN3, 3SS3
CSCT	2J03, 3D03, 3EE3, 3RR3, 3Y03, 3YY3
ECON	2CC3, 2L03
ENGLISH	2C03, 2E03, 2F03, 2J03, 2L03, 2N03, 2R03, 3D03, 3DD3, 3EE3, 3H03, 3RR3, 3U03, 3Y03
GEO	2GG3, 2MM3, 2WW3

GERMAN	3NN3
HEALTHST	2C03, 2D03, 2H03, 3Y03
HTH SCI	2A03, 2G03, 2J03, 3G03, 3GG3, 3I03, 3Y03, 4I13, 4J03
HISTORY	2AA3, 2F03, 2G03, 2HH3, 2I13, 2J03, 2JJ3, 2K03, 2LA3, 2LB3, 2LC3, 2LD3, 2M03, 2MM3, 2Q03, 2QQ3, 2R03, 2RR3, 2S03, 2T03, 2TT3, 2U03, 2UU3, 3A03, 3AA3, 3B03, 3BB3, 3DD3, 3F03, 3FF3, 3G03, 3GG3, 3I03, 3I13, 3KK3, 3L03, 3NN3, 3O03, 3P03, 3QQ3, 3RR3, 3V03, 3W03, 3WW3, 3Y03, 3Z03, 3ZZ3
HUMAN	2C03
INQUIRY	3HS3
ITALIAN	2B03 (Taught in English)
JAPAN ST	2A03, 2F03, 2P06, 3B03, 3E03, 3H03, 3UU3
LINGUIST	2E03
MEDIA	2I03
MUSIC	2A03, 2F03, 2I03, 2I13, 3T03, 3U03
PEACE ST	2A03, 2AA3, 2I03, 2S03, 3B03, 3F03, 3I03, 3L03, 3O03
PHILOS	2B03, 2C06, 2D03, 2E03, 2F03, 2G03, 2H03, 2N03
RELIG ST	2C03, 2FF3, 2M03, 2N03
SOC SCI	2J03
SOTA	3B03, 3C03
THTR&FLM	2F03, 2G03, 2H03, 2I03, 3G03
WOMEN ST	2F03, 2H03, 2HH3, 2L03, 3B03, 3DD3, 3G03, 3GG3, 3NN3

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

ANTHROP	3Z03, 3ZZ3
ART HIST	3B03
COMPLIT	4G03, 4J03
GEO	3AA3, 3CC3, 3DD3, 3HJ3
GERMAN	4G03 (Taught in English)
HEALTHST	3D03, 3E03, 3H03
HTH SCI	3K03, 4O03
KINESIOL	3DD3, 3M03, 3SS3, 3T03, 3Y03, 4M03
POL SCI	3AA3, 3CC3, 3D03, 3E03, 3EE3, 3F03, 3FF3, 3G03, 3GG3, 3HH3, 3I03, 3JJ3, 3KK3, 3LL3, 3N06, 3NN6, 3Q03, 3S03, 3T03, 3U03, 3V03, 3Y03, 3YY3, 3Z03
RELIG ST	3L03, 3S03
THTR&FLM	4J03

DEGREES BY PROGRAM

- ★ This degree program is also available through a combination of evening and summer study. The rate of completion however, will vary from program to program.
- A five-year co-op option is available.
- ▲ Degree Designation subject to approval
- A Co-op option is available.

SUBJECT	BACHELOR'S DEGREE	HONOURS DEGREE	COMBINED HONOURS	PROFESSIONAL DEGREE
Anthropology	B.A. ★	B.A. ★	B.A. ★	
Art		B.A.	B.A.	
Art History	B.A.	B.A.	B.A.	
Arts & Science		B.Arts Sc.	B.Arts Sc.	
Biochemistry •		B.Sc.	B.Sc.	
Biological Chemistry		B.Sc.		
Biology •		B.Sc.	B.Sc.; B.A.	
Biology & Pharmacology •			B.Sc.	
Business Informatics •		B.A.Sc.		
Chemical Engineering •				B.Eng.; B.Eng.Mgt.; B.Eng. Society
Chemical Engineering & Bioengineering •				B.Eng. Biosciences
Chemistry •		B.Sc.		
Civil Engineering •				B.Eng.; B.Eng.Mgt.; B.Eng. Society
Civil Engineering Infrastructure Technology •	B.Tech.			
Classics	B.A. ★	B.A.	B.A.	
Commerce				B.Com.; B.Com. (Honours)
Communication Studies		B.A. ★	B.A. ★	
Computational Biology		B.Sc.		
Comparative Literature			B.A.	
Computer Engineering •				B.Eng.; B.Eng.Mgt.; B.Eng. Society
Computer Science •		B.A.Sc.	B.Sc.; B.A.	
Computing and Information Technology •	B.Tech.			
Cultural Studies and Critical Theory			B.A. ★	
Earth & Environmental Sciences •		B.Sc.		
Economics	B.A. ★	B.A. ★	B.A.	
Electrical Engineering •				B.Eng.; B.Eng.Mgt.; B.Eng. Society
Electrical and Biomedical Engineering •				B.Eng.
Engineering Infrastructure Technology	B.Tech.			
Engineering Physics •				B.Eng.; B.Eng.Mgt.; B.Eng. Society
English	B.A. ★	B.A. ★	B.A. ★	
French	B.A. ★	B.A. ★	B.A. ★	
Geography	B.A. ★	B.A. ★	B.A. ★	
Geography & Environmental Studies		B.A.		
Geoscience	B.Sc.	B.Sc.		
Gerontology	B.A. ★	B.A. ★	B.A. ★	
Health Sciences		B.H.Sc.		
Health Studies	B.A. ★	B.A. ★	B.A. ★	
History	B.A. ★	B.A. ★		
Indigenous Studies	B.A. (Combined)		B.A. ★	
Kinesiology		B.Kin.; B.Sc.Kin. ▲, B.Sc.		
Labour Studies	B.A. ★	B.A. ★		
Life Science	B.Sc. ★	B.Sc.	B.A. ★	
Linguistic Cognitive Science		B.A.		
Linguistics		B.A.	B.A.	
Manufacturing Engineering Technology •	B.Tech.			
Materials Engineering •				B.Eng.; B.Eng.Mgt.; B.Eng. Society
Materials Science		B.Sc.		
Mathematical Science	B.Sc. ★	B.Sc.		
Mathematics			B.A.	
Mathematics & Statistics •		B.Sc.		
Mechanical Engineering •				B.Eng.; B.Eng.Mgt.; B.Eng. Society
Mechatronics Engineering				B.Eng.; B.Eng.Mgt.; B.Eng. Society
Medical & Health Physics •		B.Sc.		
Medical Radiation Sciences	B.Med.Rad.Sc. ▲			
Medicine				M.D.
Midwifery				B.H.Sc.
Molecular Biology		B.Sc.		
Multimedia			B.A.	
Music	B.A.	B.Mus.	B.A.	
Nursing				B.Sc.N.
Peace Studies			B.A.	
Philosophy	B.A. ★	B.A. ★	B.A. ★	
Physical Science	B.Sc.	B.Sc.		
Physics •		B.Sc.		
Political Science	B.A. ★	B.A. ★	B.A. ★	
Process Automation Technology •	B.Tech.			
Psychology	B.A. ★	B.A. ★; B.Sc.	B.A. ★; B.Sc.	
Religious Studies	B.A. ★	B.A. ★	B.A. ★	
Social Work				B.A./B.S.W.; B.S.W. ★
Sociology	B.A. ★	B.A. ★	B.A. ★	
Software Engineering •				B.Eng.; B.Eng.Mgt.; B.Eng. Society
Software Engineering and Embedded Systems •				B.Eng.
Software Engineering and Game Design •				B.Eng.
Theatre & Film Studies	B.A.	B.A.	B.A.	
Women's Studies			B.A.	

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

GLOSSARY

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

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

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

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

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

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

Course Numbers (e.g. 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 program of study (e.g. Bachelor of Arts, Bachelor of Kinesiology, Master of Science, Doctor of Philosophy).

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

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

Extra Courses are those courses designated at the time of registration as "Extra", which are not included as units toward completion of a student's program. The grades obtained in such courses will not be included in the computation of the Cumulative Average. However, they will be included in the computation of the Sessional Average and the Full-load Average.

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

Full Load is the number of units specified in the Calendar for an individual level of a program (e.g. Commerce, Level II: 30 units). If the Calendar does not specify the program requirements by individual levels, divide the total units for all levels by the number of levels, discarding the remainder.

Full-load Average (FA) is based on the successful completion of a full load of course units (see *Full Load* definition), and includes only courses taken in the Fall/Winter session. Overload units (those above Full Load) and Extra Courses taken during the Fall/Winter session are included in the FA.

Full-time Student for academic purposes is an undergraduate student who is registered in at least 24 units in the Fall/Winter session, including Extra Courses. Full-time status for students in the Faculty of Science Co-op programs is granted to those students registered in at least 12 units in Term 1 or Term 2 of the Fall/Winter session.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ADMISSION REQUIREMENTS

1. ADMISSION FROM SECONDARY SCHOOLS

A. Ontario

General Requirements (For All Level I Programs)

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

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

1. An Ontario Secondary School Diploma (OSSD) with acceptable standing;
AND
 2. An overall average in completed Grade 12 U and M courses which meets or exceeds the minimum set by the specific program to which you applied;
AND
 3. Satisfactory completion of six Grade 12 U and M courses including the subject requirements for your chosen program.
- Music External (Conservatory) 4M 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.

Admission Average

The admission average is normally calculated using the best six Grade 12 U and M grades, including the grades in all of the required subjects. However, the admission average is a "point in time" calculation. That is, the number of grades included in the admission average will be a minimum of three final grades and a maximum of six interim, midterm, or final grades and will depend on the number of grades available on the Admissions database at the time of assessment. McMaster calculates averages to two decimal points and we do not round up averages. See the headings *Early Conditional Admission* and *Final Admission* below for specific details.

Early Conditional Admission

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

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

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

Admission offers made in April and May will be based on updated Grade 12 U and M grades. Some Faculties may review information you may have provided on a supplementary application form.

If you are granted a conditional offer of admission, you must meet the general requirements of the university. See *General Requirements (For All Level I Programs)* above.

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

1. if you do not meet the minimum final average prescribed for your chosen program;
OR
2. if you do not receive an OSSD;
OR
3. if you do not complete six Grade 12 U and M courses including all required subjects;
OR
4. if you do not respond to the Ontario Universities' Application Centre (OUAC) within the response period indicated on your offer letter.
5. if you do not meet any other condition stipulated on your conditional offer of admission.

Minimum Final Average

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

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

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

Supplementary Application Forms and Personal History

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

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

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

Final Admission

Applicants may be eligible for final admission if they have fulfilled the requirements for their OSSD and have final grades in at least six Grade 12 U and M courses. If you fulfill the requirements for your chosen program by the end of February, you may be granted an offer of final admission by the end of March.

If you do not receive a conditional offer of admission by May 25th, you may still be considered for final admission, once final marks are received, depending on availability of space in your chosen program.

Deferral of Admission

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

All requests for deferral of both admission and scholarship should be made in writing to the Office of the Registrar at McMaster by September 1, 2007 outlining the reasons for the request. Normally, decisions regarding deferral requests are not made until early August, after the receipt of all final grades and required documentation.

If a deferral is granted, it is conditional upon the student not attending a secondary or post-secondary institution during the deferral period. Students will be required to re-apply through the OUAC on the 105 application form to reactivate their application by no later than March 1st or the specific deadline date for the program, whichever is earlier.

Program Transfer After Admission

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

If you have not already registered, contact the Office of the Registrar to request a program transfer. If you have registered, contact the Faculty Office for your desired program to request a transfer.

Implementation of the New Ontario Mathematics Curriculum and Planning for Admission

With the implementation of the new secondary school Mathematics curriculum, it has been necessary for the university to re-define its admission requirements relative to the Grade 12 U Mathematics courses. We are aware that some secondary

students during the early stages of the transition, may present courses from both the new and old Mathematics curricula. McMaster is committed to ensuring that all applicants shall be considered fairly. In the section below, you will find admission requirements for programs including the old Mathematics curriculum and the new Mathematics curriculum where applicable.

For further information, consult McMaster's Prospective Students web site at the following url: registrar.mcmaster.ca/external/.

Subject Requirements for Specific Level I Programs

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

McMaster University offers thirteen Level I programs: Arts & Science I, Business I, Engineering I, Health Sciences I, Humanities I, Kinesiology I, Mathematics and Statistics I, Medical Radiation Sciences I, Midwifery I, Music I, Nursing I, Science I and Social Sciences I. Several new programs are being introduced in 2008-2009.

> ARTS AND SCIENCE I {0027}

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

The following are the minimum Grade 12 U and M requirements for 2007-2008:

1. English U
2. Advanced Functions and Introductory Calculus U
3. Completion of four additional U or M courses of which two must be at the U level.

Effective 2008-2009:

1. English U
2. Advanced Functions U
3. Completion of four additional U or M courses of which two must be at the U level.

> BUSINESS I {0725}

The following are the minimum Grade 12 U and M requirements for 2007-2008:

1. English U
2. Advanced Functions and Introductory Calculus U
3. One of Geometry and Discrete Mathematics U or Mathematics of Data Management U
4. Completion of three additional U or M courses to total six credits

Effective 2008-2009:

1. English U
2. Advanced Functions U
3. One of Calculus and Vectors U or Mathematics of Data Management U
4. Completion of three additional U or M courses of which two must be at the U level.

Principles of Financial Accounting M is recommended.

In recent years, an average in the low 80s is expected to be required for an offer of admission.

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

> COMPUTER SCIENCE I {0145}

> COMPUTER SCIENCE I CO-OP {0145003} (EFFECTIVE 2008-2009)

The following are the minimum Grade 12 U and M requirements beginning in 2008-2009:

1. English U
2. Calculus and Vectors U
3. Two of Biology U, Chemistry U, Physics U, Earth and Space U, Computer and Information Science U, or Computer Science M
4. Completion of two additional U or M courses to total six credits. Students are also expected to have completed Advanced Functions U.

> ENGINEERING I {0730}

> ENGINEERING I CO-OP {0730003}

The following are the minimum Grade 12 U and M requirements for 2007-2008:

1. English U
2. Advanced Functions and Introductory Calculus U
3. Chemistry U
4. Physics U
5. One of Geometry and Discrete Mathematics U, Mathematics of Data Management U, Biology U or Earth and Space Science U. (Geometry and Discrete Mathematics U is recommended).
6. Completion of one additional U or M course to total six credits.

Effective 2008-2009:

1. English U
2. Chemistry U
3. Physics U
4. Calculus and Vectors U
5. Completion of two additional U or M course to total six credits. Students are also expected to have completed Advanced Functions U.

A minimum overall average in the low to mid-80s has been required for an offer of admission in recent years.

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

> ENVIRONMENTAL AND EARTH SCIENCES I {0211} (EFFECTIVE 2008-2009)

The following are the minimum Grade 12 U and M requirements beginning in 2008-2009:

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

> HEALTH SCIENCES I {2276}

The selection method is by consideration of academic qualifications (minimum overall average of 90% is required for consideration) and a mandatory *Supplementary Application*. A review of the mandatory *Supplementary Application* is a very important component of the admission process. Applicants who do not complete the *Supplementary Application* are not considered for admission.

The following are the minimum Grade 12 U and M requirements for 2007-2008:

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

Effective 2008-2009:

1. English U
2. Biology U
3. Chemistry U
4. One of Advanced Functions U, Calculus and Vectors U, or Mathematics of Data Management U
5. One U or M course from Social Sciences (Geography, History, Law, Psychology, Sociology) or Humanities (Art, Drama, English, French, Music, other languages)
6. Completion of one additional U or M course in any subject area to total six courses.

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

> HUMANITIES I {0700}

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

1. English U
 2. Completion of additional U or M courses to total six credits
- In recent years, an average in the mid-70s has been required for an offer of admission.

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

12 ADMISSION REQUIREMENTS

Admission to Art:

When applying for admission using the OUAC application, applicants who wish to study **Art** should select **MH** for the OUAC code and choose **FINE ARTS** for the Subject of Major Interest.

Honours Art programs have limited enrolments. Entrance to any Honours Art program requires the permission of the School of the Arts and successful completion of **ART 1F03** and **1FF3**. Students who wish to enrol in **ART 1F03** and **1FF3** in Level I must complete a portfolio interview to be eligible for permission to register in these courses. The portfolio should contain a variety of works in different media that represent the applicant's creative abilities and interests. Aptitude in art, academic ability and demonstrated commitment to the discipline are considered in the selection process. In exceptional circumstances, where distance does not allow for an interview, portfolios may be submitted in the form of colour slides or photographs.

- Portfolio interviews occur between January and April each year for entrance in September of the same calendar year. Only those students who call the Office of the School of the Arts (ext. 27671) before March 1st to book appointments for portfolio interviews will be guaranteed consideration for entrance into **ART 1F03** and **1FF3**. (Late applicants will only be interviewed if space availability permits).
- Permission to register in **ART 1F03** and **1FF3** will be verified with written confirmation from the School of the Arts. School of the Arts verification and a Letter of Admission to Humanities I from the University will guarantee a space in the program as long as the student meets the minimum academic requirements as outlined under *School of the Arts* programs in the *Faculty of Humanities* section of the Calendar.

➤ KINESIOLOGY I {0308} (LAST OFFERED IN 2007-2008)

The following are the minimum Grade 12 U and M requirements for 2007-2008:

1. English U
 2. Biology U
 3. One of Geometry and Discrete Mathematics U or Advanced Functions and Introductory Calculus U
 4. Completion of three additional U or M courses to total six credits
- In recent years, an average in the mid-high 80s has been required for an offer of admission.

NOTES:

- i) Completion of a *Supplementary Application* is recommended for those students whose average is near the cut-off.
- ii) Please see Level I Science courses for specific Ontario Secondary School prerequisites.

➤ HONOURS KINESIOLOGY I {0309} (EFFECTIVE 2008-2009)

The following are the minimum Grade 12 U and M requirements beginning in 2008-2009:

1. English U
2. Biology U
3. Advanced Functions U
4. Completion of three additional U or M courses to total six credits. 4U courses strongly recommended include Calculus and Vectors U and Exercise Science U.

➤ LIFESCIENCES I {0312} (EFFECTIVE 2008-2009)

The following are the minimum Grade 12 U and M requirements beginning in 2008-2009:

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

➤ MATHEMATICS AND STATISTICS I {0320}

The following are the minimum Grade 12 U and M requirements for 2007-2008:

1. English U
 2. Advanced Functions and Introductory Calculus U
 3. Geometry and Discrete Mathematics U
 4. Completion of three additional U or M courses to total six credits
- Effective 2008-2009:

1. English U
 2. Advanced Functions U
 3. Calculus and Vectors U
 4. Completion of three additional U or M courses to total six credits
- Completion of a *Supplementary Application* is recommended for those students whose average is near the cut-off.

➤ MEDICAL RADIATION SCIENCES I {0345}

The following are the minimum Grade 12 U and M requirements for 2007-2008:

1. English U
 2. Biology U
 3. Chemistry U
 4. Advanced Functions and Introductory Calculus U
 5. Completion of two additional U or M courses to total six credits
- Physics 12 U is strongly recommended.

Effective 2008-8009:

1. English U
2. Biology U
3. Chemistry U
4. Advanced Functions U
5. One of Calculus and Vectors U or Physics U (both are recommended)
6. Completion of one additional U or M courses to total six credits

➤ MIDWIFERY I {6501}

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

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

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

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

➤ MUSIC I {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 to at least honours standing in Grade 8 of the Royal Conservatory of Music)
2. Performance (approximately 20 minutes duration) of two or three varied pieces of your choice (approximately Grade 8 honours level), including at least one from the 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 I {6390}

NURSING CONSORTIUM (Conestoga) {6385}

NURSING CONSORTIUM (Mohawk) {6386}

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

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

The following are the minimum Grade 12 U and M requirements for 2007-2008:

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

Ontario Secondary School Course Equivalents for Students from Other Canadian Provinces

Ontario Grade 12	B.C./Yukon	Alta./Nunavut	Sask.	Manitoba	++Que. (CEGEP)	Nova Scotia	New Brunswick	P.E.I.	Nfld.
ENGLISH U	English 12	English 30 or 31	English A30 and B30	English ELA 40S	Two English 603 courses	English 12	English 121 or 122	English 621	English 3201
ADVANCED FUNCTIONS AND INTRO CALCULUS U ** +	Calculus 12 AP Calculus if available	Math 31	Calculus 30, if available or AP Calculus	AP Calculus or Pre Calculus Math 40S may be considered	Calculus I and II	AP Calculus or Pre Calculus Math 12 may be considered	Advanced Math with Intro to Calculus 120	Math 611	Math 3207 or AP Calculus
GEOMETRY AND DISCRETE MATHEMATICS U	Principles of Math 12	Math 30	Math B30 and C30	Pre Calculus	Linear Algebra I	Advanced Math 12 or Math 12	Trigonometry and 3-space 121/122	Math 621B	Math 3204 or 3205
MATHEMATICS OF DATA MANAGEMENT U	Principles of Math 12	Not available*	Not available*	Applied Math 40S	Not available*	Not available*	Not available*	Math 621A	Not available*
CHEMISTRY U	Chemistry 12	Chemistry 30	Chemistry 30	Chemistry 40S	Chemistry I and II	Chemistry 12	Chemistry 121 or 122	Chemistry 621	Chemistry 3202
PHYSICS U	Physics 12	Physics 30	Physics 30	Physics 40S	Physics I and II	Physics 12	Physics 121 or 122	Physics 621	Physics 3204
BIOLOGY U	Biology 12	Biology 30	Biology 30	Biology 40S	Biology I and II	Biology 12	Biology 121 or 122	Biology 621	Biology 3201

* Topics related to Mathematics of Data Management are found in several Math courses.

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

**AP Mathematics, AP Calculus or International Baccalaureate Calculus is also acceptable.

++Six Grade 12 credits numbered in the 600 series may be substituted.

Effective 2008-2009:

1. English U
2. Biology U
3. Chemistry U
4. One of Advanced Functions U or Mathematics of Data Management U
5. Completion of two additional U or M courses to total six credits
In recent years, an average in the low 80s has been required for an offer of admission at the McMaster site and at least 70% for the Conestoga and Mohawk sites.

> PHYSICAL SCIENCES I {0435} (EFFECTIVE 2008-2009)

The following are the minimum Grade 12 U and M requirements beginning in 2008-2009:

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

> SCIENCE I

{0710}

Science I will be last offered in 2007-2008. Science I will be replaced by Environmental and Earth Sciences I, Life Sciences I and Physical Sciences I beginning in 2008-2009.

The following are the minimum Grade 12 U and M requirements for 2007-2008:

1. English U
2. Advanced Functions and Introductory Calculus U
3. Two of Geometry and Discrete Mathematics U, Biology U, Chemistry U or Physics U
4. Completion of two additional U or M courses to total six credits
In recent years, an average in the low 80s has been required for an offer of admission.

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

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

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➤ SOCIAL SCIENCES I [0720]

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

1. English U
2. Completion of additional U or M courses to total six credits
In recent years, an average in the mid-high 70s has been required for an offer of admission.

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

➤ TECHNOLOGY I [0731] (EFFECTIVE 2008-2009)

The following are the minimum Grade 12 U and M requirements beginning in 2008-2009:

1. English U
2. Chemistry U
3. Physics U
4. Advanced Functions U
5. Completion of two additional U or M courses to total six credits

B. Other Canadian Provinces and Territories

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

Alberta, Northwest Territories and Nunavut

Grade 12 high school diploma with five acceptable courses numbered 30 or 31, including English 30 or 31.

British Columbia and Yukon

Grade 12 high school diploma with four acceptable provincially examinable Grade 12 courses (or the equivalent), including English 12.

Manitoba

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

New Brunswick

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

Newfoundland and Labrador

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

Nova Scotia

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

Prince Edward Island

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

Quebec

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

Year I CEGEP with twelve appropriate academic courses, including two English/anglais 603 courses. Students with Year II or III CEGEP who have achieved the DEC will be considered for advanced credit in their chosen program. The Côte de Rendement (R Score) will be used for admission consideration.

Saskatchewan

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

Subject Requirements for Level I Programs

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

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

Early Conditional Admission

Applications are reviewed for conditional admission as soon as all required documents with sufficient course and grade data are received by the Admissions Office. All Canadian applicants should ensure that their schools forward interim/ mid-year school grade reports showing marks for all courses taken during the Grade 12 year as soon as they are available. The terms and conditions of the offer of admission are stated clearly on the offer letter.

C. International Baccalaureate Diploma

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

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

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

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

E. Other International Secondary School Qualifications

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

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

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

American High School Curriculum

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

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

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

Applicants from the General Certificate of Education system require:

1. five GCE subjects, at least two of which must be at the Advanced Level with the balance of subjects at the Ordinary Level;

2. Advanced Level subjects appropriate for your chosen program, (refer to *Subject Requirements for Specific Level I Programs* listed under *Ontario* in this section). For Science and Engineering programs, Mathematics and one of Physics or Chemistry must be offered at the Advanced Level;
3. Grades of at least C must be presented in each of the Ordinary and Advanced Level subjects. Some programs will require higher grades.

Possession of the minimum grades does not guarantee admission.

Applicants with a minimum grade of C in Advanced Level subjects may be eligible for up to 12 units of Advanced Credit which will be determined on a case by case basis, at the discretion of the Faculty.

Advanced Placement (A.P.) Courses/Examinations

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

International Baccalaureate Diploma

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

Other Countries or Educational Systems

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

F. Home Schooled Applicants

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

All other home schooled applicants may apply for admission to Humanities I or Social Sciences I only and must present the following for consideration:

1. List of home school credentials including but not limited to structured curriculum completed through ACE (Accelerated Christian Education Program) or other such programs.
2. Portfolio of written work; normally, we will expect to see evidence of appropriate intellectual maturity.
3. Results of standardized tests such as SAT, ACT. For SAT I, we normally recommend a minimum requirement of 1200 combined score for the Critical Reading and Math Components of the SAT I Tests. For ACT, we normally recommend a requirement of a minimum composite score of 27.

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

2. ADMISSION/TRANSFER FROM POST-SECONDARY INSTITUTIONS

A. From Universities

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

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

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

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

If you have been required to withdraw from another university and have fulfilled your period of suspension, you may apply for admission. However, you must present a letter of explanation and clarification concerning your past academic performance. You may also be asked to provide academic documentation for proof of further academic achievement which is both current and relevant. Admission will be considered on a case by case basis and is not guaranteed.

B. From Colleges of Applied Arts and Technology

McMaster welcomes applications from students who have attended a College of Applied Arts and Technology. See the minimum admission requirements for Level I programs as listed below. You are considered for admission on an individual basis. All GPAs listed below are based on a 4-point scale of grading.

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

> ARTS AND SCIENCE

1. Completion of a three-year diploma.
2. Successful completion of both Grade 12 Advanced Functions and Introductory Calculus and English U (or equivalent).
3. 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 cumulative GPA of 3.4 or better.
3. Successful completion of three Mathematics courses at the college level or a Grade 12 Advanced Mathematics course or equivalent.

> ENGINEERING

1. Completion of a three-year technology diploma program.
 2. A cumulative GPA of 3.2 or better.
- Technician programs are not recognized as eligible for admission consideration to Engineering I.

> BACHELOR OF HEALTH SCIENCES (HONOURS)

Admission is not assessed based on CAAT achievement. It is based on high school admission criteria only. See *Subject Requirements for Specific Level I Programs* section of the Calendar.

> HUMANITIES

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

> KINESIOLOGY

1. Completion of a three-year diploma.
2. A cumulative GPA of 3.5 or better.
3. Completion of Grade 12 Advanced Functions and Introductory Calculus U, Geometry and Discrete Mathematics U, and Biology U.
4. Admission is by selection upon review of college and high school transcripts to determine eligibility.

> MATHEMATICS AND STATISTICS

1. Completion of a three-year technology diploma program.
 2. A cumulative GPA of 3.0 or better.
 3. Completion of Grade 12 Advanced Functions and Introductory Calculus U and Geometry and Discrete Mathematics U.
- No transfer credit will be offered.

> MIDWIFERY

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

> MUSIC

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

> NURSING

1. Completion of an Ontario diploma in Nursing or the equivalent.
 2. A cumulative GPA of 2.8 or higher.
 3. Selection will be based on academic qualification and a rating obtained on a questionnaire completed by the applicant. An interview may also be required.
- OR
1. Completion of an Ontario diploma in pre-health sciences.
 2. A cumulative GPA of 2.8 or higher.
 3. Completion of at least two semesters (two credits) of Biology, Chemistry, Mathematics and English.
 4. Selection will be based on academic qualification and a rating obtained on a questionnaire completed by the applicant. An interview may also be required.

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> SCIENCE

1. Completion of a three-year technology diploma program.
2. A cumulative GPA of 3.2 or better.
3. Completion of Grade 12 Advanced Functions and Introductory Calculus U, two of Geometry and Discrete Mathematics U, Biology U, Chemistry U, or Physics U.
4. Admission is by selection upon review of college and high school transcripts to determine eligibility.

No transfer credit will be offered. Technician programs are not recognized as eligible for admission consideration to Science I.

> SOCIAL SCIENCES

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

> BACHELOR OF TECHNOLOGY (DEGREE COMPLETION PROGRAM)

1. Completion of a related three-year technology diploma program.
2. A cumulative GPA of 3.0 or better.

Post diploma experience would be an asset and will be taken into consideration if the GPA falls below the minimum requirement, on a case by case basis.

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

Admission is by selection. If you have a first degree, you may apply to take an Honours second degree in the same subject area or a second degree in another discipline. Please note three exceptions: B.H.Sc. (Bachelor of Health Sciences (Honours)), B.Com. (Bachelor of Commerce) and B.Com. (Honours) cannot be done as second degree programs. The requirements are set out in the *General Academic Regulations* section of this Calendar.

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

D. Continuing Students

To be eligible to take courses as a Continuing Student you will be expected to have an undergraduate university degree and at least a C (third-class standing) average, with no failures, in your final year's work (or the equivalent, in the case of a degree taken through part-time studies), and academic records which are satisfactory to the Department and the Office of the Associate Dean of the appropriate Faculty.

McMaster Graduates

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

Graduates from Other Universities

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

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

E. From Six Nations Polytechnic

McMaster University, along with four other universities, has entered into a partnership with Six Nations Polytechnic to offer university courses in the community of Six Nations. The courses offered are eligible for transfer credit at any of the universities within the consortium.

F. From Post-Secondary Institutions with Religious Affiliation

Undergraduate general academic studies taken at Bible colleges, theological colleges, and seminaries that are member institutions of the Association of Universities and Colleges of Canada (AUCC), affiliated with an AUCC member institution, or accredited by the

Association of Biblical Higher Education (ABHE), the Association of Theological Schools (ATS), the Association of Institutions for Higher Learning in Jewish Education (AIHLJE) or institutions listed by Canadian Information Centre For International Credentials (CICIC) and/or the International Association of Universities (IAU) will be considered for admission and transfer credit based on the following:

1. Applicants from accredited post-secondary institutions with religious affiliation:

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

General Notes about Transfer Credit:

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

2. Applicants from non-accredited post-secondary institutions with religious affiliation:

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

3. OTHER CATEGORIES OF ADMISSION

A. Part-time Admission

Applicants who wish to pursue undergraduate studies on a part-time basis at McMaster must meet one of the admission criterion outlined in the sections above. If applicants do not meet any of these criteria, they may qualify for Mature Student Admission. For further information see the *Part-Time Degree Studies* section of this calendar.

B. Mature Students Admission

If you do not qualify for consideration under one of the above categories, McMaster will assess your eligibility as a mature student. You may be considered for limited admission to part-time study, provided all of the following conditions are satisfied:

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

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

Applicants admitted as a mature student will not be granted transfer credit.

The following Level I programs have specific course requirements from secondary school as outlined:

- The Faculty of Science: requires satisfactory standing in Grade 12 Advanced Functions and Introductory Calculus U (or equivalent) and two of Grade 12 Biology U, Chemistry U, Geometry and Discrete Mathematics, or Physics U (or equivalent).
- The Department of Mathematics and Statistics: requires satisfactory standing in Grade 12 U Advanced Functions and Introductory Calculus (or equivalent) and Grade 12 U Geometry and Discrete Mathematics (or equivalent).
- The Faculty of Business: requires Grade 11 U Mathematics (or equivalent).
- The Midwifery Program: requires Grade 12 U English (or equivalent), one of Grade 12 U Biology (or equivalent) or Grade 12 Chemistry (equivalent), and one Grade 12 U or M course in Social Sciences (or equivalent) with a minimum of grade of 70% in each course.

The Nursing Program does not offer mature admission directly to the program. However, students interested in Nursing may be admitted as a mature student to another program. In order to be reviewed for admission to Nursing, students must complete the following processes:

- complete a minimum of 12 units of university level course work with a minimum cumulative average of 7.0
- fill out the Nursing supplementary application form by February 15th of the year in which they are planning to transfer.
- fill out the Application for Admission for Nursing I on SOLAR (available on-line at the end of February) in the year in which they are planning to transfer.

Enrolment in this program is limited. Possession of the minimum admission requirements does not guarantee an offer of admission.

The Faculty of Engineering, the Arts & Science Program, the Bachelor of Health Sciences Program, the Medical Radiation Sciences Program, and the Kinesiology Program do not admit mature students.

If admitted to a program as a mature student, you may register to take up to 18 units of course work (normally Level I courses) during the Fall/Winter session with no more than 9 units in each term (3 courses). Within the first 18 units, mature students will be limited to taking 3 units in each term of the Spring/Summer session.

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

C. Senior Citizens

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 Ontario Universities' Application Centre (OUAC).

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

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

You must initially apply through the Ontario Universities' Application Centre (OUAC) and send your Letter of Permission and an official transcript from your home institution directly to the Office of the Registrar at McMaster. Upon receipt, your transcript will be reviewed to ensure you have met the prerequisites for courses you plan to take at McMaster as detailed in your Letter of Permission. Approval of your application as a Visiting Student does not guarantee your registration in a course.

Subsequent requests to take courses on a Letter of Permission do not require another application, however you must send an updated Letter of Permission and a current official transcript from your home institution to the Associate Dean's Office of the Faculty offering the course at McMaster. If you are attempting to register in courses offered by more than one Faculty, you must obtain approval from each Associate Dean's Office.

E. Graduates of McMaster Certificate/Diploma Programs

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

F. Post-Degree Students

If you are a university graduate or a person with professional qualifications who wishes to take one or more graduate courses but not proceed to an advanced degree, you may apply to McMaster as a post-degree student. To enrol as a post-degree student, you must apply to the appropriate departments and have your admission and registration approved by the School of Graduate Studies for each session in which you wish to take courses. You will register and pay fees as a graduate student.

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

G. Listeners

If you are still uncertain about degree courses, you may register as a listener in a degree course at a reduced rate, but not for credit. You attend all classes, but do not complete any of the essays, tests and other formal requirements. You do not receive a grade for courses that you attend. Some students have eased their way into degree study with this option, subsequently applying for admission and enrolling in further courses for credit. Please note not all courses are available to Listeners.

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

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

H. Enrichment Program for Secondary School Students

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

I. Former McMaster Degree Students (Returning Students)

Readmission

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

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

Reinstatement

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

Second McMaster Degree

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

Continuing Studies

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

J. Deferral of Admission

Students whose country of residence is Canada and who received an offer of admission and accepted the offer prior to the specified deadline may apply to defer their entry to McMaster for one year. Each case is evaluated on its own merits.

All requests for deferral of admission should be made in writing to the Office of the Registrar at McMaster by September 1, 2007 outlining the reasons for the request. Normally, decisions regarding deferral requests are not made until August or September, after the receipt of all final grades.

If a deferral is granted, it is conditional upon the student not attending a secondary or post-secondary institution during the deferral period. Students will be required to re-apply through the OUAC on the 105 application form to reactivate their application by no later than March 1st or the specific deadline date for the program, whichever is earlier.

4. TRANSFER CREDITS**A. General Policy on the Transfer of University Course Credits**

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

1. Acceptance of transfer credits from accredited universities shall be based on the recognition that, while learning experiences may differ in a variety of ways, their substance may be essentially equivalent in terms of their content and rigour. Insofar as possible, acceptance of transfer credit shall allow for the maximum recognition of previous learning experience in university-level courses;
2. Subject to degree, grade and program requirements, any course offered for credit by an accredited university shall be accepted for credit by McMaster when there is an essential equivalency in course content. However, no course for which a grade of less than C- (60%) has been achieved will be considered.
3. Evaluation of all possible transfer credits available at the time of admission must be completed within one year of the date of admission to the University.

B. From Colleges of Applied Arts and Technology

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

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

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

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

1. your performance in the college program;
2. the duration of the college program;
3. the program taken at the college and the program to which entry is sought;
4. your secondary school record.

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

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

C. Advanced Credit

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

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

If you have acquired knowledge at different type of institution or in a manner that makes assessment of your qualifications difficult, you may be permitted to seek degree credit through special assessment (Challenge for Credit).

Challenge for credit is not intended to give credit for skills or knowledge gained through high school, college or previous university instruction. The special assessment may include one or more of the following: written examinations, papers, essays, submissions of a substantial body of work, or portfolios, or laboratory tests. Credit can be granted only for those courses listed in the current McMaster calendar. Not all courses in all disciplines are available for challenge. Faculties and departments are free to determine which, if any, of their courses are open for special assessment. Challenges are assessed on a pass/fail basis. The passing grade for a challenge appears on the transcript as COM (Complete) and is not used in computing averages or evaluating honours or scholarship standing, but is counted as a course attempt. Unsuccessful attempts will be noted on the transcript. Special Assessment is not available for a course taken previously and a course may be attempted only once by special assessment.

Once you have registered for a course by such means (known as challenge exams) the registration may not be cancelled and you may not withdraw from the course.

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

5. ENGLISH LANGUAGE PROFICIENCY

If your first language is not English, you must demonstrate English language proficiency by achieving a score of at least 86 and a minimum score of 20 on each of the four component parts of reading, listening, speaking and writing on the IBT; or 237 on the computerized test (CBT); or 580 on the paper-based test (PBT) on TOEFL, or the equivalent on other recognized tests.

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

1. Attended, in full-time academic studies, an accredited Secondary School (High School) or Post-Secondary College in an English-speaking country for at least three years,
OR
2. Attended, in full-time academic studies, an accredited English medium Secondary School (High School) or Post-Secondary College for at least three years,
OR
3. Attended, in full-time academic studies, an accredited English medium University for at least one year,
OR
4. Resided in an English speaking country for at least four years immediately prior to application to McMaster.

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

APPLICATION PROCEDURES

How to Apply

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

1. CATEGORIES OF ADMISSION

A. Current Ontario High School Students

If you are currently registered as a full-time *day school* student in an Ontario secondary school and wish to begin university studies in September

- Use the Compass 101 on-line application at www.ouac.on.ca/101/. Please consult with your secondary school guidance office regarding this application process.

B. All Other Canadian High School Students

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

- Use the OUAC 105D on-line application at www.ouac.on.ca/105/.

C. High School Students with International Qualifications

If you are currently attending or have recently completed a secondary school program outside of Canada

- Use the OUAC 105F on-line application at www.ouac.on.ca/105/.

D. University/College Transfer Students

If you are currently registered in or have completed an undergraduate degree program at another university and wish to attend McMaster OR

If you are currently registered in or have completed a college diploma program and wish to attend McMaster

- Use the OUAC 105 on-line application at www.ouac.on.ca/105/. Applicants residing in Canada (Canadian citizens, permanent residents or applicants studying in Canada on a student permit or other visa) should use the 105D form. Applicants currently residing outside of Canada who are not Canadian citizens should use the 105F form.

E. Students Applying to Nursing Consortium Programs

If you are interested in applying to McMaster's Nursing (B.Sc.N.) program at the Mohawk College or Conestoga College sites

- Apply on-line through the Ontario College Application Services (OCAS) at www.ocas.on.ca/.

F. Previous McMaster Degree Students (Returning Students)

1. **Readmission:** If you are a former McMaster student with a record of course registrations who was in good standing and who voluntarily withdrew from an undergraduate program more than five years ago (providing you have not attended another university nor received a college diploma since last registered at McMaster). If you are a former Nursing student, you must apply for readmission regardless of the amount of time that has elapsed.

2. **McMaster Second Degree:** If you are a McMaster graduate or potential graduate and wish to pursue a second undergraduate degree (providing you have not attended another university nor received a college diploma since last registered at McMaster).

- Use the *McMaster Returning Student Application* to apply on-line at registrar.mcmaster.ca/external/chs-retur.htm.

3. **Reinstatement:** If you are a former McMaster student who was previously ineligible to continue studies at McMaster (providing you have not attended another university nor received a college diploma since last registered at McMaster).

- Obtain the *Reinstatement Request Form* from the Office of the Registrar, Gilmour Hall, Room 108, McMaster University, Hamilton, Ontario, L8S 4L8.

4. **Continuing Student:** If you are a McMaster graduate and wish to become a Continuing student

- You do not need to apply for admission. Simply submit a Registration.

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

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

- Use the OUAC 105 on-line application at www.ouac.on.ca/105/ to apply for full-time studies.

- Use the *Part-Time Degree Studies* application to apply on-line (to McMaster only) at registrar.mcmaster.ca/external/chs-partt.htm to apply for part-time studies.

H. Students Seeking Part-Time Degree Studies at McMaster Only

If you wish to begin undergraduate studies in September, May or June or if you wish to take undergraduate courses on a part-time basis (registered in 18 units or less)

- Use the *Part-Time Degree Studies* application to apply on-line (to McMaster only) at registrar.mcmaster.ca/external/chs-partt.htm. (If you wish to apply to other Ontario universities as well, use the OUAC 105 application to apply on-line at www.ouac.on.ca/105/.)

I. Students Seeking Post-Degree Studies

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

- Download the *Post-Degree Studies Application* from www.mcmaster.ca/graduate/deptforms.html or contact the Graduate Studies Office, Gilmour Hall, Room 212, McMaster University, Hamilton, Ontario, L8S 4L8. Use the form to apply to the appropriate academic department(s).

J. Students Applying to the Medical Program

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

2. DOCUMENTS

A. Required Documents

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

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

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

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

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

B. Retention of Documents

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

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

3. DEADLINES

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

A. FALL/WINTER SESSION (SEPTEMBER 2007 ENTRY)

Undergraduate programs which are not specified below:	June 1
> International Applications	April 1
> International Documentation	April 1
> Domestic Applications	June 1
> Domestic Documentation	June 15
> Optional Supplementary Applications for Level I Programs	April 30
> Arts & Science Applications	February 9
Supplementary Applications	February 9
> Level III Science Cooperative programs	February 1
> Gerontology Applications	May 15
> Health Sciences (Honours) Applications	February 9
Supplementary Applications (Lvl I)	February 9
Supplementary Applications (Above Lvl I)	April 29
> Health Studies	May 15
> Kinesiology	May 15
> Labour Studies	May 15
> Medicine	October 1
> Midwifery Applications	February 1
Official Transcripts	February 1
Midwifery Application Forms**	February 1

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

* Nursing I applicants, with the exception of current secondary school students, need to complete the mandatory supplementary application. The form is available on-line at www.fhs.mcmaster.ca/nursing/docs/Supplement-BSN-Application-Form.doc

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

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

B. FALL/WINTER SESSION (JANUARY ENTRY)

> Bachelor of Technology Degree Completion	November 15
Documentation Deadline	December 1
January entry is available for the above program only.	

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

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

D. Reinstatement or Readmission Deadlines

> September Entry (all programs, except Nursing††)	
Reinstatement Deadline	June 30
Readmission Deadline	July 15
†† Nursing Deadline	February 15

Application deadlines for May or June entry are as indicated under the corresponding headings above. January is not available as an entry point for Reinstatement or Readmission.

E. Academic Counselling for Admitted Students

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

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

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

F. Enquiries

Please direct your enquiries about Application Procedures to:

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

GENERAL ACADEMIC REGULATIONS

STUDENT ACADEMIC RESPONSIBILITY

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

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

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

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

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

ACADEMIC REGULATIONS

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

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

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

Faculties are authorized to use discretion in special situations by taking into account past practice, the spirit of the regulations, and extraordinary circumstances. Students who believe their situations warrant special consideration should consult the appropriate Office of the Associate Dean.

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

1. UNIVERSITY REGULATIONS

Residence Requirements

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

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

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

1. by completing the final level and at least one other level (a minimum of approximately 60 units of work) at McMaster University; or
2. by completing the final level (approximately 30 units of work) at McMaster University, including at least 18 units of program-specific courses.

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

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

Registration

Policy on Access to Undergraduate Courses

McMaster's policy on access to Undergraduate courses is designed to ensure that resources are properly managed while enabling students to register in required courses so that their program admission requirements and course requisites can be met, and that their program of study is not extended.

1. Enrolment capacities are set on all undergraduate courses taking into account enrolment projections along with resources, enrolment trends and type of course (required or elective).
2. If need exceeds approved capacity, enrolment capacities for courses will be reviewed and may be adjusted.
3. Faculties and Department Offices are responsible for determining which courses require seats held back. These hold-back seats must be managed so that students are able to complete program admission requirements, meet course requisites and register in courses required to meet their program of studies in a timely manner.
4. Where students are selecting from a list of required courses, access to a specific course is not guaranteed when there is another course available to meet a specific degree requirement.

■ **Registration:** The purpose of registration is to officially record your program and courses. Information on how to register is available online on the web site of the Office of the Registrar at the following url: <http://registrar.mcmaster.ca/gettingregistered/>. You are responsible for ensuring that your registration information is complete, and that your course selections meet the requirements of your degree. Counselling is available to assist you in course selections.

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

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

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

■ **Changes to Registration:** The last day for adding or dropping courses is approximately one week after classes begin for each term. (Please see the tables in the *Sessional Dates* section for the relevant dates for each term of the academic year.) After the above-mentioned period, you may cancel courses until the last day to withdraw without failure by default. Cancelled courses will be shown on your transcript with the notation CAN (Cancelled). After this date, you will remain registered in courses whether or not you attend classes. Your transcript will show a grade of F for any course not successfully completed. You are responsible for ensuring that your course selection meets the requirements of your degree. You should review your personal degree audit on the working day following each time you drop or add courses, and contact a student advisor in the Office of the Associate Dean of your Faculty if you have questions. Changes to your course load may also affect your fees and your eligibility for scholarships and financial aid such as OSAP.

■ **Limit on Level I Courses:** In most Faculties, you may not obtain credit in more than 42 units of Level I courses in a three-level program, or more than 48 units in a four-level program.

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

■ **Overload Work:** If you wish to take more than the normal number of units prescribed for a Level, you may do so only with the permission of the Office of the Associate Dean of your Faculty. Normally, a Sessional Average of at least 7.0 in the immediately preceding review period will be required if an overload is to be permitted. Additional academic fees will be assessed for overload work. (See *Financial Information* section.)

■ **Load in Spring/Summer Session:** If you wish to take more than 12 units in the Spring/Summer Session, or more than six units in either term of that Session, you may do so only with the permission of the Office of the Associate Dean of your Faculty.

■ **Repetition of Courses:** Students may repeat courses that have been failed or for which credit has been obtained a number of times, with the exception of the students in the Faculty of Business who may only repeat courses which they have failed. 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 are a currently registered student in a degree program and 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, audit the course. You must satisfy the prerequisite for the course, but will not complete assignments nor write the final examinations. You will not be permitted to register for credit in the course after the registration deadline for the session has passed.

■ **Letters of Permission:** If you are in good academic standing at McMaster and you wish to attend another university to take courses for credit towards a 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. 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.

■ **Withdrawal from the University:** If you wish to withdraw from the University, you must consult the appropriate Office of the Associate Dean. Your student identity card must be surrendered to the Office of the Associate Dean. Your course record 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 Dean to which you wish to transfer. It is possible that full credit may not be given at the time of transfer between Faculties and additional courses may need to be taken.

■ **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 programs that exist between McMaster and a number of universities in other countries; by participating in one of the programs available through specific Faculties; or by independent study abroad.

Formal exchange programs 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 program, you can obtain further information and an application form from the International Student Services Office, Gilmour Hall, Room 104. Applications are normally due mid-January 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.

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

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 program or an independent study abroad program offers 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 programs and universities, please contact the International Student Services Office, Gilmour Hall, Room 104.

2. ACADEMIC STANDING AND PROGRAM REQUIREMENTS

Academic Standing

Academic standing is reviewed in May and August each year for students who

1. have attempted at least 18 units of work since the last review; or
2. may be eligible to graduate at the next Convocation; or
3. were admitted under the part-time mature student provision and have attempted the first 12 units of work.

In the review of academic standing, three sets of decisions are made:

1. whether a student may graduate;
2. whether a student may continue at the University; and
3. whether a student may continue in a program.

Minimum Requirements to Continue at the University

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

Level I Registration and

Academic Standing Requirements

When you are admitted to McMaster University for a first degree, you will register in one of the following Level I programs: Arts and Science I, Business I, Engineering I, Health Sciences I, Humanities I, Kinesiology I, Mathematics and Statistics I, Medical Radiation Sciences 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 has the discretion to permit you to take some of the work in the higher levels prior to having attempted the full load of Level I. Decisions will be made on an individual basis, according to the special circumstances that apply in the particular case.

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

At the review when you complete the Level I work, if you attain a CA of at least 3.0 and have not previously been on 'academic probation, but fail to meet the admission requirements of any program, you may continue at the University for one additional reviewing period on academic probation. You will be registered in your original Faculty, and will be classified as a Level I irregular student if your work may only qualify you to be considered for admission to a program in another Faculty. If, at the end of the next reviewing period, you again do not qualify for admission to a program, you may not continue at the University. If your CA is less than 3.0 you may not continue at the University. Students in Arts & Science I should refer to the *Arts & Science Program regulations* listed below.

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

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

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

➤ ARTS & SCIENCE PROGRAM

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

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

If your CA is 3.0 to 3.4, you will be placed on academic probation. You may continue in the program for one reviewing period as an irregular student but cannot take Arts & Science Program courses. The purpose of this period is to prepare yourself for a program outside the Arts & Science Program. You may be on academic probation only once. (Potential graduands may not continue at the University.)

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

➤ SCHOOL OF BUSINESS

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

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

If your CA is 3.5 or greater, although you may not continue into a Commerce program either now or in the future, you are still in good standing at the University. You may continue at the University in a program outside the School of Business or as an irregular student in Business. To continue in a program outside the School of Business you must apply for admission to that program through the Office of the Associate Dean appropriate for that program. You should consult 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 program outside the School of Business.

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

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

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

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

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

➤ FACULTY OF ENGINEERING

■ **B.Eng., B.A.Sc. Programs:** To be admitted to a Level II Engineering program, you must have completed all non-elective Engineering I courses with a minimum CA of 4.0. To be admitted to Level II Honours Computer Science or Honours Business Informatics you must have completed a minimum of 24 units of all non-elective courses and some electives.

In Level II and above, you must maintain a CA of at least 4.0 to continue in an Engineering program or in the Honours Computer Science or Honours Business Informatics programs. 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.

■ **B.Tech Programs:** For specific minimum requirements, please see the descriptions for the individual programs within the *Faculty of Engineering* section in this Calendar.

➤ FACULTY OF HEALTH SCIENCES

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

➤ FACULTIES OF HUMANITIES AND SOCIAL SCIENCES

■ **Honours B.A. Programs; B. Mus. Program; B.A./B.S.W. and B.S.W. Programs:** You must have a CA of at least 6.0 to continue in an Honours program. If your CA is 5.5 to 5.9, you may remain in the Honours program, but will be placed on program probation for one reviewing period. You may be on program probation only once. If your CA is 3.0 to 5.4, you must transfer to another program for which you qualify. If your CA is less than 3.0, you may not continue at the University.

■ **Honours B.Kin. Program:** To be admitted to a Level II Honours Kinesiology program, you must have completed all Kinesiology I program requirements with a Cumulative Average of at least 6.0 including an average of at least 6.0 in KINESIOL 1A06, 1E03, 1H03.

Upon completion of Kinesiology I, students who have achieved an average of at least 6.0 in KINESIOL 1A06, 1E03, 1H03 and whose CA is between 5.5 and 5.9 may register in Level II Honours Kinesiology but will be placed on program probation for one reviewing period. A student may be on program probation only once.

Upon completion of Kinesiology I, students who have achieved an average of at least 6.0 in KINESIOL 1A06, 1E03, 1H03 and whose CA is between 3.5 and 5.4 may register in Level II Kinesiology General and, with permission, take Level II Kinesiology required courses. At their next review, such students must achieve a CA of at least 6.0 to transfer to an Honours Kinesiology program.

Upon completion of Kinesiology I, students who have not achieved an average of 6.0 in KINESIOL 1A06, 1E03, 1H03 and whose CA is between 3.5 and 5.4 may register in Level II Kinesiology General for one reviewing period. During that period a student may not take Level II Kinesiology courses but may upgrade or repeat Level I Kinesiology courses. At the end of that period, students who have achieved an average of at least 6.0 in KINESIOL 1A06, 1E03, 1H03 and have a CA of at least 6.0 may transfer to the Honours Kinesiology program. Students who fail to meet the minimum requirements for transfer to Honours Kinesiology must transfer to a non-Kinesiology program for which they qualify.

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

➤ FACULTY OF SCIENCE

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

■ **Honours B.Sc. Kinesiology Program (Effective 2008-2009):** You must complete Honours Kinesiology I with a CA of at least 6.0 including an average of at least 6.0 in KINESIOL 1A03, 1AA3, 1C03, 1E03, 1F03, 1G03.

If, upon completion of Honours Kinesiology I, you have achieved an average of at least 6.0 in KINESIOL 1A03, 1AA3, 1C03, 1E03, 1F03, 1G03 and have a CA between 5.5 and 5.9, you may register in Level II Honours Kinesiology but will be placed on program probation for one reviewing period. You may be on program probation only once.

If, upon completion of Honours Kinesiology I, you have achieved an average of at least 6.0 in KINESIOL 1A03, 1AA3, 1C03, 1E03, 1F03, 1G03 and have a CA between 3.5 and 5.4, you may register in Level II Kinesiology General and, with permission, take Level II Kinesiology required courses. At your next review, you must achieve a CA of at least 6.0 to transfer to an Honours Kinesiology program.

If, upon completion of Honours Kinesiology I, you have not achieved an average of 6.0 in KINESIOL 1A03, 1AA3, 1C03, 1E03, 1F03, 1G03 and your CA is between 3.5 and 5.4, you may register in Level II Kinesiology General for one reviewing period. During that period you may not take Level II Kinesiology courses but may upgrade or repeat Level I Kinesiology courses. At the end of that period if you have achieved an average of at least 6.0 in KINESIOL 1A03, 1AA3, 1C03, 1E03, 1F03, 1G03 and have a CA of at least 6.0 you may transfer to the Honours Kinesiology program. If you fail to meet the minimum requirements for transfer to Honours Kinesiology, you must transfer to a non-Kinesiology program for which you qualify.

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

■ **M.R.Sc. Program:** You must complete all the course requirements prescribed for Medical Radiation Sciences I by the end of term 2 of Level I, with a CA of at least 5.0 or permission of the Committee of Instruction (Chair Medical Radiation Sciences (Mohawk), Coordinator Medical Radiation Sciences (McMaster), Coordinator Radiation Therapy Specialization, Coordinator Radiography Specialization, Coordinator Ultrasonography Specialization).

Reinstatement

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

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

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

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

Transfer Between Programs

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

Minors

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

If you wish to receive a Minor, you should check the information under the heading Minor in the appropriate department's listing. McMaster also offers Interdisciplinary Minors in Archaeology and Jewish Studies. (See *Interdisciplinary Minors and Thematic Areas* section.) You will be responsible for ensuring that you register in the required Minor courses. Normally, you must complete a minimum of 24 units in the Minor subject. No more than six of these units can be 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 program, when you file your Graduation Information Card, you must indicate your desire to receive a Minor in the chosen subject. The Faculty Reviewing Committee will verify that the requirements have been met. If you are successful, your transcript will contain a designation for Minor in that area. See *Sessional Dates* section for deadlines.

Minors cannot be revoked once approved. (See Note 4 under *Second Bachelor's Degree Programs*.)

Second Bachelor's Degree Programs

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

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

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

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

■ **B. Eng. and B.A.Sc.:** For entry, you must meet the admission requirements for the program. If admitted, you must complete at least 60 units beyond the first degree including all program requirements.

NOTES

1. All work for the second degree must be completed at McMaster University.
2. A second degree is not available in all subject areas. You will not be admitted to a second degree program where there is substantial overlap in the requirements. See the individual Faculty/Program regulations or consult the Faculty/Program Offices for exclusions or further information.
3. Minors will not be revoked to permit later registration in a three-level second degree in the same subject. Students may return for a second degree in a subject in which they have obtained a Minor, but only at the Honours level. (See *Minors* above.)
4. Extra courses taken while you are registered in a first degree program, or courses completed as a Continuing Student, may, with the approval of the Faculty, be applied to the second degree program.
5. You must meet the same standards for continuation and graduation as are applied to students registered in a first degree program.
6. Credit from the first two degrees cannot be applied to a third undergraduate degree. To obtain a third undergraduate degree you must take the complete program, i.e. approximately 90 units for a three-level degree and approximately 120 units for a four-level degree.

Deans' Honour List

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

Provost's Honour Roll

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

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

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

Procedure 1: Petitions for Relief for Missed Term Work

1. A student may submit a Petition for Special Consideration through the Faculty office for relief from the academic consequences of missed term work based on compelling medical, personal or family reasons before or immediately after the work is missed, normally within five working days.
2. If the reason is medical, the approved McMaster University Medical Form must be used. The student must be seen by a doctor at the earliest possible date, normally on or before the date of the missed work and the doctor must verify the duration of the illness. Relief will not be available for minor illnesses.
3. If the reason is non-medical, appropriate documentation with verifiable origin covering the relevant dates must be submitted, normally within five working days.
4. Students should expect to have academic commitments Monday through Saturday but not on Sunday or statutory holidays. Students who require accommodations to meet a religious obligation or to celebrate an important religious holiday should make their requests as soon as possible after the start of term to their Faculty/program office.
5. 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.
6. After the third Petition for Special Consideration a student will be asked to meet with the Associate Dean (or delegate).
7. The University reserves the right to require students to obtain medical documentation from the Campus Health Centre.
8. It is the student's responsibility to check with the Faculty office for a decision on the petition.
If the petition is granted, the Faculty office will notify the instructor(s) recommending relief.
9. The student must contact the instructor promptly to discuss the appropriate relief.
10. It is the prerogative of the instructor of the course to determine the appropriate relief for missed term work in his/her course.

Procedure 2: Petitions for Deferred Examinations

1. Once a student has completed an examination, no special consideration will be granted. A student who misses an examination or is unable to complete an examination may submit a Petition for Special Consideration requesting a deferral of the examination to the Faculty office, normally within five working days of the missed examination. The petition must be based on compelling medical, personal or family reasons.
2. See steps 1. - 6. in *Petitions for Relief for Missed Term Work* above.
3. It is the student's responsibility to check with the Faculty office for a decision on the petition for a deferred examination.
4. If the deferred examination is granted, the student will be informed officially by means of the notation DEF which will appear against the relevant course on the student's academic record (available on MUGSI) and on the student's grade report.
5. Deferred examinations are written during the next official University deferred 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 program. The steps in this procedure will be consistent with those used to consider a student's eligibility for a deferred examination.

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

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

4. EXAMINATIONS

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

Other instructor-scheduled tests and examinations may be held throughout each session but may not be scheduled during the last five days of the terms of the Fall/Winter session, or between the last day of classes for the term and the first day of the examination schedule, except as approved by the Undergraduate Council. Assignments worth more than ten percent of a final course grade cannot be assigned during this ban period, and take-home examinations worth more than ten percent of a final course grade cannot be due during the ban period. Tests that are exempt from the ban must:

- a) be a part of a process of continuous or periodic assessment through the term; and
- b) be held in the normally scheduled class or lab slot; and
- c) be worth no more than ten percent of the final course grade.

See the *Sessional Dates* section of this Calendar.

Examinations Conducted by the Office of the Registrar

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

26 GENERAL ACADEMIC REGULATIONS

- You may only use books, papers or instruments during an examination if they are specifically prescribed on the examination paper. No examination books or supplies are to be removed from the room.
- No conversation or any form of communication between candidates is permitted in the examination room.
- No cell phones, pagers or any communicating devices are permitted.
- No food is permitted and drinks must be in a spill proof container.
- The University is not responsible for lost or stolen articles.
- Items (including back packs) that are not required to write the examination should not be brought into the examination as they must be left at the side of the room at your own risk.
- Handbags or small personal belongings may be left beneath your chair but not on your desk.
- You are expected to use the washroom before or after and not during an examination.
- You are responsible for writing the correct examination from the right instructor at the place and time indicated on the examination timetable.
- 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 president.
- If you miss or leave an examination for medical reasons you must submit a *Petition for Special Consideration* form with supporting documentation of illness, personal or family reasons, to the Office of the Associate Dean of your Faculty normally within five working days of the missed examination.
- If you are late for an examination, report immediately to the president in your examination location or to the Examinations Section of the Office of the Registrar.
- If you miss or leave an examination for any other reason, report immediately to the Office of the Associate Dean of your Faculty. You will be advised whether you can write your examination before the end of the examination schedule, or whether you must apply for special consideration by submitting documentation to the Office of the Associate Dean of your Faculty.
- Special examination arrangements may be made upon application to the Examinations Section of the Office of the Registrar in some circumstances, such as:

- a conflict with religious obligations
- a conflict between two Registrar-scheduled examinations
- a schedule with three examinations in one calendar day or three consecutive examinations
- December only - two consecutive examinations if the first examination is three hours long

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

■ Students with disabilities are required to inform the Centre for Student Development of accommodation needs for examinations on or before the last date for withdrawal from a course without failure by default. (See the *Sessional Dates* section of this Calendar.) This allows sufficient time to verify and arrange appropriate accommodation. Failure to meet the stated deadline may result in the denial of special accommodation. See *Academic Facilities, Student Services and Organizations--Centre for Student Development* section of this Calendar.

■ **Examinations are not rescheduled for purposes of travel.** You must arrange to be available for the entire range of examination dates as listed in the *Sessional Dates* section.

Deferred Examinations

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

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

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

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

5. GRADING SYSTEM

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

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

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

Cours Grade	Grade Points		Cours Units		
A-	10	x	6	=	60
C+	6	x	3	=	18
B	8	x	6	=	48
B+	9	x	3	=	27
Total			18		153

To calculate Average: $153 / 18 = 8.5$

- ◆ Since September 1982, the grading scale has been:

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

UNDERGRADUATE ACADEMIC AWARDS

The Fall/Winter Sessional Average will be used to determine your eligibility for these awards. Terms and conditions of awards for full-time and part-time studies are defined in the *Undergraduate Academic Awards* section.

7. GRADUATION

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

The following Cumulative Averages are required to graduate:

- B.A. — 3.5
- B.A. (Honours) — 5.0
- B.A./B.S.W. and B.S.W. — 6.0
- B.Arts Sc. and B.Arts Sc. (Honours) — 5.0
- B.Com. — 4.0
- B.Com. (Honours) — 5.0
- B.Eng., B.Eng.Biosciences, B.Eng.Mgt., B.Eng.Society — 4.0
- B.H.Sc. — 6.0 (on all graded courses)
- B.H.Sc. (Honours) — 5.0
- B.Kin. (Honours) — 5.0
- B.Kin. Major — 4.0
- B.Mus. (Honours) — 5.0
- B.Med.Rad.Sc.*, B.Sc. — 3.5
- B.Sc. (Honours) — 5.0
- B.Sc.Kin.* (Honours) — 5.0
- B.Sc.N. — 3.5
- B.Tech. — 3.5
- * Degree designation subject to approval

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

If you are registered in Level III of an Honours program and wish to transfer to a three-level degree program to be eligible for graduation at the next Convocation, you must apply to the appropriate Office of the Associate Dean by April 15 for Spring Convocation, and by September 1 for Fall Convocation. If permission is granted, you must complete a **Graduation Information Card**.

If you are scheduled to graduate from a three-level program and wish to be considered to transfer to Level IV of an Honours program rather than graduate, you must apply to the appropriate Office of the Associate Dean by April 15 for Spring Convocation and by September 1 for Fall Convocation. You will receive the decision on your eligibility to transfer on your grade report and if you are not eligible to transfer, you will graduate from your three-level program as scheduled.

During the session in which you expect to complete your graduation requirements, you must complete a Graduation Information Card online at <http://registrar.mcmaster.ca/internal/convocation/> by mid-February for Spring Convocation and by mid-July for Fall Convocation. Deadline dates appear in the *Sessional Dates* section of this Calendar.

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

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

Diplomas will not be released if you have an outstanding account with the University.

Diplomas held for students with an outstanding account or that have been returned in the mail will only be retained for a period of twelve months following the Convocation date. Students under the above circumstance requesting diplomas after this period will need to purchase a replacement diploma.

Duplicate and Replacement Parchments, Diplomas and Certificates

Graduates may request, with payment of the required fee, a duplicate or replacement degree parchment, diploma or certificate. A *duplicate copy* of the student's degree parchment, diploma or certificate will be issued when a student requires a second copy of the degree parchment, diploma or certificate. A degree parchment, diploma or certificate will be *reissued* (noting the date of reissue) when the original document has been lost, damaged or destroyed.

The words *duplicate copy* or *reissued* will be affixed to all degree parchments, diplomas or certificates requested in this manner. Degree parchments, diplomas or certificates will bear the signatures of the current Chancellor, President and Vice-Chancellor and Registrar.

8. RECORDS POLICY

Transcripts

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

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

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

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

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

Requests are filled promptly on receipt of payment. Official transcripts are usually delivered to other Ontario universities by courier and elsewhere by Canada Post. To avoid disappointment, please allow at least five to seven days (up to 10 business days during the peak periods of January, June and September) for processing plus delivery time. Transcripts will not be issued if you have outstanding accounts at the University.

Retention Policy

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

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

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

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

Notification of Disclosure of Personal Information to Statistics Canada

Statistics Canada is the national statistical agency. As such, Statistics Canada carries out hundreds of surveys each year on a wide range of matters, including education.

In order to carry out such studies, Statistics Canada asks all colleges and universities to provide data on students and graduates. Institutions collect and provide to Statistics Canada student identification information (student's name, student ID number, Social Insurance Number), student contact information (address and telephone number), student demographic characteristics, enrolment information, previous education and labour force activity.

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

Students who do not wish to have their information used are able to ask Statistics Canada to remove their identification and contact information from the national database. For further information, please see Statistics Canada's web site at: <http://www.statcan.ca> or write to the Postsecondary Section, Centre for Education Statistics, 17th Floor, R.H. Coats Building, Tunney's Pasture, Ottawa, K1A 0T6.

Collection of Personal Information and the Protection of Privacy

McMaster University collects and retains personal information of students, alumni and other parties, including but not limited to professors, staff, visiting academics and private citizens using services provided by McMaster University, under the authority of the *McMaster University Act*, (1976). This information is used for the academic, administrative, employment-related, financial and statistical purposes of the University, including for the administration of admissions, registration, awards and scholarships, convocation, alumni relations and other fundamental activities related to being a member of the University community, a user of services provided by McMaster or an attendee of, or applicant to, a public post-secondary institution in the Province of Ontario. The information will be used, among other things, to admit, register and graduate students, record academic achievement, issue library cards and, where applicable, local transit passes, to provide access to information systems and to operate academic, financial, athletic, recreational, residence, alumni and other University programs. Information on admissions, registration and academic achieve-

ment may also be disclosed and used for statistical and research purposes by the University, other post-secondary educational institutions and the federal and provincial governments. An individual's name, Faculty and program, award information, degree(s) awarded and date of graduation is considered public information and may be published by McMaster University. In addition, student photographs posted by the University in the form of individual pictures or class pictures may be publicly displayed. Aside from the foregoing, the information you provide and any other information placed in a student record, or in a personnel record, will be protected and used in compliance with Ontario's *Freedom of Information and Protection of Privacy Act* and will be disclosed only in accordance with this Act. If you have any questions about the collection and use of this information, please contact the University Registrar, University Hall, Room 209; McMaster University, Student Records, Gilmour Hall, Room 108; or the University Secretary, Gilmour Hall, Room 210, McMaster University.

McMaster University may also collect personal information from other relevant sources including, without limitation, the Ontario Universities' Application Centre, secondary schools, colleges, universities and other institutions previously attended, including third-party services and test score providers where the items collected form a part of the application or admission process to a university program.

In addition to collecting personal information for its own purposes, McMaster University collects specific and limited personal information on behalf of the McMaster Student Union, the McMaster Association of Part-time Students and/or the McMaster Graduate Students Association. These constituent student groups use personal information for the purpose of membership, administration, elections, annual general meetings, health plans and other related matters only. Please contact the relevant Student Union/Association office if you have questions about this collection, use and disclosure of your personal information and their respective privacy policies.

SENATE POLICY STATEMENTS

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

The policies consist of:

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

The following provides a summary of the major policies which pertain to students.

A number of these policies are under review and may be revised. Students are advised to check the *Policies, Procedures and Guidelines* (<http://www.mcmaster.ca/policy>) section of the University website for the most up-to-date information. Complete versions of the policies may also be obtained from the University Secretariat, Room 210, Gilmour Hall.

Academic Integrity and Academic Dishonesty

The Academic Integrity Policy explains the expectations the University has of its scholars. Some Departments and instructors have also developed more specific rules and regulations designed to maintain scholarly integrity. It is the responsibility of each instructor to make students aware of these expectations.

The main purpose of a university is to encourage and facilitate the pursuit of knowledge and scholarship. The attainment of this purpose requires the individual integrity of all members of the University community, including all graduate and undergraduate students. Scholars at McMaster demonstrate integrity in many ways, including the following:

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

The University states unequivocally that it demands scholarly integrity from all its members. Academic dishonesty, in whatever form, is ultimately destructive of the values of the University; furthermore, it is unfair and discouraging to those students who pursue their studies honestly.

Academic dishonesty is not qualitatively different from other types of dishonesty. It consists of misrepresentation by deception or by other fraudulent means. In an academic setting, this may include any number of forms such as:

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

For a complete definition and examples, please refer to the Academic Integrity Policy, Appendix 3.

Allegations of academic dishonesty will be handled according to the procedures described in the Academic Integrity Policy. Penalties may be imposed on students who have been found guilty of academic dishonesty. Examples of penalties include a mark of zero on an assignment, zero for the course with a transcript notation, and suspension or expulsion from the University, etc.

Student Appeal Procedures

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

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

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

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

Applicants who have been refused readmission to a degree program may appeal the decision, using the procedures described in the *Student Appeal Procedures*, if the following two conditions have been met:

1. the applicant withdrew voluntarily from the University, and
2. the applicant alleges error or injustice on grounds other than academic judgment.

Student Code of Conduct

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

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

Alcohol Policy and Residence Community Alcohol Policy

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

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

Statement on Human Rights

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

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

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

Sexual Harassment Policy

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

Anti-Discrimination Policy

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

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

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

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

Guidelines for Student Evaluation

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

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, campus health services, student organizations, and athletics, and are payable by all students.

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

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

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

Fees shown below are for 2006-2007. The fee schedules for 2007-2008 are available on the internet at <http://www.mcmaster.ca/bms/finance/student/> in the spring of 2007.

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

Base Per Unit Tuition Per Faculty

Faculty/Program	Canadian/ Permanent Resident Status	Visa Status
> Arts & Science Level 1	143.97 per unit	431.60 per unit
> Arts & Science Levels 2, 3, 4	143.28	431.60
> Business Level I	162.95	448.20
> Commerce Levels 2, 3, 4	156.91	448.20
> Engineering Level 1	175.78	539.55
> Engineering Levels 2, 3, 4	169.27	539.55
> Eng. Mgt. II, IV	171.44	589.25
> Eng. Mgt. III, V	169.27	539.55
> Health Sciences (Honours) Level 1	143.97	435.00
> Health Sciences (Honours) Levels 2, 3, 4	143.28	435.00
> Humanities Level 1	143.97	379.60
> Humanities Levels 2, 3, 4	143.28	379.60
> Kinesiology and Social Sciences Level 1	143.97	379.60
> Kinesiology and Social Sciences Levels 2, 3, 4	143.28	379.60
> Medical Radiation Sciences Level 1	143.97	431.60
> Medical Radiation Sciences Levels 2, 3, 4	143.28	431.60
> Nursing Level 1	143.97	435.00
> Nursing Levels 2, 3, 4	143.28	435.00
> Science Level 1	143.97	431.60
> Science Levels 2, 3, 4	143.28	431.60

Supplementary Fees

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

Athletics and Recreation Activity Fee	\$4.37
Administrative Services Fee	1.02

McMaster Association of Part-Time Students Fees:

Organization Fee	\$5.00
Total Charge per unit	\$10.39

Nursing Students Add:

Learning Resource Fee	\$7.65
Immunization Fee	\$20.00
Respiratory Mask Fitting Fee	\$18.00

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	\$98.42
Student Health Service	50.35
Ontario Public Interest Research Group (OPIRG)	6.64

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

McMaster Student Union Fees:

Student Organization Fee	\$104.74
Health Plan Premium*	45.00
Dental Plan Premium*	95.00
H.S.R. Bus Pass	69.88
WUSC Student Refugee Fee	1.30
Ancillary Fee for CFMU-FM	15.37
Ancillary Fee for MARMOR Yearbook	8.00
Incite Publication	0.84

Sub Total \$495.54

***NOTE:** Students who can prove comparable coverage may opt out of the McMaster Students Union Health Plan and Dental Plan Premiums. For deadline dates and detailed information, students should consult the MSU Insurance Plans web site at <http://www.msu.mcmaster.ca/health>.

Plus:

- McMaster Student Union's University Student Centre Building fee (\$2.82 per unit), to a maximum of \$84.60
- Student Services Fee (\$3.84 per unit), to a maximum of \$115.20
- Administrative Services Fee (\$1.02 per unit), to a maximum of \$30.60
- Athletics and Recreation Building Fee (\$2.55 per unit), to a maximum of \$76.50

And Faculty Specific Society/Support Fees as Follows:

Arts & Science	28.00
Bachelor of Health Sciences (Honours)	26.00
Commerce	184.53
Engineering	132.00
Humanities	15.62
Kinesiology	50.00
Medical Radiation Science Collaborative Fee	81.76
Nursing	206.34
Science	35.00
Social Sciences	50.33

Canadian Citizens and Landed Immigrant Students

(Examples of fees for full academic load.)

	Supplementary		
	Tuition Fee	Fees	Total Fees
> Arts & Science Level 1	4,319.10	830.44	5,149.54
> Arts & Science Levels 2, 3, 4	4,298.40	830.44	5,128.84
> Business Level 1	4,888.50	986.97	5,875.47
> Commerce Levels 2, 3, 4	4,707.30	986.97	5,694.27
> Engineering Level 1	5,800.74	934.44	6,735.18
> Engineering Levels 2, 3, 4 and Eng. Mgt. III, V	5,585.91	934.44	6,520.35
> Eng. Mgt. II, IV	5,143.20	934.44	6,077.64

	Tuition Fee*	Supplementary Fees	Total Fees
➤ Health Sciences (Honours) Level 1	4,319.10	828.44	5,147.54
➤ Health Sciences (Honours) Levels 2, 3, 4	4,298.40	828.44	5,126.84
➤ Humanities Level 1	4,319.10	818.06	5,137.16
➤ Humanities Levels 2, 3, 4	4,298.40	818.06	5,116.46
➤ Kinesiology Level 1	4,319.10	852.44	5,171.54
➤ Kinesiology Levels 2, 3, 4	4,298.40	852.44	5,150.84
➤ Medical Radiation Sciences Level 1	4,319.10	919.20	5,238.30
➤ Medical Radiation Sciences Levels 2, 3, 4	4,298.40	919.20	5,217.60
➤ Medicine I	15,600.00	1,083.23	16,683.23
➤ Medicine II, III	15,022.00	1,083.23	16,105.23
➤ Midwifery Level 1	4,530.89	266.77	4,797.66
➤ Midwifery Levels 2, 3, 4	4,403.86	266.77	4,670.63
➤ Nursing Level 1	4,319.10	1,008.78	5,327.88
➤ Nursing Levels 2, 3, 4	4,298.40	1,008.78	5,307.18
➤ Science Level 1	4,319.10	837.44	5,156.54
➤ Science Levels 2, 3, 4	4,298.40	837.44	5,135.84
➤ Social Sciences Level 1	4,319.10	852.77	5,171.87
➤ Social Sciences Levels 2, 3, 4	4,298.40	852.77	5,151.17

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

Visa Students

(Examples of fees for full academic load.)

	Tuition Fee*	Supplementary Fees	Total Fees
➤ Arts & Science	12,948.00	830.44	13,778.44
➤ Business and Commerce	13,446.00	986.97	14,432.97
➤ Engineering and Eng. Mgt. III, V	17,805.15	934.44	18,739.59
➤ Eng. & Mgt. II, IV	17,677.50	934.44	18,611.94
➤ Health Sciences (Honours)	13,050.00	828.44	13,878.44
➤ Humanities	11,388.00	818.06	12,206.06
➤ Kinesiology	11,388.00	852.44	12,240.44
➤ Medical Radiation Sciences	12,948.00	919.20	13,867.20
➤ Nursing	13,050.00	1,008.78	14,058.78
➤ Science	12,948.00	837.44	13,785.44
➤ Social Sciences	11,388.00	852.77	12,240.77

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

Student Health Services Fees

The supplementary student health services fee of \$50.35 supports the on-campus clinic facilities, which provide the services of doctors and nurses. The McMaster Students Union Health Plan Premium fee of \$45.00 includes reimbursement of expenses resulting from an accident incurred during the academic year, where such expenses are not recoverable under the Ontario Health Insurance Plan. The McMaster Students Union Dental Plan Premium fee of \$95.00 provides a dental plan for all full-time undergraduates students enrolled in 18 units or more.

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

NOTE: Students who can prove comparable coverage may opt out of the McMaster Students Union Health Plan and Dental Plan Premiums. For deadline dates and detailed information, students should consult the MSU Insurance Plans web site at <http://www.msu.mcmaster.ca/health>.

Co-op Fees

Co-op students attending the full academic term (September-April) should add a \$1,000.00 Co-op Fee to the regular 30 unit Science fee. Co-op students attending one academic term should pay half the 30 unit Science fee plus a \$500.00 Co-op Fee.

Listeners

You may register as a Listener in some degree and certificate/diploma courses. A Listener simply audits the course and does not receive a grade. Listener status is not available in limited enrolment classes. The Listener fee is one-half of the standard tuition fee. For any degree course, written permission to attend must be obtained from the course instructor before registration is finalized by the Centre for Continuing Education. Listeners withdrawing from a course may do so without penalty up to five working days before the first session. After that and before the second class, an administrative fee of \$60.00 applies. There is no refund after the second class.

This category excludes currently registered students, who may audit a course. See *General Academic Regulations* section in this Calendar for details.

Persons Aged 65+

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

RESIDENCE AND MEAL PLAN FEES

Regular Session

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

The fees below are those for 2006-2007.

RESIDENCES

	Full Payment	Installment Payment
Traditional Residences		
• Bunk and Loft Triple Room	3,490.00	2,045.00
• Quad Room	3,965.00	2,283.00
• Double/Triple Room	4,135.00	2,368.00
• Double Room with Washroom	4,390.00	2,495.00
• Single Room	4,535.00	2,568.00
• Single Room with Washroom	4,835.00	2,718.00
	Full Payment	Installment Payment

Apartment Style Residences

• Bates Apartment Room	5,215.00	2,908.00
• Mary E. Keyes Suite Room	5,475.00	3,038.00

MEAL PLANS

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

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

The fees below are those for 2006-2007.

Group A Full Meal Plan

(Available to all residence students)

	Full Payment	Installment Payment
• Light	2,300.00	1,150.00
• Small	2,550.00	1,275.00
• Regular	2,750.00	1,375.00
• Large	2,950.00	1,475.00
• X-Large	3,150.00	1,575.00

Group B Reduced Meal Plan

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

	Full Payment	Installment Payment
• Light	1,650.00	825.00
• Small	1,900.00	950.00
• Regular	2,100.00	1,050.00
• Large	2,300.00	1,150.00
• X-Large	2,500.00	1,250.00

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

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

Summer Residence

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

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

PAYMENT OF FEES

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

- Funding Options
- Payment Plans
- Payment Methods

Our web site at <http://www.mcmaster.ca/bms/finance/student> contains valuable information about your fees, various payment options and important deadline dates. You will find a "SOLAR Registration Video" which walks you through the online registration process. We also include step-by-step instructions for getting financial approval.

Students selecting a payment option that does not cover full fees, will be charged interest at the current rate of 1.2% compounded, 15.32% annually at the end of each month on the outstanding balance.

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 \$35.00 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 and their record of courses will be deleted from the system.

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

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

Refunds

If you are forced, by illness or other personal reasons, to withdraw from courses, you will be charged a partial fee for courses that are cancelled. The charge is determined by the date on which 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 2006-2007 academic year, and are over and above assessed academic fees, supplementary fees, and residence fees and meal plan fees.

Academic User Fees

- Applications for re-admission 50.00
- Applications to Part-Time Studies 50.00
- Certification of Enrolment Fee No fee
- Contribution to Psycho-Educational Assessment 200.00

- Deferred Examination on campus* No fee
- Examination Reread (Refunded if grade is changed) 50.00
- Letter of Permission No fee
- Notarizing Fee (plus \$0.50 per page over 10 pages) No fee
- Photocopying of Examination Script 10.00
- Replacement of Diploma 50.00
- Replacement of Student I.D. Card 30.00
- Replacement of Student I.D. Card/computer proximity chip 40.00
- Transcript (per copy) No fee
- Transcript Evaluation 60.00

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

Financial/Administrative User Fees

- Certificate Replacement Fee
 - Income Tax Receipt/Education Credit Certificate No fee
- Certification of Fee Payment No fee
- Meal Plan Withdrawal Fee 50.00
- Fine for Meal Card Misuse 25.00
- Returned Cheque Charge (NSF, Stopped Payment)
 - First Occurrence 35.00
 - Each Subsequent Occurrence (Additional) 10.00
- Late Payment Agreement Fee 50.00
- Late Payment Fee 35.00
- Payment Agreement Default Fee 35.00
- Deferment Fee 35.00
- Monthly Payment Plan Application Fee 35.00
- Reinstatement Fee 100.00
- Locker Rental Small 20.00
- Locker Rental Wide 25.00
- Library Charges
 - Overdue Recalled Books (per day) 2.00
 - Overdue Reserve Material (per hour) 2.00
 - Replacement Cost, plus Fine: up to 100.00
 - Returned Books After Billing 10.00

EXPENSES

Costs Other Than Fees

For Students in Clinical Courses

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

If you are a Nursing student, your uniform and accessories are ordered under the direction of the School of Nursing. The approximate cost is \$100.00. Level I Nursing students are also required to purchase a stethoscope at approximately \$100.00.

Registration Examinations

Graduates of the B.Sc.N. program can expect to pay fees (approximately \$337.05 in 2006) to write the comprehensive registration examinations administered by the College of Nurses of Ontario.

Insurance of Personal Property on University Premises

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

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

Death and Dismemberment Insurance

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

There are various 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.

ARTS & SCIENCE PROGRAM

WEB ADDRESS: <http://www.mcmaster.ca/artsci>

Commons Building, Room 105

Ext. 24655, 23153

Director

P.G. Sutherland/B.Sc., M.S., Ph.D.

Program Administrator

D. Cmac/B.A.

The Arts & Science Program has been designed for students who wish to use their university years to further their intellectual growth through study of significant achievements in both arts and sciences and in practice of methods of inquiry. The program also allows for substantial specialization in a discipline or area through the use of electives. The philosophy of the Arts & Science Program can be expressed by quoting A.N. Whitehead:

"What education has to impart is an intimate sense for the power of ideas, for the beauty of ideas, and for the structure of ideas, together with a particular body of knowledge which has peculiar reference to the life of the being possessing it."

— The Aims of Education and Other Essays, 1929

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

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

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

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

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

ACADEMIC REGULATIONS

STUDENT ACADEMIC RESPONSIBILITY

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

ACCESS TO COURSES

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases priority is given to students from particular programs or Faculties. All students are encouraged to register as soon as MUGSI/SOLAR is available to them.

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

The Program begins in Level I and leads to the degree, Bachelor of Arts & Science (Honours) on completion of Level IV. The four-level program provides an opportunity for specialization through electives and through an individual study or thesis course. Students who decide to conclude their studies in the program on completion of Level III may qualify to graduate with the degree, Bachelor of Arts & Science (B.Arts Sc.).

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

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

INQUIRY SEMINAR REQUIREMENTS

Inquiry seminars comprise 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 (3CE6, 3CF3, 3CG3, etc.) and are described in the program listing as *upper-level Inquiry*. See the course listing for topic designations. ARTS&SCI 1C06 must be completed in Level I. One upper-level inquiry seminar is required and is normally taken in Level II or III.

COMBINED HONOURS

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

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

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

INTERNATIONAL/CANADIAN EXCHANGE PROGRAMS

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

Calendar year of planned travel: No later than the end of December, students must propose a program of study for approval by the Director. Credit will be confirmed only after transcripts are received and academic achievements are reviewed on the student's return.

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

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

CENTRE FOR STUDENT DEVELOPMENT
INTERNATIONAL STUDENT SERVICES

GILMOUR HALL, ROOM 104

TELEPHONE: (905) 525-9140, EXTENSION 24748

ARTS & SCIENCE PROGRAM**B.Arts Sc. (Honours)****{2027}****Notes**

1. Six units of upper-level Inquiry beyond Level I are required.
2. An additional six units of upper-level Inquiry may be included as an Elective with permission of the Director.

COURSE LIST

ARTS&SCI 1E03; BIOLOGY 1A03,1AA3; CHEM 1A03,1AA3; ENVIR SC 1A03, 1B03, 1G03

REQUIREMENTS**LEVEL I: 30 UNITS**

- 24 units ARTS&SCI 1A06, 1B06, 1C06, 1D06
 6 units Electives or Course List (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 Course List (if not completed in Level I)

LEVEL III: 30 UNITS

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

LEVEL IV: 30 UNITS

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

ARTS & SCIENCE AND ANOTHER SUBJECT

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

Combined Honours Programs, Arts & Science and:

Anthropology	{2027010}
Art History	{2027029}
Biochemistry	{2027040}
Biology	{2027050}
Biology (Biodiversity Specialization)	{2027812}
Chemistry	{2027070}
Classics	{2027130}
Comparative Literature	{2027142}
Computer Science	{2027145}
Economics-Option A	{2027151}
Economics-Option B	{2027152}
English	{2027200}
Environmental Science	{2027211}
French - Program A	{2027230}
French - Program B	{2027231}
Geography	{2027240}
Gerontology	{2027265}
Health Studies	{2027273}
History	{2027290}
Linguistics	{2027312}
Mathematics	{2027320}
Multimedia	{2027294}
Origins Specialization	{2027412}
Peace Studies	{2027417}
Philosophy	{2027420}
Physics	{2027440}
Political Science	{2027450}
Psychology	{2027460}
Religious Studies	{2027475}
Sociology	{2027520}
Theatre & Film Studies	{2027551}
Women's Studies	{2027642}

DeGROOTE SCHOOL OF BUSINESS

(FACULTY OF BUSINESS)

WEB ADDRESS: <http://www.degroote.mcmaster.ca>EMAIL ADDRESS: buscom@mcmaster.caDeGroote School of Business, Room 104
Ext. 24433**Dean of Business**

P. K. Bates

Associate Dean of Business, Academic

M. Head/B.Math., M.B.A., Ph.D.

Director, Undergraduate Programs

N. Bontis/B.A., Ph.D.

Manager, Undergraduate Programs

D. Ellis

Undergraduate Student Advisor

L. Hill

Undergraduate Student Advisor

B. Pegg/B.A.

Student Advisor

M. Burley

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

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

Also, the School of Business participates in the Committee of Instruction and offers courses for programs in Labour Studies which are described in the *Faculty of Social Sciences* section of this Calendar.

THE COMMERCE PROGRAMS

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

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

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

INTERNATIONAL/CROSS-CULTURAL/LANGUAGE MENU

In its revised programs, the School of Business is stressing the importance of breadth of knowledge. Students are required to take courses in a variety of business disciplines, thus giving them a sound understanding of business functions and their relationships. They also obtain exposure to international and cross-cultural issues. This will provide them with the knowledge needed for the world of global organizations. Prior to graduation, students are required to successfully complete **two courses** from an International/Cross-Cultural/Language menu. **NOTE:** Students who participate in an official McMaster University exchange are required to successfully complete one course from an International/Cross-Cultural/Language menu prior to graduation. Students must satisfy the normal prerequisites for the courses listed on the menu. Students follow the menu requirements of the Calendar in force when they enter Business I, however, when a later Calendar expands the menu options, students may choose from those additional courses as well. **The menu for 2007-2008 is as follows:**

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

All courses in the Faculty of Humanities open to Commerce students, with the exception of all Multimedia courses, PHILOS 2N03 and English courses other than those listed below.

All Indigenous Studies courses

All Political Science courses, except POL SCI 1G06, 3F03, 3FF3, 3JJ3, 3S03, 4O06

All Religious Studies courses

ECON 2F03 The Political Economy of Development
ECON 2L03 Peace, Human Security and Economic Development

ECON 3H03 International Monetary Economics
ECON 3HH3 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 and Consumer Culture
ENGLISH 2C03 Contemporary Canadian Fiction
ENGLISH 2F03 Studies in American Literature
ENGLISH 2J03 Contemporary Popular Culture
ENGLISH 3D03 Science Fiction
ENGLISH 3EE3 African American Fiction
ENGLISH 3Y03 Children's Literature
GEO 1HS3 Geography of the Human Environment (if not completed as part of the Business I requirements)

GEO 1HU3 Urban Economic Geography
GEO 3HJ3 Geography of Japan
GEO 3HR3 Geography of a Selected World Region
GEO 3HZ3 Urban Social Geography
KINESIOL 3SS3 Body, Mind, Spirit
SOCIO 2E06 Racial and Ethnic Group Relations
SOCIO 3Z03 Ethnic Relations

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

FULL-TIME/PART-TIME STUDIES

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

CONTINUING STUDENTS

Graduates of McMaster's Commerce programs or one of the Engineering and Management programs may take, as part-time students, Level III and IV Commerce courses (not previously taken, to a maximum of 18 units), subject to space availability, excluding COMMERCE 4AG3*, 4AH3*, 4AI3*. (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.

Other than those graduates specified above, Commerce courses are not open to Continuing Students.

SECOND UNDERGRADUATE DEGREE

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

CREDIT TOWARDS PROFESSIONAL DESIGNATIONS

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

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

MINOR

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

ACADEMIC REGULATIONS

STUDENT ACADEMIC RESPONSIBILITY

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

ACCESS TO COURSES

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases priority is given to students from particular programs or Faculties. All students are encouraged to register as soon as MUGSI/SOLAR is available to them.

A student enrolled in either of the Commerce programs, in addition to meeting the *General Academic Regulations* of the University, shall be subject to the following *School of Business Regulations*.

QUALIFYING FOR HONOURS COMMERCE

To be considered for entry to Level III of the Honours Commerce program, students must have attempted at least 24 units of course work for Level II Commerce (as described in this section of the Calendar) with a C.A. of at least 6.0 and no more than six units of failures (in required and/or elective course work) after entry to Level II Commerce.

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

CHANGE OF PROGRAM

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

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

WORKLOAD

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

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

DEFERRED EXAMINATIONS

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

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

REPEATED COURSES

Any failed course must be repeated if it is a required course for the program, or must be 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 the *Glossary* section of this Calendar.)

LEVEL I COURSES

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

LEVEL OF REGISTRATION

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

READMISSION

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

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

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

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

REINSTATEMENT

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

There are two categories of students who may apply for reinstatement to Business I:

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

Students seeking reinstatement must complete the *Reinstatement Request Form* available at the Office of the Registrar. The completed form and the \$50 fee must be submitted to the Office of the Registrar by June 30 for entry in September.

The form must clearly demonstrate extraordinary circumstances which caused inadequate performance and indicate whether the circumstances surrounding their academic situation have been resolved. They should also include relevant documentary evidence, for example, a letter from a physician outlining any medical condition that might have affected the student's academic performance or final grade. Reinstatement cases will be carefully screened and the evidence considered will include the student's academic performance before and after admission to McMaster, as well as the nature of the reasons cited in the application letter and the accompanying documentation. Such exceptional cases will be considered on their merit. **Reinstatement is not guaranteed.**

Upon reinstatement, the Cumulative Average for a student is reset to 0.0 on zero units. If at any review after reinstatement the student's Cumulative Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.

FORMER COMMERCE STUDENTS

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

If five years have passed since the student was last registered at McMaster, he/she should consult the heading *Readmission* in the *Admission Requirements* section of this Calendar.

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

INQUIRIES RE: ACADEMIC REGULATIONS

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

COMMERCE INTERNSHIP PROGRAM

This is a program designed to provide students with an opportunity to participate in career oriented work terms. Positions begin after the successful completion of Level III and may continue for periods of eight, twelve or sixteen months. Students compete for opportunities with participating companies through an application and interview process. Upon completion of the Internship, students return to campus to complete their degree program. Students securing positions will be required to register in COMMERCE 3IN0, Commerce Internship Program, successfully complete a minimum of an eight-month Internship, obtain a satisfactory employer evaluation, and submit a work term report upon return to campus. Meeting these requirements will result in a transcript notation indicating the successful completion of COMMERCE 3IN0, the name of the Internship employer and dates of employment. Students are also required to attend a series of six preparatory career development sessions prior to competing for Internship opportunities. For more information, please contact the Manager, Commerce Career Resource Centre, DeGroote School of Business, Room 112.

EXCHANGE PROGRAMS

There are a number of official exchange programs offered to undergraduate students registered in the School of Business. The countries involved are: Australia, Denmark, England, France, Japan, the Netherlands, Norway, Mexico and Singapore. Official exchange programs offer students the most inexpensive means of studying abroad as students participating in these exchanges avoid the foreign student fees by paying fees to McMaster. All

students must be in good standing with a Cumulative Average of at least 7.0 to be eligible to participate in an exchange. In most cases, students who participate in exchange programs go abroad for Level III of their program. Information is available from Prof. M. Malik, Director, International Exchange Programs, in the DeGroote School of Business, Room 228.

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

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

CENTRE FOR STUDENT DEVELOPMENT**INTERNATIONAL STUDENT SERVICES**

GILMOUR HALL, ROOM 104

TELEPHONE: (905) 525-9140, EXTENSION 24748

PROGRAMS**PROGRAM NOTES**

1. Students in Business I are not eligible to take upper Level Commerce course work.
2. Students have only one opportunity to be reviewed for entry to Commerce II. Other options may be pursued through the Academic Programs Office.
3. To be considered for entry into Commerce II a Business I student must have met all of the following:
 - a) achieved a CA of at least 5.0 on the 30 units of course work for Business I (on first attempts only);
 - b) successfully completed on first attempts only all Business I required courses (ECON 1A06 or both ECON 1B03 and 1BB3; COMMERCE 1E03 or 1S03; COMP SCI 1BA3; MATH 1A03 or 1M03; and one of ANTHROP 1A03, GEO 1HS3, PSYCH 1A03 or SOCIOL 1A06). For students without Grade 12 Advanced Functions, and Introductory Calculus U (or equivalent) or whose credit in same is older than five years, MATH 1K03 must be taken before MATH 1A03 or 1M03; students without Grade 12 Mathematics of Data Management U (or equivalent) or whose credit in same is older than five years must take STATS 1L03;
 - c) have no more than six units of failure in the elective component of Business I courses;
 - d) have successfully completed ECON 2X03 if registered in this course in Business I. (ECON 2X03 is not required for admission to Commerce II. Students who elect to register in ECON 2X03 in Business I and who do not successfully complete the course, will not be permitted to enter Commerce II.)
4. Refer to *Workload* under the *Academic Regulations* section in the *School of Business* for information on full-time and part-time Business I course loads.
5. Students seeking a Minor in Mathematics and Statistics must take MATH 1A03 and should refer to the *Faculty of Science* section of this Calendar for the requirements for a Minor in Mathematics and Statistics. **Students neither seeking this Minor nor planning on a transfer to the Faculty of Science, are advised to take MATH 1M03.**
6. Transfer students may be admitted to Commerce II from other universities or from other Faculties within McMaster University. Transfer students will be expected to complete COMMERCE 1E03 or 1PA0, 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.
7. Admission to either of the Commerce programs beyond Commerce Level II is not possible.

Business I**{0725}****REQUIREMENTS****LEVEL I: 30 UNITS**

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

1 course	COMMERCE 1PA0
3 units	COMMERCE 1E03
3-6 units	from ANTHROP 1A03, GEO 1HS3, PSYCH 1A03, SOCIOL 1A06

- 3 units COMP SCI 1BA3
 6 units from ECON 1A06, 1B03, 1BB3
 3 units from MATH 1A03, 1M03 (See Note 5 above.)
 0-3 units MATH 1K03 (for those without Grade 12 Advanced Functions and Introductory Calculus U or equivalent or whose credit in same is older than five years)
 0-3 units STATS 1L03 (for those without Grade 12 Mathematics of Data Management U or equivalent or whose credit in same is older than five years)
 3-12 units Electives to total 30 units. See also the *International/Cross-Cultural/Language Menu* in this section of the Calendar.

Commerce II {2140}

REQUIREMENTS

LEVEL II: 30 UNITS

- 24 units COMMERCE 2AA3, 2AB3, 2BA3, 2FA3, 2MA3, 2QA3, 2QB3, 2S03
 3 units ECON 2X03
 3 units from COMMERCE 2SB3, electives from non-Commerce courses. See also the *International/Cross-Cultural/Language Menu* in this section of the Calendar.

Honours Commerce (Honours B.Com.) {2141}

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

REQUIREMENTS

LEVEL III: 30 UNITS

- 15 units COMMERCE 3BC3, 3FA3, 3MC3, 3QA3, 3QC3
 6 units Level III or IV Commerce
 9 units from COMMERCE 2SB3, electives from non-Commerce courses. See also the *International/Cross-Cultural/Language Menu* in this section of the Calendar.

LEVEL IV: 30 UNITS

- 6 units COMMERCE 4PA3, 4SA3
 15 units Electives from non-Commerce courses, COMMERCE 2SB3 or Level III or IV Commerce courses
 9 units from COMMERCE 2SB3, electives from non-Commerce courses. See also the *International/Cross-Cultural/Language Menu* in this section of the Calendar.

Commerce (B.Com.) {2140}

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

REQUIREMENTS

LEVEL III: 30 UNITS

- 15 units COMMERCE 3BC3, 3FA3, 3MC3, 3QA3, 3QC3
 15 units from COMMERCE 2SB3, electives from non-Commerce courses. See also the *International/Cross-Cultural/Language Menu* in this section of the Calendar.

LEVEL IV: 30 UNITS

- 6 units COMMERCE 4PA3, 4SA3
 6 units from COMMERCE 2SB3, electives from non-Commerce courses or Level III or IV Commerce courses
 18 units from COMMERCE 2SB3, electives from non-Commerce courses. See also the *International/Cross-Cultural/Language Menu* in this section of the Calendar.

Minor in Business

NOTES

- The Minor is not open to students registered in any Commerce or Engineering and Management program.
- 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 and students admitted to the Minor in Finance and the Minor in Accounting and Financial Management Services) is limited to 40 students who are registered in a four- or five-level McMaster degree program. Places in these courses will be allocated on a first-come, first-served basis.

- Effective September 1999, COMMERCE 2AA3, 2FA3 and 2MA3 will also require completion of ECON 1A06 or 1B03 with a minimum grade of B- as a prerequisite; or completion of ECON 2G03 or 2X03 with a minimum grade of B- as a prerequisite.
- For purposes of the Business Minor, KINESIOLOGY 3L03 will be accepted as a substitute for COMMERCE 2BA3; ECON 2B03, HTH SCI 1F03, 2A03, SOC SCI 2J03, STATS 1CC3, 2MB3, 3J04, 3N03 or 3Y03 will be accepted as a substitute for COMMERCE 2QA3. ECON 2I03 will be accepted as a substitute for COMMERCE 2FA3.

REQUIREMENTS

24 units total

- 6 units ECON 1A06 or 1B03 and 1BB3
 18 units COMMERCE 2AA3, 2AB3, 2BA3, 2FA3, 2MA3, 2QA3, 2QB3, 3BC3, 3FA3, 3MC3

Minor in Finance

The School of Business will admit a maximum of 30 students in total to the Minor in Finance and the Minor in Accounting and Financial Management Services each year.

NOTES

- Application for admission (forms available from the Academic Programs Office) must be submitted to the Academic Programs Office by April 30.
- Students seeking the Minor must have completed ECON 1A06 with a minimum grade of B- or an average of at least 7.0 in ECON 1B03 and 1BB3.
- The Minor is not open to students registered in any Commerce or Engineering and Management program.
- Students seeking to obtain the Minor must complete either ECON 2G03 or 2X03, and both ECON 2B03 and 2H03 before undertaking any Level III or Level IV Finance courses.
- For the purposes of this Minor, STATS 1CC3, 2MB3, 3J04, 3N03 or 3Y03 will be accepted as a substitute for ECON 2B03.

REQUIREMENTS

33 units total

- 6 units from ECON 1A06, 1B03, 1BB3
 3 units from ECON 2G03, 2X03 (See Note 4 above.)
 6 units ECON 2B03, 2H03 (See Note 4 above.)
 9 units COMMERCE 2AA3, 2FA3 (or ECON 2I03), 3FA3
 9 units from COMMERCE 3FB3, 3FC3, 4FA3, 4FD3, 4FE3, 4FF3, 4FG3, 4FH3, 4FI3, 4FJ3, 4FK3, 4FL3, 4FV3, 4FX3

Minor in Accounting and Financial Management Services

The School of Business will admit a maximum of 30 students in total to the Minor in Accounting and Financial Management Services and the Minor in Finance each year.

NOTES

- Application for admission (forms available from the Academic Programs Office) must be submitted to the Academic Programs Office by April 30.
- Students seeking the Minor must have completed ECON 1A06 with a minimum grade of B- or an average of at least 7.0 in ECON 1B03 and 1BB3.
- The Minor is not open to students registered in any Commerce or Engineering and Management program.
- Students seeking to obtain the Minor must complete either ECON 2G03 or 2X03, and both ECON 2B03 and 2H03 before undertaking any Level III or Level IV Accounting courses.
- For the purposes of this Minor, STATS 1CC3, 2MB3, 3J04, 3N03 or 3Y03 will be accepted as a substitute for ECON 2B03.

REQUIREMENTS

33 units total

- 6 units from ECON 1A06, 1B03, 1BB3
 3 units from ECON 2G03, 2X03 (See Note 4 above.)
 6 units from ECON 2B03, 2H03 (See Note 4 above.)
 12 units COMMERCE 2AA3, 2AB3, 3AB3, 3AC3
 6 units from COMMERCE 4AA3, 4AC3, 4AD3

FACULTY OF ENGINEERING

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

John Hodgins Engineering Building, Room A214

Ext. 24646

Dean of Engineering

M. Elbestawi/B.Sc., M.Eng., Ph.D., P.Eng.

Associate Dean of Engineering

P.M. Smith/B.Eng.Mgt., M.Eng., Ph.D., P.Eng.

Director of Engineering I

S. Masten/B.S., M.S.E., Ph.D., P.E.

Academic Assistant to the Associate Dean

M. White/B.Sc.

Undergraduate Student Advisors

J. Hopkins

S. Williams/B.A.

Engineering is a profession concerned with the creation of new and improved systems, processes and products to serve human needs. The central focus of engineering is design, an art entailing the exercise of ingenuity, imagination, knowledge, skill, discipline and judgment based on experience. The practice of professional engineering requires a mastery of engineering methodology together with a sensitivity to the physical potential of materials, to the logic of mathematics, to the constraints of human, physical and financial resources, to the minimization of risk, and to the protection of the public and the environment.

BACHELOR OF TECHNOLOGY PROGRAMS

The McMaster University Faculty of Engineering and the Mohawk College School of Engineering Technology are collaborating in the development of a unique concept for the shared delivery of technological education in Ontario. The primary purpose of this endeavour is to offer Bachelor of Technology degree programs with a variety of technical specializations. It builds on the very successful Bachelor of Technology program in Manufacturing Engineering Technology that has been offered jointly by both institutions since 1997. This type of program is targeted to individuals whose technological interests are applications-oriented.

The programs to be offered are of two kinds:

- A four-year degree program** (leading to both a Diploma in Technology from Mohawk and a Bachelor of Technology degree from McMaster) with entry directly from high school and
- A degree completion program** (leading to a Bachelor of Technology degree) for graduates of the Mohawk College three-year Diploma in Technology (or graduates of similar programs at other Colleges).

A major thrust of all of the programs is the inclusion of a significant component (seven one-term courses) of management education in order to ensure that graduates are able to perform supervisory and management responsibilities as they advance in their technical careers. The management component is designed to form a cohesive segment which complements the technical program content.

For information concerning the Bachelor of Technology programs, please see the Programs for the B.Tech. Degree in this section of this Calendar.

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

- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Electrical and Biomedical Engineering
- Engineering Physics
- Materials Engineering
- Mechanical Engineering
- Mechatronics Engineering
- Software Engineering
- Software Engineering and Embedded Systems
- Software Engineering and Game Design

Five-year programs, leading to the Bachelor of Engineering and Society Degree, are offered in:

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

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

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

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

- Chemical Engineering and Bioengineering

All programs have limitations on enrolment. Students are admitted to the program following successful completion of Level I. Admission procedures and criteria can be obtained from the Office of the Associate Dean of Engineering. The B.Eng., B.Eng.Biosciences, B.Eng.Mgt. and B.Eng.Society programs are honours degree programs.

McMaster baccalaureate degree programs in Engineering are accredited by the Canadian Engineering Accreditation Board (CEAB) of the Canadian Council of Professional Engineers, except the Mechatronics Engineering, Mechatronics Engineering and Management, Mechatronics Engineering and Society, Software Engineering and Game Design. Software Engineering and Embedded Systems and all of the Engineering and International Studies programs which will be examined for the first time at the next accreditation review. Provincial Engineering Associations accept the accreditation as a major requirement for admission to the qualification Professional Engineer.

At McMaster, Engineering students take a common Level I program comprising Mathematics, Materials, Physics, Chemistry, Engineering Graphics, Introduction to Professional Engineering and Design, Computation and complementary studies electives. The specialized programs are entered at Level II. Students interested in the Engineering and Management programs must take ECON 1B03 as one of their electives in Level I. Students interested in one of the Engineering and Society programs are advised to choose the six units complementary studies in Level I to be consistent with their chosen focus of the program.

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

Complementary Studies Electives are broadening courses with subject matter that deals with central issues, methodologies and thought processes of the humanities and social sciences.

In addition to ENGINEER 4A03, or equivalent, and 4B03, complementary studies electives are required in all Engineering programs.

The Associate Dean of Engineering must authorize each student's complementary studies elective courses. An approved list is published each spring and is available from the Associate Dean's office (<http://www.eng.mcmaster.ca/electives/electvs.htm>). Engineering I students should refer to the *Degrees and Programs* section of this Calendar to determine which Level I Complementary Studies electives are possible (<http://www.eng.mcmaster.ca/electives/lv1elec.htm>).

Technical Electives are Engineering or Applied Science courses in subjects relevant to the particular B.Eng. program. A list is available in each Engineering Department office.

Commerce Electives are required in Level V of Engineering and Management programs.

Engineering and Society Focus Electives are courses offered by various departments throughout the University. These courses are selected in consultation with the Director of the Engineering and Society program, such that they form a proper sequence of the focus electives.

ENGINEERING CO-OP PROGRAM

Undergraduate students in the Faculty of Engineering can enroll in a Co-op or in a non-Co-op version of each program. Students enrolled in the former will be required to complete 12 months of industrial/practical experience prior to graduation. The 12 months experience may be acquired through a combination of three four-month experience terms, including UROP - Undergraduate Research Opportunities Program and the Co-op Summer Experience as well as through a Co-op Internship Experience. Students may enter the Co-op version of their program at any time up to the beginning of Term 2 of their next-to-last level of undergraduate studies.

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

- ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
- ENGINEER 1EE0, 2EE0 and 4EA0, or
- ENGINEER 1EE0 and 4EB0, or
- ENGINEER 1EE0 and 4EC0

Engineering Co-Op Fees

An Engineering Co-op fee will be charged for students registered in an Engineering Co-op Program.

EXCHANGE PROGRAMS

Formal exchange programs with a number of universities in other countries are available for B.Eng. students wishing to attend a foreign university and receive credit at McMaster. For further information please see *International Study* in the *General Academic Regulations* section in this Calendar. Information concerning student exchanges can also be found in the *Academic Facilities, Student Services and Organizations* section of this Calendar under the heading *Centre for Student Development, International Student Services*.

ACADEMIC REGULATIONS FOR B.ENG. AND B.A.SC. PROGRAMS

STUDENT ACADEMIC RESPONSIBILITY

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

ACCESS TO COURSES

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases priority is given to students from particular programs or faculties. All students are encouraged to register as soon as MUGSI/SOLAR is available to them.

Students enrolled in the Faculty of Engineering programs not including Bachelor of Technology programs, in addition to meeting the *General Academic Regulations* of the University, shall be subject to the following Faculty Regulations.

ENGINEERING I

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

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

COMPUTER SCIENCE I (EFFECTIVE 2008-2009)

To be eligible for Level II Computer Science or Business Informatics a student must successfully complete 24 units of non-elective Level I courses with an overall Cumulative Average (CA) of 4.0 or greater.

A student in Computer Science I whose Cumulative Average (CA) is less than 4.0 may no longer continue in the Faculty.

SEQUENCE OF COURSES

Courses must be taken in the sequence specified in the Calendar for the program. Students must register for all outstanding work of one level before attempting work for a higher level.

REPEATED COURSES

All failed courses must be repeated if they are required courses for the Engineering program or may be replaced if the courses are not explicitly required.

LEVEL OF REGISTRATION

A student is required to register in the lowest level for which more than six units of work is incomplete. Work of a higher level may be undertaken only with the permission of the Associate Dean of Engineering.

REINSTATEMENT TO ENGINEERING

A student who is ineligible to continue in the Faculty of Engineering or who *May not continue at the university* may normally not apply for reinstatement for one full academic year. Exceptions may be made when there are extenuating circumstances which are supported by documentation.

Students seeking reinstatement must complete the *Reinstatement Request Form* available at the Office of the Registrar or the Office of the Associate Dean of Engineering. The completed form and the \$50 fee must be submitted to the Office of the Registrar by June 30. The form must be accompanied by a written explanation of the reason for the student's previous unsatisfactory academic performance, reasons for reinstatement at this time (including documentation of what has been done to correct previous problems), reasons why the student would expect to succeed in the desired program if reinstated (i.e. what was the previous problem and what has been done to correct it), activities since last registered at McMaster including all academic work. **Reinstatement is not guaranteed.**

A student who is reinstated after being ineligible to continue at a given level must repeat all the courses of that level, unless specific course exemptions are granted explicitly in the letter of reinstatement. Students who are reinstated will be placed on program probation, and calculation of their Cumulative Average (CA) will begin anew. If at any review after reinstatement the student's Cumulative Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.

PROGRAM CHANGES

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

LEVEL I PROGRAMS

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

ENGINEERING I: 37 UNITS (0730)

ENGINEERING I CO-OP (0730003)

3 units CHEM 1E03

10 units ENGINEER 1C03, 1D04, 1P03

3 units MATLS 1M03

9 units MATH 1H03, 1N03, 1NN3

6 units PHYSICS 1D03, 1E03

6 units approved complementary studies electives. (See *Elective Courses Available to Level I Students* in the *Degrees, Programs and Courses* section of this Calendar.)

1 course ENGINEER 1A00

COMPUTER SCIENCE I: 30 UNITS (0145)

(EFFECTIVE 2008-2009)

COMPUTER SCIENCE I CO-OP (0145003)

(EFFECTIVE 2008-2009)

NOTE

Computer Science I students interested in entering the Honours Business Informatics program must take ECON 1B03 and 1BB3 as six units of electives.

6 units COMP SCI 1FC3, 1MD3

9 units MATH 1H03, 1N03, 1NN3

15 units Electives (See *Note* above)

1 course ENGINEER 1A00

PROGRAMS FOR THE B.A.Sc. DEGREES**Admission to Level II B.A.Sc. Programs**

Admission to Level II Honours Computer Science or Honours Business Informatics requires completion of a minimum of 24 units of non-elective Computer Science I courses with a minimum Cumulative Average (CA) of 4.0. All programs have limited enrolment. In addition, admission to the Honours Business Informatics program requires completion of ECON 1B03 and 1BB3.

Honours Business Informatics (B.A.Sc.) {4140}

Honours Business Informatics {4140003}

Co-op (B.A.Sc.)

Subject to approval by the Ministry of Training, Colleges and Universities, beginning in the 2007-2008 academic year, a Bachelor of Applied Sciences (B.A.Sc.) program in Business Informatics will be offered.

Business Informatics is the study of the design and application of information systems for use in business. It lies within the intersection of Computer Science and Business.

ADMISSION

See *Admission to Level II Engineering Programs*.

LEVEL II: 30 UNITS

15 units COMP SCI 2CS3, 2ME3, 2MJ3, 2O03, 2SC3

9 units COMMERCE 2AA3, 2AB3, 2FA3

3 units STATS 2MA3

3 units Electives

LEVEL III: 30 UNITS

18 units COMP SCI 3CN3, 3DB3, 3EA3, 3IS3, 3MH3, 3SR3

12 units COMMERCE 2BA3, 2MA3, 3FA3, 4QA3

LEVEL IV: 30 UNITS

9 units COMP SCI 4AR3, 4HC3, 4WW3

3 units COMMERCE 3BC3

6 units from COMMERCE 4BK3, 4QB3, 4QF3, 4QH3

9 units Levels III and IV Computer Science

3 units Electives

Honours Arts & Science and Computer Science

(B.Arts.Sc.; See Arts & Science Program)

Honours Computer Science

(B.Sc.; See Faculty of Science, Department of Computing and Software)

Honours Economics and Computer Science

(B.A.; See Faculty of Social Sciences, Department of Economics)

Honours Mathematics and Computer Science

(B.A.; See Faculty of Science, Department of Mathematics and Statistics)

Honours Computer Science (B.A.Sc.) {4145}

Honours Computer Science {4145003}

Co-op (B.A.Sc.)**NOTE**

The Honours Computer Science (B.A.Sc.) program in the Faculty of Engineering is replacing the Honours Computer Science (B.Sc.) program in the Faculty of Science. The Honours Computer Science program in the Faculty of Science is being phased out and registration in Level III of that program will be last available in September 2007. All new students should register in the Honours Computer Science (B.A.Sc.) program.

ADMISSION

See *Admission to Level II Engineering Programs*.

LEVEL II: 30 UNITS

21 units COMP SCI 2CA3, 2CS3, 2ME3, 2MF3, 2MJ3, 2O03, 2SC3

3 units STATS 2MA3

6 units Electives

LEVEL III: 30 UNITS

24 units COMP SCI 3CN3, 3DA3, 3DB3, 3EA3, 3IS3, 3MH3, 3MI3, 3SR3

6 units Electives

LEVEL IV: 30 UNITS

21 units COMP SCI 4CD3, 4HC3, 4MN3, 4TB3, 4WW3, 4ZP6

3 units from COMP SCI 4AR3, 4TC3, 4TE3

3 units Electives

Minor in Computer Science**REQUIREMENTS****24 UNITS IN TOTAL**

6 units COMP SCI 1FC3, 1MD3

12 units from COMP SCI 2CA3, 2ME3, 2ME3, 2MF3, 2MJ3, 2O03, 2SC3

6 units from COMP SCI 3CN3, 3DA3, 3EA3, 3MH3

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

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all non-elective Engineering I courses with a minimum Cumulative Average (CA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on a points system, computed as the product of the Sessional Average (SA) and the number of units taken in the session (a minimum of 31 units will be used in the calculation). Students who do not meet the requirements to proceed to Level II in May will have a *Pending* flag put on their allocation. The *Pending* flag will be removed in August if the student completes the requirements over the summer.

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

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

Students seeking admission to the Engineering and Management program, the Engineering and Society program, or the Engineering and International Studies program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these three programs.

Chemical Engineering (B.Eng.) {4080}

Chemical Engineering Co-op (B.Eng.) {4080003}

ADMISSION

See *Admission to Level II Engineering Programs*.

NOTES

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

PROCESS SYSTEMS ENGINEERING (PSE) STREAM:

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

POLYMER MATERIALS AND MANUFACTURING (PMM) STREAM:

••Required Courses: CHEM ENG 3Q03, 4B03, 4C03, 4L02 (PMM laboratories completed), 4W04 (with approved PMM project), 4X03. Other courses may be substituted with permission of the Department Chair.

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

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

••ENGINEER 1EE0, 2EE0 and 4EA0, or

••ENGINEER 1EE0 and 4EB0 or

••ENGINEER 1EE0 and 4EC0

LEVEL II: 36 UNITS

15 units CHEM ENG 2A04, 2D04, 2F04, 2G03

6 units CHEM 1AA3, 2A03

6 units MATH 2M03, 2MM3

3 units STATS 3N03

6 units approved complementary studies electives

LEVEL III: 38 UNITS

- 29 units CHEM ENG 3D03, 3E04, 3G04, 3K04, 3L02, 3M04, 3O04, 3P04
 9 units 3-6 units from CHEM 2E03; or both CHEM 2OA3 and 2OB3
 3-6 units from BIOCHEM 2EE3, CHEM ENG 3Q03, CHEM 3I03

LEVEL IV: 37-38 UNITS

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

Chemical Engineering and Management (B.Eng.Mgt.) {4080325}

Chemical Engineering and Management Co-op (B.Eng.Mgt.) {4080323}

ADMISSION

See *Admission to Level II Engineering Programs.*

NOTES

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

PROCESS SYSTEMS ENGINEERING (PSE) STREAM:

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

POLYMER MATERIALS AND MANUFACTURING (PMM) STREAM:

- **Required Courses:** CHEM ENG 3Q03, 4B03, 4C03, 4L02 (PMM laboratories completed), 4W04 (with approved PMM project), 4X03, ENGINEER 2O03 (or MATLS 1M03). Other courses may be substituted with permission of the Department Chair.

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

- ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
- ENGINEER 1EE0, 2EE0 and 4EA0, or
- ENGINEER 1EE0 and 4EB0, or
- ENGINEER 1EE0 and 4EB0 or
- ENGINEER 1EE0 and 4EC0

LEVEL II: 36 UNITS

- 15 units CHEM ENG 2A04, 2D04, 2F04, 2G03
 3 units CHEM 1AA3
 3 units COMMERCE 2AA3
 6 units ECON 1BB3, 2X03
 6 units MATH 2M03, 2MM3
 3 units STATS 3N03 or 3Y03

LEVEL III: 38 UNITS

- 25 units CHEM ENG 3D03, 3E04, 3G04, 3K04, 3L02, 3M04, 3O04
 3 units approved complementary studies electives
 9 units COMMERCE 2AB3, 2FA3, 2MA3
 1 unit ENGN MGT 3AA1

LEVEL IV: 35-39 UNITS

- 4 units CHEM ENG 3P04
 3 units from CHEM ENG 4K03, 4M03, 4T03, 4X03, ENGINEER 4U03
 12 units COMMERCE 2BA3, 3FA3, 3MC3, 4QA3
 3 units from ENGINEER 4A03, 4H03
 1 unit ENGN MGT 4A01
 3 units CHEM 2A03
 3-6 units CHEM 2E03; or both CHEM 2OA3 and 2OB3
 3 units from BIOCHEM 2EE3, CHEM ENG 3Q03, CHEM 3I03, MATLS 1M03 (or ENGINEER 2O03)
 3-4 units Level III or IV technical electives from approved list or permission of the Department of Chemical Engineering

LEVEL V: 37-38 UNITS

- 10 units CHEM ENG 4L02, 4N04, 4W04
 6 units COMMERCE 3BC3, 4PA3
 3 units ENGN MGT 5B03
 9 units from CHEM ENG 4B03, 4E03, 4G03, 4K03, 4M03, 4T03, 4X03, ENGINEER 4U03
 6 units Commerce electives selected from Level III or IV Commerce
 3-4 units Level III or IV technical electives from approved list or permission of the Department of Chemical Engineering

Chemical Engineering and Society (B.Eng.Society) {4080535}

Chemical Engineering and Society Co-op (B.Eng.Society) {4080533}

Chemical Engineering and International Studies (B.Eng. Society) {4080125}

Chemical Engineering and International Studies Co-op (B.Eng. Society) {4080123}

ADMISSION

See *Admission to Level II Engineering Programs.*

NOTES

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

PROCESS SYSTEMS ENGINEERING (PSE) STREAM:

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

POLYMER MATERIALS AND MANUFACTURING (PMM) STREAM:

- **Required Courses:** CHEM ENG 3Q03, 4B03, 4C03, 4L02 (PMM laboratories completed), 4W04 (with approved PMM project), 4X03, ENGINEER 2O03 (or MATLS 1M03). Other courses may be substituted with permission of the Department Chair.

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

- ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
- ENGINEER 1EE0, 2EE0 and 4EA0, or
- ENGINEER 1EE0 and 4EB0, or
- ENGINEER 1EE0 and 4EB0 or
- ENGINEER 1EE0 and 4EC0

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

LEVEL II: 33-36 UNITS

- 15 units CHEM ENG 2A04, 2D04, 2F04, 2G03
 3 units CHEM 1AA3
 6 units MATH 2M03, 2MM3

SOCIETY:

- 6 units ENGSOCTY 2X03, 2Y03
 3-6 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 9 units ANTHROP 1A03, ENGSOCTY 2X03, 2Y03

LEVEL III: 32-38 UNITS

- 17 units CHEM ENG 3D03, 3K04, 3L02, 3M04, 3O04
 3 units CHEM 2A03
 3-6 units CHEM 2E03; or both CHEM 2OA3 and 2OB3
 3 units STATS 3N03 or 3Y03

SOCIETY:

- 3 units ENGSOCTY 3Y03
 3-6 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 3-6 units from POL SCI 2A06, 2XX3, RELIG ST 1B06
 3-6 units International Studies focus electives

LEVEL IV: 36-40 UNITS

- 12 units CHEM ENG 3E04, 3G04, 3P04
 6 units from CHEM ENG 4K03, 4M03, 4T03, 4X03, ENGINEER 4U03
 6 units from BIOCHEM 2EE3, CHEM ENG 3Q03, CHEM 3I03, MATLS 1M03 (or ENGINEER 2O03)
 3-4 units Level III or IV technical electives from approved list or permission of the Department of Chemical Engineering

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SOCIETY:

- 6 units ENGSOCTY 3X03, 3Z03
3-6 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 6 units ENGINEER 3PM3, ENGSOCTY 3X03
3 units International Studies focus electives

LEVEL V: 34-35 UNITS

- 10 units CHEM ENG 4L02, 4N04, 4W04
9 units from CHEM ENG 4B03, 4E03, 4G03, 4K03, 4M03, 4T03, 4X03, ENGINEER 4U03
3-4 units Level III or IV technical electives from approved list or permission of the Department of Chemical Engineering

SOCIETY:

- 6 units ENGSOCTY 4X03, 4Z03
6 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 6 units ENGINEER 4SC3, ENGSOCTY 4X03
6 units International Studies focus electives

Chemical Engineering and {4080043}

Bioengineering (B.Eng.Biosci.)

Chemical Engineering and {4080433}

Bioengineering Co-op (B.Eng.Biosci.)

ADMISSION

See *Admission to Level II Engineering Programs*.

NOTE

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

- ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
- ENGINEER 1EE0, 2EE0 and 4EA0, or
- ENGINEER 1EE0 and 4EB0, or
- ENGINEER 1EE0 and 4EC0

LEVEL II: 36 UNITS

- 15 units CHEM ENG 2A04, 2D04, 2F04, 2G03
3 units CHEM 1AA3
3 units BIOLOGY 1A03
6 units HTH SCI 2L03, 2LL3
6 units MATH 2M03, 2MM3
3 units STATS 3N03

LEVEL III: 37-40 UNITS

- 24 units BIOLOGY 2EE3, CHEM ENG 3D03, 3G04, 3K04, 3L02, 3M04, 3O04
3 units CHEM 2A03
3-6 units CHEM 2E03; or both CHEM 2OA3 and 2OB3
3 units BIOCHEM 2EE3
3 units approved complementary studies electives

LEVEL IV: 37-38 UNITS

- 19 units CHEM ENG 3BK3, 3BM3, 3E04, 3P04, 4L02, 4LL3
3 units BIOCHEM 3G03
3 units from ENGINEER 4A03, 4H03
6 units from CHEM 3I03, CHEM ENG 3Q03, MATLS 1M03 (or ENGINEER 2O03)
3 units approved complementary studies electives
3-4 units Level III or IV technical electives from approved list or permission of the Department of Chemical Engineering

LEVEL V: 38-39 UNITS

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

Civil Engineering (B.Eng.)

Structural/Geotechnical Engineering Stream {4110}

Water/Environmental Engineering Stream {4130}

Civil Engineering Co-op (B.Eng.)

Structural/Geotechnical Engineering Stream {4110003}

Water/Environmental Engineering Stream {4130003}

ADMISSION

See *Admission to Level II Engineering Programs*.

NOTES

1. Students entering Level II can choose between a Structural/Geotechnical Engineering Stream (**S/G Stream**) and a Water/Environmental Engineering Stream (**W/E Stream**).
2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
 - ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
 - ENGINEER 1EE0, 2EE0 and 4EA0, or
 - ENGINEER 1EE0 and 4EB0, or
 - ENGINEER 1EE0 and 4EC0
3. Level IV Civil Engineering courses must be selected in accordance with regulations which require a minimum content of 10 units of engineering design and synthesis. Before the end of Level III, students must complete a Civil Engineering electives form, and ensure that it has been approved by the Department before completing Level IV Registration.
4. To meet the capstone project requirement, all students in their final level must take or complete one of the following project courses: CIV ENG 4C04 or 4R04.

LEVEL II: 37 UNITS

- 27 units CIV ENG 2A03, 2B03, 2C04, 2E03, 2I03, 2J04, 2O04, 2Q03
4 units ENGINEER 2P04
6 units MATH 2M03, 2MM3

LEVEL III: 38 UNITS

- 25 units CIV ENG 3A03, 3B03, 3C03, 3G03, 3J04, 3K03, 3M03, 3P03
4 units STATS 3J04
3 units approved complementary studies electives
6 units **S/G Stream:** CIV ENG 3R03, 3S03
W/E Stream: CIV ENG 3L03, 3U03

LEVEL IV: 34-36 UNITS

- 3 units ENGINEER 4B03
3 units from ENGINEER 4A03, 4H03
3 units approved complementary studies electives
4 units from CIV ENG 4C04, 4R04
21-23 units **S/G Stream:** from approved list of Level IV Civil Engineering technical electives
W/E Stream: from approved list of Level III and IV Civil Engineering technical electives

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

Structural/Geotechnical Engineering Stream {4110325}

Water/Environmental Engineering Stream {4130325}

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

Structural/Geotechnical Engineering Stream {4110323}

Water/Environmental Engineering Stream {4130323}

ADMISSION

See *Admission to Level II Engineering Programs*.

NOTES

1. Students entering Level II can choose between a Structural/Geotechnical Engineering Stream (**S/G Stream**) and a Water/Environmental Engineering Stream (**W/E Stream**).
2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
 - ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
 - ENGINEER 1EE0, 2EE0 and 4EA0, or
 - ENGINEER 1EE0 and 4EB0, or
 - ENGINEER 1EE0 and 4EC0

- Level V Civil Engineering courses must be selected in accordance with regulations which require a minimum content of 10 units of engineering design and synthesis. Before the end of Level IV, students must complete a Civil Engineering electives form, and ensure that it has been approved by the Department before completing Level V Registration.
- To meet the capstone project requirement, all students in their final level must take or complete one of the following project courses: CIV ENG 4C04 or 4R04

LEVEL II: 40 UNITS

- 21 units CIV ENG 2A03, 2B03, 2C04, 2I03, 2J04, 2O04
 6 units COMMERCE 2AA3, 2MA3
 3 units ECON 2X03
 4 units ENGINEER 2P04
 6 units MATH 2M03, 2MM3

LEVEL III: 38 UNITS

- 18 units CIV ENG 2E03, 2Q03, 3A03, 3B03, 3G03, 3M03
 9 units COMMERCE 2AB3, 2BA3, 2FA3
 3 units ECON 1BB3
 4 units STATS 3J04
 3 units approved complementary studies electives
 1 unit ENGN MGT 3AA1

LEVEL IV: 35 UNITS

- 13 units CIV ENG 3C03, 3J04, 3K03, 3P03
 12 units COMMERCE 3BC3, 3FA3, 3MC3, 4QA3
 3 units Commerce electives selected from Level III or IV
 Commerce
 1 unit ENGN MGT 4A01
 6 units **S/G Stream:** CIV ENG 3R03, 3S03
W/E Stream: CIV ENG 3L03, 3U03

LEVEL V: 36-37 UNITS

- 3 units COMMERCE 4PA3
 3 units Commerce electives selected from Level III or IV
 Commerce
 3 units ENGN MGT 5B03
 3 units from ENGINEER 4A03, 4H03
 4 units from CIV ENG 4C04, 4R04
 20-21 units **S/G Stream:** from approved list of Level IV Civil Engineering technical electives
W/E Stream: from approved list of Level III and IV Civil Engineering technical electives

Civil Engineering and Society (B.Eng.Society)**Structural/Geotechnical Engineering Stream {4110535}****Water/Environmental Engineering Stream {4130535}****Civil Engineering and Society Co-op (B.Eng.Society)****Structural/Geotechnical Engineering Stream {4110533}****Water/Environmental Engineering Stream {4130533}****Civil Engineering and****International Studies (B.Eng.Society)****Structural/Geotechnical Engineering Stream {4110125}****Water/Environmental Engineering Stream {4130125}****Civil Engineering and****International Studies Co-op (B.Eng.Society)****Structural/Geotechnical Engineering Stream {4110123}****Water/Environmental Engineering Stream {4130123}****ADMISSION**See *Admission to Level II Engineering Programs.***NOTES**

- Students entering Level II can choose between a Structural/Geotechnical Engineering Stream (**S/G Stream**) and a Water/Environmental Engineering Stream (**W/E Stream**).
- As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
 - ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
 - ENGINEER 1EE0, 2EE0 and 4EA0, or
 - ENGINEER 1EE0 and 4EB0, or
 - ENGINEER 1EE0 and 4EC0

- Level V Civil Engineering courses must be selected in accordance with regulations which require a minimum content of 10 units of engineering design and synthesis. Before the end of Level IV, students must complete a Civil Engineering electives form, and ensure that it has been approved by the Department before completing Level V Registration.
- To meet the capstone project requirement, all students in their final level must take or complete one of the following project courses: CIV ENG 4C04 or 4R04.
- A minimum of 18 units of focus elective courses is required for the program. (This does not include the six units of complementary studies elective in Level I.)

LEVEL II: 40 UNITS

- 21 units CIV ENG 2A03, 2B03, 2C04, 2I03, 2J04, 2O04
 4 units ENGINEER 2P04
 6 units MATH 2M03, 2MM3

SOCIETY:

- 6 units ENGSOCTY 2X03, 2Y03
 3 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 9 units ANTHROP 1A03, ENGSOCTY 2X03, 2Y03

LEVEL III: 31-34 UNITS

- 18 units CIV ENG 2E03, 2Q03, 3A03, 3B03, 3G03, 3M03
 4 units STATS 3J04

SOCIETY:

- 3 units ENGSOCTY 2Y03
 6-9 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 3-6 units POL SCI 2A06, 2XX3, RELIG ST 1B06
 3-6 units International Studies focus electives

LEVEL IV: 31-34 UNITS

- 13 units CIV ENG 3C03, 3J04, 3K03, 3P03
 6 units **S/G Stream:** CIV ENG 3R03, 3S03
W/E Stream: CIV ENG 3L03, 3U03

SOCIETY:

- 6 units ENGSOCTY 3X03, 3Z03
 6-9 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 6 units ENGINEER 3PM3, ENGSOCTY 3X03
 3 units International Studies focus electives

LEVEL V: 36-37 UNITS

- 3 units ENGINEER 4B03
 4 units from CIV ENG 4C04, 4R04
 20-21 units **S/G Stream:** from approved list of Level IV Civil Engineering technical electives
W/E Stream: from approved list of Level III and IV Civil Engineering technical electives

SOCIETY:

- 6 units ENGSOCTY 4X03, 4Z03
 3 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 6 units ENGINEER 4SC3, ENGSOCTY 4X03
 3 units International Studies focus electives

Computer Engineering (B.Eng.) {4144}**Computer Engineering Co-op (B.Eng.) {4144003}****ADMISSION**See *Admission to Level II Engineering Programs.***NOTE**

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

- ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
- ENGINEER 1EE0, 2EE0 and 4EA0, or
- ENGINEER 1EE0 and 4EB0, or
- ENGINEER 1EE0 and 4EC0

LEVEL II: 37 UNITS

- 16 units COMP ENG 2DI4, 2DP4, 2SH4, 2SI4
 17 units ELEC ENG 2CI5, 2CJ4, 2EI5, 2FH3
 4 units MATH 2P04

LEVEL III: 34 UNITS (2007-2008 ONLY)

- 11 units COMP ENG 3DQ4, 3DR4, 3SK3
 16 units ELEC ENG 3EJ4, 3TP4, 3TQ4, 3TR4
 3 units MATH 3K03
 4 units SFWR ENG 3K04

LEVEL III: 37 UNITS (EFFECTIVE 2008-2009)

- 11 units COMP ENG 3DQ4, 3DR4, 3SK3
 16 units ELEC ENG 3EJ4, 3TP4, 3TQ4, 3TR4
 3 units MATH 3K03
 4 units SFWR ENG 3K04
 3 units approved complementary studies electives

LEVEL IV: 36-38 UNITS

- 21 units COMP ENG 4DK4, 4DM4, 4DN4, 4DS4, 4OI5
 3 units ENGINEER 4B03
 3 units from ENGINEER 4A03, 4H03
 3 units SFWR ENG 3SH3
 3-4 units technical electives from Computer Engineering or Electrical Engineering Level III or IV
 3-4 units approved Level III or IV technical electives of the Faculty of Engineering

Computer Engineering and Management (B.Eng.Mgt.) {4144325}

Computer Engineering and Management Co-op (B.Eng.Mgt.) {4144323}

ADMISSION

See *Admission to Level II Engineering Programs.*

NOTE

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

- ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
- ENGINEER 1EE0, 2EE0 and 4EA0, or
- ENGINEER 1EE0 and 4EB0, or
- ENGINEER 1EE0 and 4EC0

LEVEL II: 38 UNITS

- 3 units COMMERCE 2AA3
 8 units COMP ENG 2SH4, 2SI4
 6 units ECON 1BB3, 2X03
 12 units ELEC ENG 2CI5, 2CJ4, 2FH3
 2 units ENGN MGT 2AA2
 4 units MATH 2P04
 3 units approved complementary studies electives

LEVEL III: 37 UNITS

- 12 units COMMERCE 2AB3, 2BA3, 2FA3, 2MA3
 13 units ELEC ENG 2EI5, 3TP4, 3TQ4
 8 units COMP ENG 2DI4, 2DP4
 1 unit ENGN MGT 3AA1
 3 units MATH 3K03

LEVEL IV: 39 UNITS

- 8 units ELEC ENG 3EJ4, 3TR4
 8 units COMP ENG 3DQ4, 3DR4
 4 units SFWR ENG 3K04
 9 units COMMERCE 3BC3, 3FA3, 3MC3
 3 units STATS 3Y03
 1 unit ENGN MGT 4A01
 3 units from ENGINEER 4A03, 4H03
 3 units Commerce electives selected from Level III or IV Commerce

LEVEL V: 39 UNITS

- 6 units COMMERCE 4PA3, 4QA3
 24 units COMP ENG 3SK3, 4DK4, 4DM4, 4DN4, 4DS4, 4OI5
 3 units SFWR ENG 3SH3
 3 units ENGN MGT 5B03
 3 units Commerce electives selected from Level III or IV Commerce

Computer Engineering and Society (B.Eng.Society) {4144535}

Computer Engineering and Society Co-op (B.Eng.Society) {4144533}

Computer Engineering and International Studies (B.Eng.Society) {4144125}

Computer Engineering and International Studies Co-op (B.Eng.Society) {4144123}

ADMISSION

See *Admission to Level II Engineering Programs.*

NOTES

1. A minimum of 18 units of focus elective courses is required for the program. (This does not include the six units of complementary studies elective in Level I.)
2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
 - ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
 - ENGINEER 1EE0, 2EE0 and 4EA0, or
 - ENGINEER 1EE0 and 4EB0, or
 - ENGINEER 1EE0 and 4EC0

LEVEL II: 37 UNITS

- 12 units COMP ENG 2DI4, 2SH4, 2SI4
 12 units ELEC ENG 2CI5, 2CJ4, 2FH3
 4 units MATH 2P04

SOCIETY:

- 6 units ENGSOCTY 2X03, 2Y03
 3 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 9 units ANTHROP 1A03, ENGSOCTY 2X03, 2Y03

LEVEL III: 35 UNITS

- 7 units COMP ENG 2DP4, 3SK3
 9 units ELEC ENG 2EI5, 3TP4
 3 units MATH 3K03

SOCIETY:

- 6 units ENGSOCTY 3Y03, 3Z03
 3 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 3-6 units from POL SCI 2A06, 2XX3, RELIG ST 1B06
 6-9 units International Studies focus electives

LEVEL IV: 32-35 UNITS

- 8 units COMP ENG 3DQ4, 3DR4
 12 units ELEC ENG 3EJ4, 3TQ4, 3TR4
 3 units ENGINEER 4B03

SOCIETY:

- 3 units ENGSOCTY 3X03
 6-9 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 6 units ENGINEER 3PM3, ENGSOCTY 3X03
 3-6 units International Studies focus electives

LEVEL V: 36-37 UNITS

- 21 units COMP ENG 4DK4, 4DM4, 4DN4, 4DS4, 4OI5
 3 units SFWR ENG 3SH3
 3-4 units technical electives from an approved list of Computer Engineering or Electrical Engineering Level III or IV

SOCIETY:

- 6 units ENGSOCTY 4X03, 4Z03
 3 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 6 units ENGINEER 4SC3, ENGSOCTY 4X03
 3 units International Studies focus electives

Electrical Engineering (B.Eng.) {4170}

Electrical Engineering Co-op (B.Eng.) {4170003}

ADMISSION

See *Admission to Level II Engineering Programs.*

NOTE

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

- ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
- ENGINEER 1EE0, 2EE0 and 4EA0, or
- ENGINEER 1EE0 and 4EB0, or
- ENGINEER 1EE0 and 4EC0

LEVEL II: 37 UNITS

- 17 units ELEC ENG 2CI5, 2CJ4, 2EI5, 2FH3
 12 units COMP ENG 2DI4, 2SH4, 2SI4
 8 units MATH 2P04, 2Q04

LEVEL III: 37 UNITS

- 7 units COMP ENG 2DP4, 3SK3
 24 units ELEC ENG 3EJ4, 3FK4, 3PI4, 3TP4, 3TQ4, 3TR4
 3 units MATH 3K03
 3 units approved complementary studies electives

LEVEL IV: 37-39 UNITS

- 5 units ELEC ENG 4OI5
 3 units ENGINEER 4B03
 4 units SFWR ENG 3M04
 16 units from COMP ENG 3DQ4, 3DR4, 4DK4, 4DM4, 4DN4, 4DS4, 4TL4, ELEC ENG 4BD4, 4BE4, 4CL4, 4FJ4, 4PL4, 4PK4, 4TK4
 3-4 units technical electives from an approved list of Computer Engineering or Electrical Engineering Level III or IV
 3-4 units technical electives (from Level III or IV of the Faculty of Engineering)
 3 units from ENGINEER 4A03, 4H03

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

Electrical and Biomedical Engineering Co-op (B.Eng.) {4171003}

ADMISSION

See *Admission to Level II Engineering Programs.*

NOTE

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

- ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
- ENGINEER 1EE0, 2EE0 and 4EA0, or
- ENGINEER 1EE0 and 4EB0, or
- ENGINEER 1EE0 and 4EC0

LEVEL II: 39 UNITS

- 14 units ELEC ENG 2CI5, 2CJ4, 2EI5
 8 units COMP ENG 2SH4, 2SI4
 8 units MATH 2P04, 2Q04
 3 units BIOLOGY 1A03
 3 units CHEM 1AA3
 3 units approved complementary studies electives

LEVEL III: 40 UNITS

- 17 units ELEC ENG 2FH3, 3BA3, 3BB3, 3EJ4, 3TP4
 8 units COMP ENG 2DI4, 2DP4
 3 units MATH 3K03
 6 units CHEM 2OA3, 2OB3
 6 units HTH SCI 2L03, 2LL3

LEVEL IV: 37 UNITS

- 4 units COMP ENG 4TL4
 27 units ELEC ENG 3TQ4, 3TR4, 4BC3, 4BD4, 4BE4, 4BF3, 4BI5
 3 units from ENGINEER 4A03, 4H03
 3 units ENGINEER 4B03

Electrical Engineering and Management (B.Eng.Mgt.) {4170325}

Electrical Engineering and Management Co-op (B.Eng.Mgt.) {4170323}

ADMISSION

See *Admission to Level II Engineering Programs.*

NOTE

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

- ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
- ENGINEER 1EE0, 2EE0 and 4EA0, or
- ENGINEER 1EE0 and 4EB0, or
- ENGINEER 1EE0 and 4EC0

LEVEL II: 39 UNITS

- 3 units COMMERCE 2AA3
 6 units ECON 1BB3, 2X03
 8 units COMP ENG 2SH4, 2SI4
 12 units ELEC ENG 2CI5, 2CJ4, 2FH3
 2 units ENGN MGT 2AA2
 8 units MATH 2P04, 2Q04

LEVEL III: 40 UNITS

- 12 units COMMERCE 2AB3, 2BA3, 2FA3, 2MA3
 11 units COMP ENG 2DI4, 2DP4, 3SK3
 13 units ELEC ENG 2EI5, 3TP4, 3TQ4
 1 unit ENGN MGT 3AA1
 3 units MATH 3K03

LEVEL IV: 35 UNITS (2007-2008 ONLY)

- 9 units COMMERCE 3BC3, 3FA3, 3MC3
 12 units ELEC ENG 3EJ4, 3PI4, 3TR4
 4 units SFWR ENG 3M04
 3 units from ENGINEER 4A03, 4H03
 1 unit ENGN MGT 4A01
 3 units STATS 3Y03
 3 units Commerce electives selected from Level III or IV Commerce

LEVEL IV: 39 UNITS (EFFECTIVE 2008-2009)

- 9 units COMMERCE 3BC3, 3FA3, 3MC3
 16 units ELEC ENG 3EJ4, 3FK4, 3PI4, 3TR4
 4 units SFWR ENG 3M04
 3 units from ENGINEER 4A03, 4H03
 1 unit ENGN MGT 4A01
 3 units STATS 3Y03
 3 units Commerce electives selected from Level III or IV Commerce

LEVEL V: 39-40 UNITS (2007-2008 ONLY)

- 6 units COMMERCE 4PA3, 4QA3
 3 units COMP ENG 3SK3
 16 units from COMP ENG 3DQ4, 3DR4, 4DK4, 4DM4, 4DN4, 4DS4, 4TL4, ELEC ENG 4BD4, 4BE4, 4CL4, 4FJ4, 4PK4, 4PL4, 4TK4
 5 units ELEC ENG 4OI5
 3 units ENGN MGT 5B03
 3 units Commerce electives selected from Level III or IV Commerce
 3-4 units technical electives (from Level III and IV of the Faculty of Engineering)

LEVEL V: 39-40 UNITS (EFFECTIVE 2008-2009)

- 6 units COMMERCE 4PA3, 4QA3
 16 units from COMP ENG 3DQ4, 3DR4, 4DK4, 4DM4, 4DN4, 4DS4, 4TL4, ELEC ENG 4BD4, 4BE4, 4CL4, 4FJ4, 4PK4, 4PL4, 4TK4
 5 units ELEC ENG 4OI5
 3 units ENGN MGT 5B03
 3 units approved complementary studies electives
 3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2QB3
 3-4 units technical electives (from Level III and IV of the Faculty of Engineering)

Electrical Engineering and Society (B.Eng.Society) {4170535}

Electrical Engineering and Society Co-op (B.Eng.Society) {4170533}

Electrical Engineering and International Studies (B.Eng.Society) {4170125}

Electrical Engineering and International Studies Co-op (B.Eng.Society) {4170123}

ADMISSION

See *Admission to Level II Engineering Programs.*

NOTES

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

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

- ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
- ENGINEER 1EE0, 2EE0 and 4EA0, or
- ENGINEER 1EE0 and 4EB0, or
- ENGINEER 1EE0 and 4EC0

LEVEL II: 38 UNITS

- 12 units COMP ENG 2DI4, COMP ENG 2SH4, 2SI4
9 units ELEC ENG 2CI5, 2CJ4
8 units MATH 2P04, 2Q04

SOCIETY:

- 6 units ENGSOCTY 2X03, 2Y03
3 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 9 units ANTHROP 1A03, ENGSOCTY 2X03, 2Y03

LEVEL III: 35-41 UNITS

- 7 units COMP ENG 2DP4, 3SK3
12 units ELEC ENG 2EI5, 2FH3, 3TQ4
3 units MATH 3K03
4 units SFWR ENG 3M04

SOCIETY:

- 6 units ENGSOCTY 3Y03, 3Z03
3-9 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 3-6 units POL SCI 2A06, 2XX3, RELIG ST 1B06
3-6 units International Studies focus electives

LEVEL IV: 32-35 UNITS

- 20 units ELEC ENG 3EJ4, 3FK4, 3PI4, 3TP4, 3TR4
3 units ENGINEER 4B03

SOCIETY:

- 3 units ENGSOCTY 3X03
9 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 6 units ENGINEER 3PM3, ENGSOCTY 3X03
3-6 units International Studies focus electives

LEVEL V: 36-37 UNITS

- 5 units ELEC ENG 4OI5
16 units from COMP ENG 3DQ4, 3DR4, 4DK4, 4DM4, 4DN4, 4DS4, 4TL4, ELEC ENG 4BD4, 4BE4, 4CL4, 4FJ4, 4PK4, 4PL4, 4TK4
3-4 units technical electives from an approved list of Computer Engineering or Electrical Engineering Level III or IV

SOCIETY:

- 6 units ENGSOCTY 4X03, 4Z03
6 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 6 units ENGINEER 4SC3, ENGSOCTY 4X03
6 units International Studies focus electives

Engineering Physics (B.Eng.)

Interdisciplinary Engineering Stream {4194}

Nuclear Engineering and Energy Systems Stream {4191}

Nano- and Micro-Devices Stream {4192}

Photonics Engineering Stream {4193}

Engineering Physics Co-op (B.Eng.)

Interdisciplinary Engineering Stream {4194003}

Nuclear Engineering and Energy Systems Stream {4191003}

Nano- and Micro-Devices Stream {4192003}

Photonics Engineering Stream {4193003}

ADMISSION

See Admission to Level II Engineering Programs.

NOTES

1. The Department of Engineering Physics offers a common core with four streams of study:

- Interdisciplinary Engineering (I Stream)
- Nano- and Micro-Devices (M Stream)
- Nuclear Engineering and Energy Systems (N Stream)
- Photonics Engineering (P Stream)

Level II is common to all streams. All students entering Level II will be enrolled in the Interdisciplinary Engineering Stream. Students entering Level III choose one of the four streams offered in Engineering Physics.

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

- ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
- ENGINEER 1EE0, 2EE0 and 4EA0, or
- ENGINEER 1EE0 and 4EB0, or
- ENGINEER 1EE0 and 4EC0

LEVEL II: 39 UNITS

- 4 units ENGINEER 2P04
18 units ENG PHYS 2A04, 2E04, 2H04, 2S03, 2QM3
8 units MATH 2P04, 2Q04
3 units PHYSICS 2D03
6 units approved complementary studies electives

LEVEL III: 38 UNITS

- 7 units ENG PHYS 3F03, 3W04
9 units MATH 3C03, 3D03, 4Q03
6 units PHYSICS 3BA3, 3BB3
3 units approved complementary studies electives
13 units Stream specific:

I Stream ENG PHYS 3D03, 3E03, 3PN4; 3 units from ENG PHYS 3A03, 3ES3, 3MD3

M Stream ENG PHYS 3E03, 3MD3, 3PN4; 3 units approved technical electives

N Stream ENG PHYS 3D03, 3ES3, 3O04, 3 units approved technical electives

P Stream ENG PHYS 3A03, 3E03, 3G03, 3PN4

LEVEL IV: 37-39 UNITS

- 3 units ENGINEER 4B03
10 units ENG PHYS 4A06, 4U04
24-26 units Stream specific:

I Stream ENG PHYS 4L04, 4MD4, 4S04; 12-14 units of approved Level III or IV technical electives

M Stream ENG PHYS 4F03, 4MD4, 4Z03; 14-16 units of approved Level III or IV technical electives

N Stream ENG PHYS 4D03, 4ES3, 4L04, 4NE3; 11-13 units of approved Level III or IV technical electives

P Stream ELEC ENG 3FK4, 3TR4; ENG PHYS 4K03, 4S04; 9-11 units of approved Level III or IV technical electives

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

Interdisciplinary Engineering Stream {4194325}

Nuclear Engineering and Energy Systems Stream {4191325}

Nano- and Micro-Devices Stream {4192325}

Photonics Engineering Stream {4193325}

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

Interdisciplinary Engineering Stream {4194323}

Nuclear Engineering and Energy Systems Stream {4191323}

Nano- and Micro-Devices Stream {4192323}

Photonics Engineering Stream {4193323}

ADMISSION

See Admission to Level II Engineering Programs.

NOTE

1. The Department of Engineering Physics offers a common core with four streams of study:

- Interdisciplinary Engineering (I Stream)
- Nano- and Micro-Devices (M Stream)
- Nuclear Engineering and Energy Systems (N Stream)
- Photonics Engineering (P Stream)

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

2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
- ENGINEER 1EE0, 2EE0 and 4EA0, or
 - ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
 - ENGINEER 1EE0 and 4EB0, or
 - ENGINEER 1EE0 and 4EC0

LEVEL II: 39 UNITS

6 units	COMMERCE 2AA3, 2MA3
3 units	ENGN MGT 2AA2, 3AA1
4 units	ENGINEER 2P04
15 units	ENG PHYS 2A04, 2E04, 2H04, 2QM3
8 units	MATH 2P04, 2Q04
3 units	PHYSICS 2D03

LEVEL III: 37 UNITS

9 units	COMMERCE 2AB3, 2BA3, 2FA3
6 units	ECON 1BB3, 2X03
10 units	ENG PHYS 2S03, 3F03, 3W04
6 units	MATH 3C03, 3D03
6 units	PHYSICS 3BA3, 3BB3

LEVEL IV: 39 UNITS

12 units	COMMERCE 3BC3, 3FA3, 3MC3, 4QA3
1 unit	ENGN MGT 4A01
4 units	ENG PHYS 4U04
3 units	MATH 4Q03
3 units	approved complementary studies electives
3 units	Commerce electives selected from Level III or IV Commerce
13 units	Stream specific:
	I Stream ENG PHYS 3D03, 3E03, 3PN4; 3 units from ENG PHYS 3A03, 3ES3, 3MD3
	M Stream ENG PHYS 3E03, 3MD3, 3PN4; 3 units approved Level III or IV technical electives
	N Stream ENG PHYS 3D03, 3ES3, 3O04; 3 units technical electives
	P Stream ENG PHYS 3A03, 3E03, 3G03, 3PN4

LEVEL V: 39-40 UNITS

3 units	COMMERCE 4PA3
3 units	ENGN MGT 5B03
6 units	ENG PHYS 4A06
3 units	Commerce electives selected from Level III or IV Commerce
24-25 units	Stream specific:
	I Stream ENG PHYS 4L04, 4MD4, 4S04; 12-13 units of approved Level III or IV technical electives
	M Stream ENG PHYS 4F03, 4MD4, 4Z03; 14-15 units of approved Level III or IV technical electives
	N Stream ENG PHYS 4D03, 4ES3, 4L04, 4NE3; 11-12 units of approved Level III or IV technical electives
	P Stream ELEC ENG 3FK4, 3TR4; ENG PHYS 4K03, 4S04; 9-10 units of approved Level III or IV technical electives

Engineering Physics and Society (B.Eng.Society)

Interdisciplinary Engineering Stream	{4194535}
Nuclear Engineering and Energy Systems Stream	{4191535}
Nano- and Micro-Devices Stream	{4192535}
Photonics Engineering Stream	{4193535}
Engineering Physics and Society Co-op (B.Eng.Society)	
Interdisciplinary Engineering Stream	{4194533}
Nuclear Engineering and Energy Systems Stream	{4191533}
Nano- and Micro-Devices Stream	{4192533}
Photonics Engineering Stream	{4193533}

Engineering Physics and International Studies (B.Eng.Society)

Interdisciplinary Engineering Stream	{4194125}
Nuclear Engineering and Energy Systems Stream	{4191125}
Nano- and Micro-Devices Stream	{4192125}
Photonics Engineering Stream	{4193125}

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

Interdisciplinary Engineering Stream	{4194123}
Nuclear Engineering and Energy Systems Stream	{4191123}
Nano- and Micro-Devices Stream	{4192123}
Photonics Engineering Stream	{4193123}

ADMISSION

See *Admission to Level II Engineering Programs*.

NOTES

- The Department of Engineering Physics offers a common core with four streams of study:
 - Interdisciplinary Engineering (**I Stream**)
 - Nano- and Micro-Devices (**M Stream**)
 - Nuclear Engineering and Energy Systems (**N Stream**)
 - Photonics Engineering (**P Stream**)
 Levels II and III are common to all streams in a five-level program. All students entering Level II will be enrolled in the Interdisciplinary Engineering Stream. Students entering Level IV choose one of the four streams offered in Engineering Physics.
- A minimum of 18 units of focus elective courses is required for the program. (This does not include the six units of complementary studies elective in Level I.)
- As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
 - ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
 - ENGINEER 1EE0, 2EE0 and 4EA0, or
 - ENGINEER 1EE0 and 4EB0, or
 - ENGINEER 1EE0 and 4EC0

LEVEL II: 39 UNITS

4 units	ENGINEER 2P04
15 units	ENG PHYS 2A04, 2E04, 2H04, 2QM3
8 units	MATH 2P04, 2Q04
3 units	PHYSICS 2D03

SOCIETY:

6 units	ENGSOCTY 2X03, 2Y03
3 units	Engineering and Society focus electives

INTERNATIONAL STUDIES:

9 units	ANTHROP 1A03, ENGSOCTY 2X03, 2Y03

LEVEL III: 34 UNITS

10 units	ENG PHYS 2S03, 3F03, 3W04
9 units	MATH 3C03, 3D03, 4Q03
6 units	PHYSICS 3BA3, 3BB3

SOCIETY:

3 units	ENGSOCTY 3Y03
6 units	Engineering and Society focus electives

INTERNATIONAL STUDIES:

3-6 units	from POL SCI 2A06, 2XX3, RELIG ST 1B06
3-6 units	International Studies focus electives

LEVEL IV: 35 UNITS

4 units	ENG PHYS 4U04
3 units	ENGINEER 4B03
13 units	Stream specific:
	I Stream ENG PHYS 3D03, 3E03, 3PN4; 3 units from ENG PHYS 3A03, 3ES3, 3MD3
	M Stream ENG PHYS 3E03, 3MD3, 3PN4; 3 units approved Level III or IV technical electives
	N Stream ENG PHYS 3D03, 3ES3, 3O04, 3 units technical electives
	P Stream ENG PHYS 3A03, 3E03, 3G03, 3PN4

SOCIETY:

6 units	ENGSOCTY 3X03, 3Z03
9 units	Engineering and Society focus electives

INTERNATIONAL STUDIES:

6 units ENGINEER 3PM3, ENGSOCTY 3X03
 9 units International Studies focus electives

LEVEL V: 36-38 UNITS

24-26 units Stream specific:

I Stream ENG PHYS 4L04, 4MD4, 4S04; 12-14 units of approved Level III or IV technical electives
M Stream ENG PHYS 4F03, 4MD4, 4Z03; 14-16 units of approved Level III or IV technical electives
N Stream ENG PHYS 4D03, 4ES3, 4L04, 4NE3; 11-13 units of approved Level III or IV technical electives
P Stream ELEC ENG 3FK4, 3TR4; ENG PHYS 4K03, 4S04; 9-11 units of approved Level III or IV technical electives

SOCIETY:

6 units ENGSOCTY 4X03, 4Z03

INTERNATIONAL STUDIES:

6 units ENGINEER 4SC3, ENGSOCTY 4X03

Materials Engineering (B.Eng.) {4315}

Materials Engineering Co-op (B.Eng.) {4315003}

ADMISSION:

See Admission to Level II Engineering Programs.

NOTES:

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

- Metallurgy MATLS 4C03, 4D03
- Polymer CHEM ENG 3Q03, MATLS 4P03
- Electronic Materials MATLS 3Q03

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

- ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
- ENGINEER 1EE0, 2EE0 and 4EA0, or
- ENGINEER 1EE0 and 4EB0, or
- ENGINEER 1EE0 and 4EC0

LEVEL II: 38 UNITS

5 units CHEM 1AA3, 2WW2
 4 units CHEM ENG 2A04
 7 units ENGINEER 2MM3, 2P04
 13 units MATLS 2B03, 2D03, 2H04, 2X03
 6 units MATH 2M03, 2MM3
 3 units approved complementary studies electives

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

21 units MATLS 3B03, 3C04, 3E04, 3F03, 3M03, 3T04
 3 units MATH 3I03
 9-11 units from CHEM 2E03, CHEM ENG 3O04, 3Q03, MATLS 3Q03, 4D03, 4P03
 3 units approved complementary studies electives

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

3 units from ENGINEER 4A03, 4H03
 6 units ENGINEER 4B03, 4J03
 8 units MATLS 4A02, 4J04, 4L02
 4 units from MATLS 4K04, 4Z04
 3 units STATS 3Y03
 3 units approved complementary studies electives
 9-10 units approved Level III or IV technical electives, which must include CHEM ENG 3O04 if not completed

Materials Engineering - {4318}

Computational Materials Engineering Stream (B.Eng.)

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

The Materials Engineering-Computational Materials Engineering Stream has been cancelled. Students who intended to register in Level II of this program should consult the Department of Materials Science and Engineering regarding an alternate course of study.

Materials Engineering - {4320}

Nanomaterials Stream (B.Eng.)

Materials Engineering Co-op - {4320003}

Nanomaterials Stream (B.Eng.)

LEVEL III: 36-37 UNITS

24 units MATLS 3B03, 3C04, 3E04, 3F03, 3M03, 3Q03, 3T04
 3 units MATH 3I03
 3 units STATS 3Y03
 3-4 units from CHEM 2E03, CHEM ENG 3O04, 3Q03, 4Z03, MATLS 4D03, 4P03
 3 units approved complementary studies electives

LEVEL IV: 36-37 UNITS

3 units from ENGINEER 4A03, 4H03
 6 units ENGINEER 4B03, 4J03
 11 units MATLS 4A02, 4F03, 4J04, 4L02
 4 units from MATLS 4K04, 4Z04
 3 units from MATLS 4G03, 4H03
 6-7 units approved Level III or IV technical electives which must include CHEM ENG 3O04 if not completed
 3 units approved complementary studies electives

Materials Engineering and {4315325}

Management (B.Eng.Mgt.)

Materials Engineering and {4315323}

Management Co-op (B.Eng.Mgt.)

ADMISSION:

See Admission to Level II Engineering Programs.

NOTE

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

- ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
- ENGINEER 1EE0, 2EE0 and 4EA0, or
- ENGINEER 1EE0 and 4EB0, or
- ENGINEER 1EE0 and 4EC0

LEVEL II: 35 UNITS

2 units CHEM 2WW2
 3 units COMMERCE 2MA3
 6 units ECON 1BB3, 2X03
 2 units ENGN MGT 2AA2
 3 units ENGINEER 2MM3
 6 units MATH 2M03, 2MM3
 13 units MATLS 2B03, 2D03, 2H04, 2X03

LEVEL III: 38 UNITS

4 units CHEM ENG 2A04
 3 units CHEM 1AA3
 9 units COMMERCE 2AA3, 2BA3, 2FA3
 1 unit ENGN MGT 3AA1
 4 units ENGINEER 2P04
 11 units MATLS 3C04, 3F03, 3T04
 3 units MATH 3I03
 3 units STATS 3Y03

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

4 units CHEM ENG 3O04
 12 units COMMERCE 2AB3, 3BC3, 3FA3, 3MC3
 3 units from ENGINEER 4A03, 4H03
 1 unit ENGN MGT 4A01
 10 units MATLS 3B03, 3E04, 3M03
 3 units approved complementary studies electives
 3-4 units approved Level III or IV technical electives

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

6 units COMMERCE 4PA3, 4QA3
 3 units ENGINEER 4J03
 3 units ENGN MGT 5B03
 8 units MATLS 4A02, 4J04, 4L02
 4 units from MATLS 4K04, 4Z04
 6 units Commerce electives selected from Level III or IV Commerce
 6-7 units approved technical electives

Materials Engineering and Management - Computational Materials Engineering Stream (B.Eng.Mgt.) {4318325}

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

The Materials Engineering and Management-Computational Materials Engineering Stream has been cancelled. Students who intended to register in Level II of this program should consult the Department of Materials Science and Engineering regarding an alternate course of study.

Materials Engineering and Management - Nanomaterials Stream (B.Eng.Mgt.) {4320325}

Materials Engineering and Management Co-op - Nanomaterials Stream (B.Eng.Mgt.) {4320323}

LEVEL IV: 36 UNITS

- 4 units CHEM ENG 3004
- 12 units COMMERCE 2AB3, 3BC3, 3FA3, 3MC3
- 3 units from ENGINEER 4A03, 4H03
- 1 unit ENGN MGT 4A01
- 13 units MATLS 3B03, 3E04, 3M03, 3Q03
- 3 units approved complementary studies electives

LEVEL V: 36-37 UNITS

- 6 units COMMERCE 4PA3, 4QA3
- 3 units ENGINEER 4J03
- 3 units ENGN MGT 5B03
- 11 units MATLS 4A02, 4F03, 4J04, 4L02
- 4 units from MATLS 4K04, 4Z04
- 6 units Commerce electives selected from Level III or IV
- 3-4 units approved Level III or IV technical electives (MATLS 4G03, 4H03 are recommended if offered.)

Materials Engineering and Society (B.Eng.Society) {4315535}

Materials Engineering and Society Co-op (B.Eng.Society) {4315533}

Materials Engineering and International Studies (B.Eng.Society) {4315125}

Materials Engineering and International Studies Co-op (B.Eng.Society) {4315123}

ADMISSION

See Admission to Level II Engineering Programs.

NOTES

1. A minimum of 18 units of focus elective courses is required for the program. (This does not include the six units of complementary studies elective in Level I.)
2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
 - ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0; or
 - ENGINEER 1EE0, 2EE0 and 4EA0, or
 - ENGINEER 1EE0 and 4EB0, or
 - ENGINEER 1EE0 and 4EC0

LEVEL II: 33-36 UNITS

- 2 units CHEM 2WW2
- 3 units ENGINEER 2MM3
- 13 units MATLS 2B03, 2D03, 2H04, 2X03
- 6 units MATH 2M03, 2MM3

SOCIETY:

- 6 units ENGSOCTY 2X03, 2Y03
- 3-6 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 9 units ANTHROP 1A03, ENGSOCTY 2X03, 2Y03

LEVEL III: 34-37 UNITS

- 4 units CHEM ENG 2A04
- 3 units CHEM 1AA3
- 4 units ENGINEER 2P04
- 11 units MATLS 3C04, 3F03, 3T04
- 3 units MATH 3I03
- 3 units STATS 3Y03

SOCIETY:

- 3 units ENGSOCTY 3Y03
- 3-6 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 3-6 units from POL SCI 2A06, 2XX3, RELIG ST 1B06
- 3-6 units International Studies focus electives

LEVEL IV: (MATERIALS ENGINEERING STREAM) 32-36 UNITS

- 4 units CHEM ENG 3004
- 10 units MATLS 3B03, 3E04, 3M03
- 6-7 units approved Level III or IV technical electives

SOCIETY:

- 6 units ENGSOCTY 3X03, 3Z03
- 6-9 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 6 units ENGINEER 3PM3, ENGSOCTY 3X03
- 6-9 units International Studies focus electives

LEVEL V: (MATERIALS ENGINEERING STREAM) 33-37 UNITS

- 6 units ENGINEER 4B03, 4J03
- 8 units MATLS 4A02, 4J04, 4L02
- 4 units from MATLS 4K04, 4Z04
- 6-7 units approved technical electives

SOCIETY:

- 6 units ENGSOCTY 4X03, 4Z03
- 3-6 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 6 units ENGINEER 4SC3, ENGSOCTY 4X03
- 3-6 units International Studies focus electives

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

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

The Materials Engineering and Society-Computational Materials Engineering Stream has been cancelled. Students who intended to register in Level II of this program should consult the Department of Materials Science and Engineering regarding an alternate course of study.

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

Materials Engineering and Society Co-op - Nanomaterials Stream (B.Eng.Society) {4320533}

Materials Engineering and International Studies - Nanomaterials Stream (B.Eng.Society) {4320125}

Materials Engineering and International Studies Co-op - Nanomaterials Stream (B.Eng.Society) {4320123}

NOTE

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

LEVEL IV: 32-36 UNITS

- 4 units CHEM ENG 3004
- 13 units MATLS 3B03, 3E04, 3M03, 3Q03
- 3-4 units approved Level III or IV technical electives (MATLS 4G03, 4H03 are recommended if offered.)

SOCIETY:

- 6 units ENGSOCTY 3X03, 3Z03
6-9 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 6 units ENGINEER 3PM3, ENGSOCTY 3X03
6-9 units International Studies focus electives

LEVEL V: 32-36 UNITS

- 6 units ENGINEER 4B03, 4J03
11 units MATLS 4A02, 4F03, 4J04, 4L02
4 units from MATLS 4K04, 4Z04
2-3 units approved technical electives (MATLS 4G03, 4H03 are recommended if offered.)

SOCIETY:

- 6 units ENGSOCTY 4X03, 4Z03
3-6 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 6 units ENGINEER 4SC3, ENGSOCTY 4X03
3-6 units International Studies focus electives

Mechanical Engineering (B.Eng.) {4330}**Mechanical Engineering Co-op (B.Eng.) {4330003}****ADMISSION**

See Admission to Level II Engineering Programs.

NOTES

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

PROGRAM OPTION COMPULSORY COURSES:

- **GENERAL:** two of MECH ENG 3D03, 4B03, 4E03, 4Q03, 4S03, 4Z03
- **MECHANICS AND DESIGN:** MECH ENG 4Q03; three of MATLS 4J04, 4T03, MECH ENG 4B03, 4BB3, 4CC3, 4E03, 4H03, 4I03, 4K03, 4L03, 4T03, 4Z03
- **MANUFACTURING:** MECH ENG 4Q03; three of CHEM ENG 4X03, ENGINEER 4J03, MATLS 4J04, 4T03, MECH ENG 4B03, 4D03, 4E03, 4H03, 4K03, 4T03, 4Z03
- **THERMOFLUIDS AND ENERGY SYSTEMS:** MECH ENG 3D03, 4S03; two of CHEM ENG 4X03, MECH ENG 4I03, 4J03, 4Q03, 4T03, 4U03
- **APPROVED TECHNICAL ELECTIVES:** any of the required courses listed above, plus CHEM ENG 4T03, CIV ENG 3K03, COMMERCE 4QA3

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

- ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
- ENGINEER 1EE0, 2EE0 and 4EA0, or
- ENGINEER 1EE0 and 4EB0, or
- ENGINEER 1EE0 and 4EC0

LEVEL II: 36 UNITS

- 6 units MATH 2M03, 2MM3
27 units MECH ENG 2B03, 2C03, 2D03, 2P04, 2Q04, 2W04, 3A03, 3C03
3 units Mechanical Engineering complementary studies elective

LEVEL III: 36 UNITS

- 6 units ENGINEER 2MM3, 3N03
3 units MATLS 3M03
3 units MATH 3I03
21 units MECH ENG 3E05, 3F04, 3M02, 3O04, 3R03, 4R03
3 units STATS 3Y03

LEVEL IV: 35-36 UNITS

- 3 units ENGINEER 4B03
3 units from ENGINEER 4A03, 4H03
3 units approved complementary studies electives
11 units MECH ENG 4M06, 4P02, 4V03
15-16 units approved technical electives, including 13 units from required option courses. (See Note 1 above.)

Mechanical Engineering and Management (B.Eng.Mgt.) {4330325}**Mechanical Engineering and Management Co-op (B.Eng.Mgt.) {4330323}****ADMISSION**

See Admission to Level II Engineering Programs.

NOTES

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

PROGRAM OPTION COMPULSORY COURSES:

- **GENERAL:** two of MECH ENG 3D03, 4B03, 4E03, 4Q03, 4S03, 4Z03
- **MECHANICS AND DESIGN:** MECH ENG 4Q03; three of MATLS 4J04, 4T03, MECH ENG 4B03, 4BB3, 4CC3, 4E03, 4H03, 4I03, 4K03, 4L03, 4T03, 4Z03
- **MANUFACTURING:** MECH ENG 4Q03; three of CHEM ENG 4X03, ENGINEER 4J03, MATLS 4J04, 4T03, MECH ENG 4B03, 4BB3, 4CC3, 4D03, 4E03, 4H03, 4K03, 4T03, 4Z03
- **THERMOFLUIDS AND ENERGY SYSTEMS:** MECH ENG 3D03, 4S03; two of CHEM ENG 4X03, MECH ENG 4I03, 4J03, 4Q03, 4T03, 4U03
- **APPROVED TECHNICAL ELECTIVES:** any of the required courses listed above, plus CHEM ENG 4T03, CIV ENG 3K03, COMMERCE 4QA3

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

- ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
- ENGINEER 1EE0, 2EE0 and 4EA0, or
- ENGINEER 1EE0 and 4EB0, or
- ENGINEER 1EE0 and 4EC0

LEVEL II: 37 UNITS

- 9 units COMMERCE 2AA3, 2BA3, 2MA3
6 units ECON 1BB3, 2X03
6 units MATH 2M03, 2MM3
14 units MECH ENG 2D03, 2P04, 2W04, 3C03
2 units ENGN MGT 2AA2

LEVEL III: 37 UNITS

- 3 units COMMERCE 2FA3
1 unit ENGN MGT 3AA1
3 units ENGINEER 2MM3
3 units MATH 3I03
24 units MECH ENG 2B03, 2C03, 2Q04, 3A03, 3F04, 3O04, 3R03
3 units STATS 3Y03

LEVEL IV: 35 UNITS

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

LEVEL V: 35-36 UNITS

- 6 units COMMERCE 4PA3, 4QA3
6 units Commerce electives selected from Level III or IV Commerce
3 units ENGN MGT 5B03
3 units from ENGINEER 4A03, 4H03
3 units approved complementary studies electives
8 units MECH ENG 4M06, 4P02
6-7 units from required option courses or approved technical electives. (See Note 1 above.)

Mechanical Engineering and Society (B.Eng.Society)	{4330535}
Mechanical Engineering and Society Co-op (B.Eng.Society)	{4330533}
Mechanical Engineering and International Studies (B.Eng.Society)	{4330125}
Mechanical Engineering and International Studies Co-op (B.Eng.Society)	{4330123}

ADMISSION

See *Admission to Level II Engineering Programs*.

NOTES

- Level IV and Level V Mechanical Engineering and Society students must choose one of the following option areas and complete sufficient units of the listed required courses and technical electives.

PROGRAM OPTION COMPULSORY COURSES:

- **GENERAL:** two of MECH ENG 3D03, 4B03, 4E03, 4Q03, 4S03, 4Z03
 - **MECHANICS AND DESIGN:** MECH ENG 4Q03; three of MATLS 4J04, 4T03, MECH ENG 4B03, 4BB3, 4CC3, 4E03, 4H03, 4I03, 4K03, 4L03, 4T03, 4Z03
 - **MANUFACTURING:** MECH ENG 4Q03; three of CHEM ENG 4X03, ENGINEER 4J03, MATLS 4J04, 4T03, MECH ENG 4B03, 4D03, 4E03, 4H03, 4K03, 4T03, 4Z03
 - **THERMOFLUIDS AND ENERGY SYSTEMS:** MECH ENG 3D03, 4S03; two of CHEM ENG 4X03, MECH ENG 4I03, 4J03, 4Q03, 4T03, 4U03
 - **APPROVED TECHNICAL ELECTIVES:** any of the required courses listed above, plus CHEM ENG 4T03, CIV ENG 3K03, COMMERCE 4QA3
- As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
 - ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
 - ENGINEER 1EE0, 2EE0 and 4EA0, or
 - ENGINEER 1EE0 and 4EB0, or
 - ENGINEER 1EE0 and 4EC0
 - A minimum of 18 units of focus elective courses is required for the program. (This does not include the six units of complementary studies elective in Level I.)

LEVEL II: 33-36 UNITS

6 units	MATH 2M03, 2MM3
18 units	MECH ENG 2C03, 2D03, 2P04, 2Q04, 2W04

SOCIETY:

6 units	ENGSOCTY 2X03, 2Y03
3-6 units	Engineering and Society focus electives

INTERNATIONAL STUDIES:

9 units	ANTHROP 1A03, ENGSOCTY 2X03, 2Y03

LEVEL III: 32-35 UNITS

3 units	ENGINEER 2MM3
3 units	MATH 3I03
20 units	MECH ENG 2B03, 3A03, 3C03, 3F04, 3O04, 3R03

SOCIETY:

3 units	ENGSOCTY 3Y03
3-6 units	Engineering and Society focus electives

INTERNATIONAL STUDIES:

3-6 units	from POL SCI 2A06, 2XX3, RELIG ST 1B06
3-6 units	International Studies focus electives

LEVEL IV: 34-37 UNITS

3 units	ENGINEER 3N03
3 units	MATLS 3M03
3 units	STATS 3Y03
13 units	MECH ENG 3E05, 3M02, 4R03, 4V03
3 units	from required option courses or approved technical electives

SOCIETY:

6 units	ENGSOCTY 3X03, 3Z03
3-6 units	Engineering and Society focus electives

INTERNATIONAL STUDIES:

6 units	ENGINEER 3PM3, ENGSOCTY 3X03
3-6 units	International Studies focus electives

LEVEL V: 32-36 UNITS

3 units	ENGINEER 4B03
8 units	MECH ENG 4M06, 4P02
12-13 units	from required option courses or approved technical electives (See Note 1 above.)

SOCIETY:

6 units	ENGSOCTY 4X03, 4Z03
3-6 units	Engineering and Society focus electives

INTERNATIONAL STUDIES:

6 units	ENGINEER 4SC3, ENGSOCTY 4X03
3-6 units	International Studies focus electives

Mechatronics Engineering (B.Eng.) {4332}**Mechatronics Engineering Co-op (B.Eng.) {4332003}****ADMISSION**

See *Admission to Level II Engineering Programs*.

LEVEL II: 34 UNITS

6 units	MATH 2M03, 2MM3
6 units	SFWR ENG 2MX3, 2S03
8 units	ENG PHYS 2A04, 2E04
7 units	MECH ENG 2B03, 2Q04
7 units	ENGINEER 2MM3, 2P04

LEVEL III: 36 UNITS

16 units	SFWR ENG 3DX3, 3F03, 3I03, 3K04, 3X03
8 units	MECHTRON 3TA4, 3TB4
3 units	SFWR ENG 3SH3
6 units	ENGINEER 3K03, 3N03
3 units	STATS 3N03

LEVEL IV: 36 UNITS (EFFECTIVE 2008-2009)

3 units	SFWR ENG 4AA3
6 units	MECHTRON 4TB6
6 units	MECH ENG 4B03, 4K03
6 units	ENGINEER 4A03, 4B03
6 units	approved technical electives from list A (Contact the Department of Computing and Software.)
3 units	approved technical electives from list B (Contact the Department of Computing and Software.)
3 units	approved complementary studies electives

Mechatronics Engineering and Management (B.Eng.Mgt.) {4332325}**Mechatronics Engineering and Management Co-op (B.Eng.) {4332323}****ADMISSION**

See *Admission to Level II Engineering Programs*.

LEVEL II: 37 UNITS

6 units	SFWR ENG 2MX3, 2S03
8 units	ENG PHYS 2A04, 2E04
7 units	MECH ENG 2B03, 2Q04
7 units	ENGINEER 2MM3, 2P04
6 units	MATH 2M03, 2MM3
3 units	COMMERCE 2MA3

LEVEL III: 37 UNITS

16 units	SFWR ENG 3DX3, 3F03, 3K04, 3SH3, 3X03
3 units	STATS 3Y03
3 units	ENGN MGT 2AA2, 3AA1
6 units	ECON 1BB3, 2X03
9 units	COMMERCE 2AA3, 2BA3, 2FA3

LEVEL IV: 39 UNITS

3 units	SFWR ENG 4AA3
8 units	MECHTRON 3TA4, 3TB4
3 units	MECH ENG 4H03
6 units	ENGINEER 3K03, 3N03
12 units	COMMERCE 2AB3, 3BC3, 3FA3, 3MC3

- 1 unit ENGN MGT 4A01
 3 units approved technical electives from list A (Contact the Department of Computing and Software.)
 3 units approved technical electives from list B (Contact the Department of Computing and Software.)

LEVEL V: 36 UNITS

- 6 units MECHTRON 4TB6
 3 units ENGINEER 4A03
 3 units MECH ENG 4K03
 6 units COMMERCE 4PA3, 4QA3
 3 units ENGN MGT 5B03
 3 units approved complementary studies electives
 6 units approved technical electives
 6 units Commerce electives selected from Level III or IV Commerce

Mechatronics Engineering and Society (B.Eng.Society) {4332535}

Mechatronics Engineering and Society Co-op (B.Eng.Society) {4332533}

Mechatronics Engineering and International Studies (B.Eng.Society) {4332125}

Mechatronics Engineering and International Studies Co-op (B.Eng.Society) {4332123}

ADMISSION

See *Admission to Level II Engineering Programs.*

LEVEL II: 37-40 UNITS

- 6 units SFWR ENG 2MX3, 2S03
 8 units ENG PHYS 2A04, 2E04
 7 units MECH ENG 2B03, 2Q04
 7 units ENGINEER 2MM3, 2P04
 6 units MATH 2M03, 2MM3

SOCIETY:

- 3 units ENGSOCTY 2X03

INTERNATIONAL STUDIES:

- 6 units ANTHROP 1A03, ENGSOCTY 2X03

LEVEL III: 34-37 UNITS

- 16 units SFWR ENG 3DX3, 3F03, 3K04, 3SH3, 3X03
 3 units ENGINEER 3K03
 3 units STATS 3Y03

SOCIETY:

- 6 units ENGSOCTY 2Y03, 3X03
 6 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 3 units ENGSOCTY 2Y03
 3-6 units POL SCI 2A06, 2XX3, RELIG ST 1B06
 3-6 units International Studies focus electives

LEVEL IV: 32-38 UNITS

- 3 units SFWR ENG 4AA3
 8 units MECHTRON 3TA4, 3TB4
 6 units MECH ENG 4H03, 4K03
 6 units ENGINEER 3N03, 4B03

SOCIETY:

- 6 units ENGSOCTY 3Y03, 3Z03
 6-9 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 6 units ENGINEER 3PM3, ENGSOCTY 3X03
 3 units International Studies focus electives

LEVEL V: 33-36 UNITS

- 6 units MECHTRON 4TB6
 6 units approved technical electives from list A (Contact the Department of Computing and Software.)
 6 units approved technical electives from list B (Contact the Department of Computing and Software.)

SOCIETY:

- 6 units ENGSOCTY 4X03, 4Z03
 9-12 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

- 6 units ENGINEER 4SC3, ENGSOCTY 4X03
 9-12 units International Studies focus electives

Software Engineering (B.Eng.) {4517}

Software Engineering Co-op (B.Eng.) {4517003}

ADMISSION

See *Admission to Level II Engineering Programs.*

NOTE

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

- ENGINEER 1EE0, 2EE0 and 4EA0, or
- ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
- ENGINEER 1EE0 and 4EB0, or
- ENGINEER 1EE0 and 4EC0

LEVEL II: 34 UNITS

- 6 units MATH 2M03, 2MM3
 22 units SFWR ENG 2AA4, 2C03, 2DA3, 2DM3, 2FA3, 2MX3, 2S03
 3 units STATS 3Y03
 3 units approved complementary studies electives

LEVEL III: 35 UNITS

- 6 units ENGINEER 3K03, 4A03
 29 units SFWR ENG 3A04, 3BB4, 3DX3, 3F03, 3GA3, 3I03, 3RA3, 3S03, 3X03

LEVEL IV: 33 UNITS

- 3 units ENGINEER 4B03
 24 units SFWR ENG 4AA3, 4C03, 4D03, 4E03, 4G06, 4M03, 4O03
 6 units from SFWR ENG 4F03, 4J03, 4TE3

Software Engineering and Management (B.Eng.Mgt.) {4517325}

Software Engineering and Management Co-op (B.Eng.Mgt.) {4517323}

ADMISSION

See *Admission to Level II Engineering Programs.*

NOTE

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

- ENGINEER 1EE0, 2EE0 and 4EA0, or
- ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
- ENGINEER 1EE0 and 4EB0, or
- ENGINEER 1EE0 and 4EC0

LEVEL II: 37 UNITS

- 6 units COMMERCE 2AA3, 2MA3
 3 units ECON 1BB3
 6 units MATH 2M03, 2MM3
 22 units SFWR ENG 2AA4, 2C03, 2DA3, 2DM3, 2FA3, 2MX3, 2S03

LEVEL III: 38 UNITS

- 6 units COMMERCE 2BA3, 2FA3
 3 units ENGN MGT 2AA2, 3AA1
 3 units ECON 2X03
 26 units SFWR ENG 3A04, 3BB4, 3DX3, 3F03, 3GA3, 3RA3, 3S03, 3X03

LEVEL IV: 37 UNITS

- 12 units COMMERCE 2AB3, 3BC3, 3FA3, 3MC3
 3 units ENGINEER 3K03
 1 unit ENGN MGT 4A01
 9 units SFWR ENG 4AA3, 4D03, 4M03
 3 units STATS 3N03
 3 units from SFWR ENG 4F03, 4J03, 4TE3
 3 units approved complementary studies electives
 3 units Commerce electives selected from Level III or IV Commerce

LEVEL V: 33 UNITS

- 6 units COMMERCE 4PA3, 4QA3
 3 units ENGINEER 4H03
 3 units ENGN MGT 5B03
 15 units SFWR ENG 4C03, 4E03, 4G06, 4O03
 3 units from SFWR ENG 4F03, 4J03, 4TE3
 3 units Commerce electives selected from Level III or IV Commerce

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

Software Engineering and Society Co-op (B.Eng.Society) {4517533}

Software Engineering and International Studies (B.Eng.Society) {4517125}

Software Engineering and International Studies Co-op (B.Eng.Society) {4517123}

ADMISSION

See *Admission to Level II Engineering Programs.*

NOTES

1. A minimum of 18 units of focus elective courses is required for the program. (This does not include the 6 units of complementary studies elective in Level I.)
2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
 - ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
 - ENGINEER 1EE0, 2EE0 and 4EA0, or
 - ENGINEER 1EE0 and 4EB0, or
 - ENGINEER 1EE0 and 4EC0

LEVEL II: 37 UNITS

6 units MATH 2M03, 2MM3
22 units SFWR ENG 2AA4, 2C03, 2DA3, 2DM3, 2FA3, 2MX3, 2S03

SOCIETY:

6 units ENGSOCTY 2X03, 2Y03
3 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

9 units ANTHROP 1A03, ENGSOCTY 2X03, 2Y03

LEVEL III: 35 UNITS

26 units SFWR ENG 3A04, 3BB4, 3DX3, 3F03, 3GA3, 3RA3, 3S03, 3X03

SOCIETY:

3 units ENGSOCTY 3Y03
6 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

3-6 units POL SCI 2A06, 2XX3, RELIG ST 1B06
3-6 units International Studies focus electives

LEVEL IV: 33 UNITS

6 units ENGINEER 3K03, 4B03
6 units SFWR ENG 4AA3, 4M03
3 units STATS 3Y03
3 units approved technical electives

SOCIETY:

6 units ENGSOCTY 3X03, 3Z03
9 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

6 units ENGINEER 3PM3, ENGSOCTY 3X03
9 units International Studies focus electives

LEVEL V: 36 UNITS

18 units SFWR ENG 4C03, 4D03, 4E03, 4G06, 4O03
6 units from SFWR ENG 4F03, 4J03, 4TE3

SOCIETY:

6 units ENGSOCTY 4X03, 4Z03
6 units Engineering and Society focus electives

INTERNATIONAL STUDIES:

6 units ENGINEER 4SC3, ENGSOCTY 4X03
6 units International Studies focus electives

Software Engineering and Game Design (B.Eng.) {4518}

Software Engineering and Game Design Co-op (B.Eng.) {4518003}

ADMISSION

See *Admission to Level II Engineering Programs.*

LEVEL II: 34 UNITS

6 units MATH 2M03, 2MM3
6 units MMEDIA 1BE3, 2BE3
22 units SFWR ENG 2AA4, 2C03, 2DA3, 2DM3, 2FA3, 2MX3, 2S03

LEVEL III: 38 UNITS

3 units MMEDIA 2HE3
3 units STATS 3Y03
32 units SFWR ENG 3A04, 3BB4, 3DX3, 3F03, 3GA3, 3GB3, 3GC3, 3RA3, 3S03, 3X03

LEVEL IV: 33 UNITS

6 units ENGINEER 4A03, 4B03
3 units MMEDIA 3EE3
21 units SFWR ENG 3I03, 4C03, 4D03, 4GA3, 4GC3, 4GP6
3 units from SFWR ENG 4E03, 4F03, 4J03, 4M03, 4O03, 4TE3

Software Engineering and Embedded Systems (B.Eng.) {4519}

Software Engineering and Embedded Systems Co-op (B.Eng.) {4519003}

Subject to approval by the Ministry of Training, Colleges and Universities, beginning in the 2007-2008 academic year, a B.Eng. program in Software Engineering and Embedded Systems will be offered.

ADMISSION

See *Admission to Level II Engineering Programs.*

LEVEL II: 37 UNITS

22 units SFWR ENG 2AA4, 2C03, 2DA3, 2DM3, 2FA3, 2MX3, 2S03

6 units ENGINEER 2MM3, 3N03

6 units MATH 2M03, 2MM3

3 units approved complementary studies electives

LEVEL III: 37 UNITS

8 units MECHTRON 3TA4, 3TB4

26 units SFWR ENG 3A04, 3BB4, 3DX3, 3F03, 3GA3, 3RA3, 3S03, 3X03

3 units STATS 3Y03

LEVEL IV: 36 UNITS

15 units SFWR ENG 3I03, 4AA3, 4C03, 4D03, 4M03

6 units MECHTRON 4TB6

6 units ENGINEER 3K03, 4A03, 4B03

6 units from SFWR ENG 4E03, 4F03, 4J03, 4O03, 4TE3

PROGRAMS FOR THE B.TECH. DEGREE

WEB ADDRESS: <http://www.btech.mcmastermohawk.ca>

Communications Research Laboratory (CRL), Room 112B

Ext. 27056

Executive Director

A.C. Heidebrecht/Ph.D., D.Sc., P.Eng.

Associate Director (Four-Year B.Tech. Programs)

I. Singh/B.Sc., M.Sc., Ph.D., F.C.I.C.

Business Administrator

B. Eftekhari

Program Administrator (Degree Completion Programs)

S.D. Verhage

Program Administrator (Four-Year B.Tech. Programs)

G. Ferracuti

The Bachelor of Technology (B.Tech.) programs provide a degree-level technological education that is distinct from that offered in Bachelor of Engineering programs. These programs are more oriented to applications in specific technologies, with less emphasis on broader mathematical and scientific foundations than a corresponding engineering program. Graduates will have considerably more breadth and depth in their area of technology than graduates of college technology diploma programs. For degree completion programs, a second objective is to provide a path for college diploma graduates to gain an education leading to a university degree.

The programs are being offered in two specific configurations: Four-year programs with entry directly from high school leading to both a Diploma in Technology from Mohawk College and a Bachelor of Technology degree from McMaster. The programs are:

- Process Automation Technology
- Automotive and Vehicle Technology (Not offered in 2007-2008.)
- Biotechnology (Not offered in 2007-2008.)

Two-year degree-completion programs for graduates of the Mohawk College three-year Diploma in Technology program (or graduates of similar programs at other Colleges) leading to a Bachelor of Technology degree from McMaster. The programs are:

- Civil Engineering Infrastructure Technology
- Computing and Information Technology
- Manufacturing Engineering Technology

BREADTH OF LEARNING

B.Tech. graduates will be functioning in an evolving world in which they will play an important role as "evolvers" or change agents. This means that their education cannot just be narrowly focused on technical and management topics but must also enable them to develop important complementary skills, including human relations skills. The four-year B.Tech. program has an eight-course "breadth of learning" component which is designed to develop those skills in the context of broadening their knowledge of the economic, social, political, environmental, cultural and ethical dimensions of the society in which they will live and work.

MANAGEMENT STUDIES

All programs include a seven-course management studies component designed to develop management skills in a technology context. These courses (e.g. financial systems, human behavior, entrepreneurship, project management and formulating technology strategy) provide graduates with necessary skills for the development of their professional careers and provide employers with highly skilled graduates possessing a blend of technological and managerial capabilities required by business in order to strengthen competitiveness.

CO-OPERATIVE EDUCATION

Co-op placements are a mandatory component of all B.Tech. degree programs; co-op placements provide explicit experiential learning which is related to the technologically-oriented careers for which students are being prepared. Testing and enhancing their skills through a co-operative education experience is important in enabling graduates to function effectively in an industrial environment. The co-op component is administered by Engineering Co-Op and Career Services.

FOUR-YEAR B.TECH. PROGRAMS

ACADEMIC REGULATIONS FOR FOUR-YEAR B.TECH. PROGRAMS

STUDENT ACADEMIC RESPONSIBILITY

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

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

MINIMUM REQUIREMENTS TO CONTINUE IN A PROGRAM BEYOND LEVEL I

In Level II and above, the student must maintain a Cumulative Average (CA) of at least 3.5 with no failures to continue in the B.Tech. program. If the student's CA is at least 3.5 and includes one failure since the last review, the student will be placed on program probation. Probation will be lifted if the student completes a year with a Sessional Average of 3.5 with no failures. If the student's CA is less than 3.5, the student may not continue at the University.

SEQUENCE OF COURSES

Courses must be taken in the sequence specified in the requirements for the program as outlined in this Calendar. Students must register for all outstanding work of one level before attempting work for a higher level.

REPEATED COURSES

All failed courses must be repeated if they are required courses for the B.Tech. program or may be replaced if the courses are not explicitly required.

LEVEL OF REGISTRATION

A student is required to register in the lowest level for which more than six units of work are incomplete. Work of a higher level may be undertaken only with the permission of the Associate Director (Four-Year Bachelor of Technology Programs).

MINIMUM WORK LOAD

The minimum workload for students registered in Level I of the Bachelor of Technology program is 36 units. The workload for students registered above Level I will range from 33 to 36 units per year and is specified within each academic program.

REINSTATEMENT

A student who is ineligible to continue in a Bachelor of Technology program (*May not continue at university*) may normally not apply for reinstatement for one full academic year. Exceptions may be made where there are extenuating circumstances that are supported by documentation.

Students seeking reinstatement must complete the *Reinstatement Request Form* available at the Office of the Registrar or the Bachelor of Technology Program Office. The completed form and the \$50 fee must be submitted to the Office of the Registrar by June 30. The form must be accompanied by a written explanation of the reason for the student's previous unsatisfactory academic performance, reasons for reinstatement at this time (including documentation of what has been done to correct previous academic problems), reasons why the student would expect to succeed in the desired program if reinstated (i.e. what was the previous problem and what has been done to correct it), activities since last registered at McMaster including all academic work. 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 courses of that level, unless specific course exemptions are granted explicitly in the letter of reinstatement. Students who are reinstated will be placed on program probation, and calculation of their Cumulative Average will begin anew. If at any review after reinstatement the student's Cumulative Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.

TRANSFERS FROM ENGINEERING

Students who have successfully completed all courses in Engineering I with a CA of at least 3.5 can apply to transfer directly to Level II of any of the Four-Year Bachelor of Technology Programs. Depending upon the complementary studies electives taken in Engineering I and the Bachelor of Technology program to which they are transferring, students will be given credit for most or all of the Technology I program. Students who anticipate making such a transfer should consult with the Associate Director (Four-Year Bachelor of Technology Programs) at the earliest possible opportunity. Applications for transfer must be submitted to the Associate Director (Four-Year Bachelor of Technology Programs) no later than June 15.

REQUIREMENTS FOR MOHAWK DIPLOMA

Students registered in the Four-Year Bachelor of Technology Program may elect to leave the Program upon the successful completion of Level III. Students will be awarded a Mohawk College diploma.

LEVEL I PROGRAM (NOT OFFERED IN 2007-2008)

WEB ADDRESS: <http://www.btech.mcmastermohawk.ca>

NOTE

The Level I requirements for specific Level II B.Tech. programs are as follows:

- **Automotive and Vehicle Technology:** ENG TECH 1ME3, 1PR3
- **Biotechnology:** ENG TECH 1AC3, 1BI3
- **Process Automation Technology:** ENG TECH 1AC3, 1PR3

TECHNOLOGY I: 36 UNITS

{0731}

18 units ENG TECH 1CH3, 1CP3, 1EL3, 1MC3, 1MT3, 1PH3

12 units GEN TECH 1CS3, 1FS3, 1OB3, 1TI3

6 units from ENG TECH 1AC3, 1BI3, 1ME3, 1PR3 (See Note above.)

1 course ENG TECH 1A00

PROGRAMS FOR THE FOUR-YEAR

B. TECH. DEGREE

ADMISSION TO LEVEL II

To be admitted to a Level II B.Tech. program, students must have completed all non-elective B.Tech. courses with a minimum Cumulative Average (CA) of 3.5.

NOTE

Co-Op Education: Students in the Four-Year Bachelor of Technology programs will be required to complete 12 months of co-op experience prior to graduation. The 12 months of co-op experience may be acquired through a combination of three four-month experience terms.

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

- ENG TECH 1EE0 Introduction to the Technology Co-Op Program
- ENG TECH 2EE0 Four Month Co-Op Experience I
- ENG TECH 3EE0 Four Month Co-Op Experience II
- ENG TECH 4EE0 Four Month Co-Op Experience III

ENG TECH 1EE0 must be taken in the first year of the program. Depending upon the manner in which the co-op placements are organized, two of the four-month co-op experience courses may be taken in sequential calendar terms.

Automotive and Vehicle

{4031}

Technology (B.Tech)

(NOT OFFERED IN 2007-2008)

ADMISSION

Completion of Technology I including ENG TECH 1ME3 and 1PR3.

LEVEL II: 36 UNITS

- 15 units AUTOTECH 2AC3, 2AE3, 2CD3, 2MT3, 2TS3
- 12 units ENG TECH 2MA3, 2MT3, 3MN3, 3ST3
- 9 units GEN TECH 2EN3, 2TC3, 2TE3

LEVEL III: 36 UNITS

- 21 units AUTOTECH 3AE3, 3AV3, 3CT3, 3MP3, 3MV3, 3TS3, 3VD3
- 3 units ENG TECH 3FE3
- 12 units GEN TECH 2TL3, 2TM3, 3PM3, 3SF3

LEVEL IV: 33 UNITS

- 21 units AUTOTECH 4AE3, 4AT3, 4CI3, 4DV3, 4EC3, 4MS3, 4TP3
- 9 units GEN TECH 2TP3, 3TL3, 4SS3
- 3 units from GEN TECH 1DM3, 1EE3, 1HR3, 2IS3, 4LM3, 4ST3

Biotechnology (B.Tech)

{4054}

(NOT OFFERED IN 2007-2008)

ADMISSION

Completion of Technology I including ENG TECH 1AC3 and 1BI3.

LEVEL II: 33 UNITS

- 21 units BIOTECH 2BC3, 2BE3, 2BT3, 2CB3, 2GT3, 2MB3, 2OC3
- 3 units ENG TECH 2MA3
- 9 units GEN TECH 2EN3, 2TC3, 2TE3

LEVEL III: 36 UNITS

- 21 units BIOTECH 3BP3, 3EC3, 3FM3, 3FR3, 3IV3, 3MB3, 3PM3
- 3 units ENG TECH 3ST3
- 12 units GEN TECH 2TL3, 2TM3, 3PM3, 3SF3

LEVEL IV: 33 UNITS

- 21 units BIOTECH 4BI3, 4BL3, 4BM3, 4BS3, 4GP3, 4TB3, 4TR3
- 9 units GEN TECH 2TP3, 3TL3, 4SS3
- 3 units from GEN TECH 1DM3, 1EE3, 1HR3, 2IS3, 4LM3, 4ST3

Process Automation Technology (B.Tech) {4459}

(OFFERED IN 2007-2008)

ADMISSION

Completion of Technology I including ENG TECH 1AC3 and 1PR3.

LEVEL II: 36 UNITS

- 21 units PROCTECH 2CA3, 2CE3, 2EC3, 2EE3, 2IO3, 2IC3, 2PL3
- 6 units ENG TECH 2MA3, 2MT3
- 9 units GEN TECH 2EN3, 2TC3, 2TE3

LEVEL III: 36 UNITS

- 18 units PROCTECH 3CE3, 3CT3, 3MC3, 3PL3, 3SC3, 3SD3
- 3 units ENG TECH 3MN3, 3ST3
- 12 units GEN TECH 2TL3, 2TM3, 3PM3, 3SF3

LEVEL IV: 36 UNITS

- 24 units PROCTECH 4AS3, 4CT3, 4IC3, 4IT3, 4MS3, 4MT3, 4SS3, 4TR3
- 9 units GEN TECH 2TP3, 3TL3, 4SS3
- 3 units from GEN TECH 1DM3, 1EE3, 1HR3, 2IS3, 4LM3, 4ST3

DEGREE COMPLETION B.TECH. PROGRAMS

ACADEMIC REGULATIONS FOR DEGREE

COMPLETION B.TECH. PROGRAMS

STUDENT ACADEMIC RESPONSIBILITY

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

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

ADVANCED STANDING

Advance standing may be considered at the time of admission. However a minimum of 51 units of work must be completed at McMaster University in order to obtain a Bachelor of Technology degree.

SEQUENCE OF COURSES

Students in the degree completion program may register in any courses in the program for which they have achieved the specified prerequisite requirements.

REPEATED COURSES

All failed courses must be repeated if they are required courses for the B.Tech. program or may be replaced if the courses are not explicitly required.

LEVEL OF REGISTRATION

A student is required to register in the lowest level for which more than six units of work is incomplete. Work of a higher level may be undertaken only with the permission of the Associate Director of the Bachelor of Technology Program.

MINIMUM WORK LOAD

Students may elect to register in the program full-time or part-time. Students wishing to study full-time evenings may register in up to 18 units (six courses) per academic term. Students working full-time should not attempt more than two or three courses per academic term. Part-time students have up to seven years to complete the program in its entirety. The minimum number of units that may be taken in one academic term is three units (one course).

REINSTATEMENT

A student who is ineligible to continue in a Bachelor of Technology program (*May not continue at university*) may normally not apply for reinstatement for one full academic year. Exceptions may be made where there are extenuating circumstances that are supported by documentation.

Students seeking reinstatement must complete the *Reinstatement Request Form* available at the Office of the Registrar or the Bachelor of Technology Program Office. The completed form and the \$50 fee must be submitted to the Office of the Registrar by June 30. The form must be accompanied by a written explanation of the reason for the student's previous unsatisfactory academic performance, reasons for reinstatement at this time (including documentation of what has been done to correct previous academic problems), reasons why the student would expect to succeed in the desired program if reinstated (i.e. what was the previous problem and what has been done to correct it), activities since last registered at McMaster including all academic work. 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 courses of that level, unless specific course exemptions are granted explicitly in the letter of reinstatement. Students who are reinstated will be placed on program probation, and calculation of their Cumulative Average will begin anew. If at any review after reinstatement the student's Cumulative Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.

PROGRAMS FOR THE DEGREE COMPLETION B.TECH.

ADMISSION TO DEGREE COMPLETION PROGRAMS

The minimum academic requirement for admission to a Bachelor of Technology degree completion program is successful completion of a three-year technology diploma or equivalent.

The degree completion programs will accept students with diplomas in related technology from Mohawk College or similar diploma programs at other Ontario Colleges; post-diploma experience would be an asset. Applicants with educational background equivalent to those completing Ontario college diplomas, i.e. overseas technology diploma or degree graduates are encouraged to apply; such applications will be considered on an individual basis.

NOTE

Co-Op Education: Students in the degree completion Bachelor of Technology programs who initially registered in a program in September 2006 or later will be required to complete eight months of co-op experience prior to graduation. The eight months of co-op experience may be acquired through a combination of two four-month experience terms. These co-op placement terms will be waived for diploma graduates whose programs are operated on a co-op basis (which would be the case for Mohawk College diploma graduates) and for diploma graduates who have achieved significant work experience in a related field.

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

- ENG TECH 1ET0, Introduction to the Technology Co-Op Program
- ENG TECH 2ET0, Four Month Co-Op Experience I
- ENG TECH 3ET0, Four Month Co-Op Experience II

ENG TECH 1ET0 must be completed at least one academic term prior to the term in which the first co-op placement is taken.

Civil Engineering Infrastructure Technology (B.Tech.) {4122}

ADMISSION

Admission requires satisfactory completion of a three-year Mohawk College Civil Engineering Technology or a three-year Mohawk College Architectural Technology diploma (or equivalent); applicants with equivalent credentials are encouraged to apply.

NOTES

1. Architectural Technology graduates must complete CIV TECH 3FM3, 3GE3 and three units from the Infrastructure Electives Course List. Civil Engineering Technology diploma graduates must select nine units from the Infrastructure Electives Course List.
2. Architectural Technology graduates must complete CIV TECH 4MH3 and nine units from the Infrastructure Electives Course List. Civil Engineering Technology diploma graduates must select 12 units from the Infrastructure Electives Course List.

INFRASTRUCTURE ELECTIVES COURSE LIST

CIV TECH 3BD3, 3CS3, 3FR3, 3LU3, 3ND3, 3PM3, 3RM3, 3TP3, 3UM3, 3WT3

LEVEL III: 36 UNITS

- 6 units ENG TECH 3MA3, 3ML3
- 15 units GEN TECH 1FS3, 1HR3, 1OB3, 2EN3, 3PM3
- 6 units CIV TECH 3GT3, 3SA3
- 9 units six units from CIV TECH 3FM3, 3GE3 and three units from Infrastructure Electives Course List (See Note 1 above.)
or
nine units from Infrastructure Electives Course List (See Note 1 above.)
- 1 course ENG TECH 1A00

LEVEL IV: 30 UNITS

- 3 units ENG TECH 3MN3
- 9 units CIV TECH 4EI3, 4ES3, 4SD3
- 12 units three units from CIV TECH 4MH3 and nine units from Infrastructure Electives Course List (See Note 2 above.)
or
12 units from Infrastructure Electives Course List (See Note 2 above.)
- 3 units GEN TECH 3SF3
- 3 units from GEN TECH 1DM3, 1EE3, 2IS3, 4ST3

Computing and Information Technology (B.Tech.) {4141}

ADMISSION

Admission requires satisfactory completion of a three-year Mohawk College diploma in one of Software Engineering, Networking Engineering Security Analyst or Computer Engineering (or equivalent); applicants with equivalent credentials are encouraged to apply.

NOTES

1. Software Engineering diploma graduates must complete COMPTECH 3IT3 and 3NT3.
2. Network Engineering Security Analyst diploma graduates must complete COMPTECH 3PD3 and 3PR3.

LEVEL III: 36 UNITS

- 6 units from COMPTECH 3IT3, 3NT3, 3PD3, 3PR3 (See Notes 1 and 2 above.)
- 15 units COMPTECH 3DS3, 3ET3, 3IA3, 3IN3, 3RQ3
- 6 units ENG TECH 3DM3, 3ST3
- 9 units GEN TECH 1FS3, 1OB3, 2EN3
- 1 course ENG TECH 1A00

LEVEL IV: 36 UNITS

- 21 units COMPTECH 4AP3, 4ES3, 4FD3, 4IN3, 4SD3, 4TM3, 4TR3
- 3 units from COMPTECH 4CC3, 4DM3
- 9 units GEN TECH 2IS3, 3PM3, 3SF3
- 3 units from GEN TECH 1DM3, 1EE3, 1HR3, 4ST3

Manufacturing Engineering Technology (B.Tech.) {4319}

(Requirements for students who entered in September 2006 and later)

ADMISSION

Admission requires satisfactory completion of a three-year Mohawk College Mechanical Engineering Technology (or equivalent); applicants with equivalent credentials are encouraged to apply.

LEVEL III: 36 UNITS

- 18 units ENG TECH 1CP3, 3CT3, 3FE3, 3MA3, 3ML3, 3MN3
- 9 units MAN TECH 3CD3, 3MD3, 3TF3
- 9 units GEN TECH 1FS3, 1OB3, 2EN3
- 1 course ENG TECH 1A00

LEVEL IV: 36 UNITS

- 24 units MAN TECH 4FB3, 4FM3, 4FT3, 4ID3, 4MC3, 4MT3, 4ST3, 4TF3
- 9 units GEN TECH 3PM3, 3SF3, 4LM3
- 3 units from GEN TECH 1DM3, 1EE3, 1HR3, 2IS3, 4SS3, 4ST3

Manufacturing Engineering Technology (B.Tech.) {4317}

(Requirements for students who entered prior to September 2006)

This program is currently being phased out. Registration in Level II will be last available in September 2007. All new applicants should apply to Manufacturing Engineering Technology {4319} as specified above.

LEVEL II: 18 UNITS

- 9 units ENG TECH 3CT3, 3FE3, 3MN3
- 9 units MAN TECH 3MD3, 4MT3, 4TF3

LEVEL III: 15 UNITS

- 9 units MAN TECH 4FB3, 4FM3, 4FT3
- 6 units MAN TECH 4MC3, 4ST3

FACULTY OF HEALTH SCIENCES

WEB ADDRESS: <http://www.fhs.mcmaster.ca>

Dean and Vice-President

J. G. Keltón/M.D., F.R.C.P. (C.)

Associate Dean Research

S. Collins/M.B.B.S., F.R.C.P.(UK), F.R.C.P.C.

Associate Vice-President Academic and Associate Dean Education

S.D. Denburg/B.A., M.A., Ph.D.

Associate Dean (Nursing)

C. Tompkins/B.Sc.N., M.Ed., Ph.D., R.N.

Associate Dean (Rehabilitation Science)

Mary Law/B.Sc.OT, M.Sc., Ph.D., O.T. Reg (Ont)

For information concerning Health Sciences education programs and admission requirements, contact:

Office of the Registrar

McMaster University

Gilmour Hall, Room 108

Hamilton, Ontario, L8S 4L8

Telephone (905) 525-4600

OVERVIEW

The concept of Health Sciences Education is based on the view that health is a broad subject encompassing both the problems of ill health and the impact of biology, environment and lifestyle on health. Each health professional has specific educational requirements, but by learning together in shared facilities there exists an opportunity to establish effective interprofessional working relationships.

The programs in the Faculty attempt to meet these goals through a variety of learning approaches. Emphasis is placed on problem-based, small group learning experiences. Other approaches to learning, including interdisciplinary educational experiences, are used where appropriate.

In July 1974, the School of Nursing and the School of Medicine were brought together to form the Faculty of Health Sciences. In 1989, the School of Occupational Therapy and Physiotherapy (School of Rehabilitation Science) was added and in 1993 the Midwifery Education Program was established. The Faculty offers the following undergraduate degree programs: Doctor of Medicine (MD), Bachelor of Science in Nursing (B.Sc.N.), Bachelor of Health Sciences (Honours) (B.H.Sc. Honours), Bachelor of Health Science (B.H.Sc.) in Midwifery. In addition to its undergraduate programs, the Faculty of Health Sciences also has responsibility for Residency Programs in Postgraduate Medical Education.

Through the School of Graduate Studies, the Faculty offers the Medical Sciences program leading to the M.Sc. and Ph.D. degrees in the following research areas: Cell Biology and Metabolism; Hemostasis, Thromboembolism, Atherosclerosis; Molecular Virology and Immunology; Neuroscience and Behavioural Sciences; Physiology/Pharmacology; and Reproductive Biology and Human Genetics. M.Sc. and Ph.D. programs in Clinical Health Sciences (Health Research Methodology) and Clinical Health Sciences (Nursing) are available through Medical Sciences. A professional master's degree program in Rehabilitation Science (Occupational Therapy and Physiotherapy) has been established and replaces the respective baccalaureate-level professional programs.

Interprofessional programs, postprofessional in nature and leading to an academic diploma, include: Child Life Studies; Clinical Behavioural Sciences; Environmental Health; and Occupational Health and Safety.

The Faculty of Health Sciences collaborates with the Division of Health Sciences at Mohawk College in educational programs for other health professions based at the College.

Research programs encompassing the broad spectrum of health have been established, including basic and applied research and various aspects of health-care delivery. The graduate programs in medical sciences are related to the various areas of health research.

The Health Sciences Centre at McMaster provides educational and research facilities for medicine, nursing and other health professions. It includes a teaching hospital (the McMaster Site of

Hamilton Health Sciences) with extensive ambulatory clinics for primary and specialized aspects of patient care. The building has been designed to bring into close proximity the programs for the various health professions and to integrate the facilities for education, research and patient care in the Faculty of Health Sciences.

In addition to the Health Sciences Centre, education, research and clinical programs are based at other Hamilton Health Sciences sites (Chedoke, General, Henderson), St. Joseph's Centre for Mountain Health Services, St. Joseph's Hospital, St. Peter's Hospital, Hamilton Regional Cancer Centre and the Health Sciences Education Centre, Mohawk College. Extensive use is made of a variety of community agencies. A satellite program has been developed with institutions in Northwestern Ontario. In accordance with the plan to coordinate the development of specialized health services among the Hamilton and District hospitals, the Postgraduate Education programs in medicine have been developed on a regional basis.

UNDERGRADUATE HEALTH PROFESSIONAL EDUCATION PROGRAMS

ADMISSION AND REGISTRATION

Application to any program in the Faculty of Health Sciences implies acceptance on the part of the applicant of the admission policies and procedures, and the methods by which applicants are chosen for the Health Sciences programs.

Registration in any program in the Faculty of Health Sciences implies acceptance on the part of the student of the objectives of that program and the methods by which progress toward the achievement of those objectives is evaluated.

The following describes the regulations governing admission and registration in the Health Sciences programs, and should be considered in conjunction with specific admission requirements described on the following pages for the Bachelor of Health Sciences (Honours) program (B.H.Sc. Honours), School of Medicine (MD), the Midwifery program (B.H.Sc.), the School of Nursing (B.Sc.N.).

The following application deadlines are strictly enforced. Deadline dates are for consideration of admission to a program in the following September.

Program	Deadline
• Bachelor of Health Sciences (Honours) (B.H.Sc. Honours).....	February 10
• Medicine (MD) Registration with OMSAS.....	September 15
Final application deadline.....	October 2
• Midwifery (B.H.Sc.).....	February 1
• Nursing (B.Sc.N.) Applicants directly from Ontario Secondary Schools.....	May 1
Diploma Registered Nurses.....	February 15
Post Diploma Practical Nurses.....	February 15
Nurse Practitioner Certificate.....	March 1
Applicants with Other Qualifications.....	February 15
Transfers from other degree Nursing programs	
• McMaster Site.....	June 30
• Mohawk and Conestoga Site.....	May 15
• Child Life Studies Diploma Program.....	March 1
• Diploma Program in Clinical Behavioural Sciences.....	August 1

The University reserves the right to change the admission requirements at any time without notice.

As places in the degree programs of the Faculty of Health Sciences are limited, admission is by selection, and possession of published minimum requirements does not guarantee admission. The University, therefore, reserves the right to grant admission to a limited number of students, and to refuse readmission to any student whose academic performance or general conduct has been unsatisfactory, or who has withdrawn from the program for a period in excess of one academic year.

An evaluation of Unsatisfactory in the School of Medicine signifies that the student has failed to meet these objectives and the University may require the student to withdraw from the School at any time.

The University reserves the right to require the withdrawal of a student should his or her conduct so warrant.

FALSIFICATION OF ADMISSION INFORMATION

An applicant supplying documentation or evidence which, at the time, or subsequently, is found to be falsified will be withdrawn from consideration. Any student admitted to the program having submitted false evidence will be withdrawn.

HEALTH REGULATIONS FOR ADMISSION

Before registration, students must file with the University evidence of a recent health examination, immunization screening and chest X-ray. More detailed medical information will be required upon acceptance into the program.

CLINICAL COURSE REQUIREMENTS

Where the performance of the student in clinical practice may jeopardize or endanger the welfare of the patient or the patient's family, the student may be removed from clinical experience any time during the academic year, until continuation in the course is reviewed.

INFORMATION AND ACADEMIC COUNSELLING

In certain programs, a faculty member is selected for each student in the September of entry to a degree program and provides each student with advice on evaluations, electives and other educational needs throughout the program. In the MD program, the advisor is also responsible for the collation of all evaluations and completion of the final transcript. Changes in advisors may be entertained as each student becomes acquainted with Faculty well enough to choose his or her own advisor. The academic advisory role for B.Sc.N. students is fulfilled by the Coordinator of Studies (Nursing). Students are also encouraged to consult individual faculty members regarding career planning.

TRANSPORTATION

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

LICENCE TO PRACTISE

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

POST-PROFESSIONAL HEALTH SCIENCES EDUCATION PROGRAMS

CHILD LIFE STUDIES FULL-TIME DIPLOMA PROGRAM

This is an eight-month applied professional program in the Faculty of Health Sciences, focusing on the development of knowledge and skills for individuals working with infants, children, youth and families in a health care setting and community based programs.

The learning objectives are:

1. to examine and review the growth and development of infants, children and youth, incorporating communication, play, expression of feelings, discovery and mastery of the environment, behaviour management, and parent/child relationships, and
2. to examine the child life role in assessment, intervention, prevention, advocacy and documentation in situations critical to the child's development, at times of acute and chronic illness and potentially traumatic or life-changing events.

Coursework involves small group learning, case studies and self-directed learning. Two eight-week internship placements in children's hospitals and community settings are a requirement of this program.

A related university degree with an overall B average is required, as well as relevant experience. Admission is based on the assessed strengths of each applicant as determined by the application package and interviews. Applications must be submitted by March 1 of each year for the study period beginning in September. Information outlining application requirements can be obtained by contacting the Child Life Studies program office at (905) 525-9140, ext. 22795 or by email at humphre@mcmaster.ca or at <http://www.fhs.mcmaster.ca/childlife>.

Part-time Multidisciplinary Distance Learning Courses

The Child Life Studies on-line educational program offers a variety of research-based courses related to supporting the psychosocial needs of children, youth and families through health

care experience and life changing events. For a current listing of courses, schedules and registration fees, visit the web site at <http://www.fhs.mcmaster.ca/childlife> or call (905) 525-9140, ext. 22795 or by email at dilalla@mcmaster.ca.

DIPLOMA PROGRAM IN CLINICAL BEHAVIOURAL SCIENCES

The Clinical Behavioural Sciences (CBS) Post-Baccalaureate Diploma and Selected Studies Program is offered through the Department of Psychiatry and Behavioural Neurosciences. This part-time program is designed to expand the knowledge and skills of allied health professionals by demonstrating a variety of approaches to understanding clinical problems. The aim is to enable health workers to more effectively carry out the mandate of their professional designations. Single courses vary from 10 to 20 weeks in length. A small group learning format is used.

Applicants must have basic professional qualifications (degree, certificate or mandate in current job); employment (possibly including volunteer positions); leave from employer to attend classes; and approval to use course-related material from the work setting (with signing of University legal waiver). Courses must be applicable to job responsibilities. Applications must be submitted to the CBS Office (Health Sciences Centre, Room 2E12) by August 1 for September courses and by December 1 for January and April courses. Personal interviews will be arranged if required. Upon completion of this diploma, students may be granted up to 24 units of credit towards an undergraduate degree at McMaster University, as determined by the Faculty to which they are applying. For additional information visit the CBS web site at <http://www.fhs.mcmaster.ca/cbs>. Applications can be obtained by contacting the CBS Office at (905) 525-9140 ext. 22706.

DIPLOMA PROGRAM IN ENVIRONMENTAL HEALTH

The diploma program is a distance education program offered through the McMaster Institute of Environment and Health. Students are required to register on 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 program is designed to provide new and/or upgraded skills and knowledge in the environmental health area to individuals with a degree or certification in a recognized field. It is suitable for public health unit professionals, physicians, community health nurses, environmental industrial professionals and those in labour and non-governmental organizations dealing with environmental health issues. Participants must be sufficiently motivated to undertake self-directed learning.

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

Applications, a Transcript Assessment Fee, original transcripts and a letter of interest must be submitted by the end of June for the study period starting in September. Applications can be obtained by contacting the McMaster Institute of Environment and Health at (905) 525-9140, ext. 27559. Applicants will be notified of admissions decisions in July. Further information is available on our web site (<http://www.mcmaster.ca/mieh>).

DIPLOMA PROGRAM IN OCCUPATIONAL HEALTH AND SAFETY

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

While special consideration will be given to those already in the occupational health field, interested individuals without such experience may also be considered. Physicians, nurses, hygienists, related professionals and others are invited to apply. A relevant university degree or equivalent is generally required.

Applications must be submitted by March 31 each year for the course beginning in September. Applications can be obtained by contacting the Program in Occupational Health and Environmental Medicine at (905) 525-9140, ext. 22333 or emailing Jean Bodnar at bodnarj@mcmaster.ca. Further information can be obtained on our web site (<http://www.mcmaster.ca/pohem>).

THE BACHELOR OF HEALTH SCIENCES (HONOURS) PROGRAM

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

Michael G. DeGröote Centre for Learning and Discovery, Room 3308
Ext. 22815

Assistant Dean, Bachelor of Health Sciences (Honours)

D.G. Harnish/B.Sc., M.Sc., Ph.D., 3M Teaching Fellow

Program Administrator

T. M. Basilio

Program Overview

This program, first offered in September 2000, is an innovative interdisciplinary program in which students take responsibility for their learning and in which there is recognition that both the knowledge and skill sets developed by students are integral parts of preparing for either further study or entry into the workforce. The principles of independent learning and an emphasis on both content and process are central to the provision of education within the Faculty of Health Sciences, and are reflected in this program. In addition, this program reflects the established tradition within the Faculty of understanding health from biological, behavioural and population-based perspectives. The program will draw on individuals from within the Faculty of Health Sciences and the larger university community to provide students with exposure to basic and applied researchers as well as health care practitioners, enabling students to learn about and experience the study of health from these various perspectives. The program will utilize both a small group, inquiry-based format as well as traditional lecture, lab, and tutorial based teaching formats to provide students with a solid knowledge base in health related sciences as well as the skills necessary to critically evaluate and synthesize health related information.

The program is designed to emphasize flexibility, recognizing that students may use this program to prepare for a variety of post graduate options including graduate work in medical sciences, professional schools and entry into the workforce. Beyond the first year students may select to focus on one perspective of health and develop relative expertise in this area, while other students may find that their needs are better met by pursuing a broader based program of study through their senior years.

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

Registration in Level I of the program is limited to approximately 160 students, with expansion to 180 students at Level II.

BIOMEDICAL SCIENCES SPECIALIZATION (EFFECTIVE 2008-2009)

The proposed specialization in Biomedical Sciences in the Bachelor of Health Sciences (Honours) program will provide students with the option of concentrating their studies in biomedical research. Drawing on faculty from the Departments of Biochemistry and Biomedical Sciences and Pathology and Molecular Medicine, the specialization is designed to build on the existing principles of excellence in the B.H.Sc. (Honours) program, by incorporating fundamental concepts and experimental techniques used in biomedical research. This course of study will emphasize the development of essential skills in communication, problem-solving, critical thinking, scientific reasoning and logic, experimental design, and working both independently and in a group. These transferable skills and fundamental principles in biomedical sciences will prepare students for a future in professional school, industry, research or graduate studies. Applicants will indicate their interest in this specialization on the B.H.Sc. (Honours) Supplementary Application when they apply to the program for Level I. Upon acceptance into the B.H.Sc. (Honours) program and the completion of Level I, students will apply to this specialization in March.

PROGRAM GOALS

The overall goal of the program is to educate students in such a way that upon graduation students have a firm foundation in the health sciences, and the skills necessary to learn and adapt in subsequent educational or occupational environments.

➤ KNOWLEDGE

To acquire a broad knowledge base that reflects the Faculty's commitment to studying health from biological, behavioural and population-based perspectives. This should include an understanding of the structure, function and behaviour of the human body, the environmental determinants of health and the ways that these factors interact to result in disease or illness.

➤ SKILLS

To acquire and apply the following skills as a student and member of society:

1. Self directed learning skills: The ability to identify gaps in one's own knowledge that prevent solving a problem, to formulate a plan that uses appropriate educational resources, and to obtain and synthesize the information needed to solve that problem.
2. Critical thinking skills: The ability to evaluate the merit of information obtained in various ways and to present information in a way that shows evidence of a critical, reflective approach to information and problems.
3. Synthesizing skills: The ability to understand that most problems can be analyzed from a number of perspectives, to identify these perspectives and to formulate solutions that are comprehensive and adequate reflections of various levels of analysis.
4. Communication skills: The ability to communicate an issue in oral and written form, both effectively and concisely.

➤ PERSONAL QUALITIES

Individuals who successfully complete this program should be prepared to accept responsibility for a life-long process of learning and personal and professional growth. They should respect the various approaches to the study of health, and the beliefs associated with these studies, and should be open to new ways of learning and understanding. They should understand that health care is a collaborative process and be capable of working collegially with others, while being prepared to contribute to the well-being of those around them.

Admission Procedures and Requirements

The following are the requirements for admission in the academic year 2006-2007. Please note that the admission policy may be reviewed annually and the admission requirements may be changed in future years. As places in this program are limited, the admission process is competitive. Possession of the minimum requirements does not guarantee admission to the program.

Application to the B.H.Sc. (Honours) Program of the Faculty of Health Sciences implies acceptance of the admission policies, procedures and methods by which applicants are chosen.

Admission Procedures

APPLICANTS FROM ONTARIO SECONDARY SCHOOLS

Applicants currently completing Grade 12 U or M courses apply through the:

Ontario Universities' Application Centre (OUAC)

170 Research Lane

Guelph, ON, N1G 5E2

<http://www.ouac.on.ca>

Application forms are available in secondary school guidance offices. Applications for all studies beginning in September must be received by OUAC no later than **February 9**. Secondary schools will forward mid-term and final transcripts directly to OUAC in support of applications.

Applicants are required to complete a mandatory Supplementary Application Form which must be received in the B.H.Sc. (Honours) Program Office by **February 9, 2007 (for September 2007 admission)**. Supplementary Applications are to be submitted electronically via the web at: <http://bhsc.mcmaster.ca>.

Applicants with Qualifications Equivalent to Ontario Secondary School

Applicants from other provinces should contact the Ontario Universities' Application Centre (OUAC) for an application package for admission consideration. Please refer to the OUAC address above. Applicants must also have their official transcripts forwarded to the Admissions Office, McMaster University, Gilmour Hall, Room 108, 1280 Main Street West, Hamilton, Ontario, L8S 4L8. Applicants are also required to complete a mandatory Supplementary Application Form which must be received in the B.H.Sc. (Honours) Program Office by **February 9, 2007 (for September 2007 admission)**. Supplementary Applications are to be submitted electronically via the web at: <http://bhsc.mcmaster.ca>.

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

Transfer Applicants

Transfer applicants from McMaster University are required to complete a Program Application for Current Level I Students on-line via MUGSI during early March to early April and a mandatory Supplementary Application by April 27th.

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 27th. Supplementary Applications are to be submitted electronically via the web at: <http://bhsc.mcmaster.ca>.

Biomedical Sciences Specialization

B.H.Sc. (Honours) students interested in this specialization will apply in early March (beginning March 2009) via MUGSI by completing the *Application for Current Level I Students*. Enrolment is limited to approximately 40 students entering in Level II.

Admission Requirements

Applicants from Ontario Secondary Schools

The selection method for Ontario Secondary School applicants is by academic qualifications and a mandatory Supplementary Application. The majority of Level I offers of admission are made in Round 2 (early May). A minimum of 90% is required for consideration. In Round 2, the following grade information will be used:

- Semester schools: all final Grade 12 U and/or M courses from first semester or prior years, and second semester mid-term grades for Grade 12 U and/or M courses.
- Non-semester schools: second term grades for full-year Grade 12 U and/or M courses.

Offers based on interim and/or mid-term grades will be conditional upon maintaining satisfactory performance on final grades.

Supplementary Applications are to be submitted electronically via the web at: <http://bhsc.mcmaster.ca>. A review of the mandatory Supplementary Application is a very important component of the admission selection process. Applicants who do not complete the Supplementary Application are not considered for admission.

REQUIREMENTS

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

- English U;
- Biology U;
- Chemistry U;
- Advanced Functions and Introductory Calculus U;
- One U or M course from Social Sciences (Geography, History, Law, Psychology, Sociology) or Humanities (Art, Drama, English, French, Music, other languages);
- One additional U or M course in any other subject area to total six courses.

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

Effective September 2008 Admission: Grade 12 Advanced Functions and Introductory Calculus U will be replaced with one of Grade 12 Mathematics of Data Management U, Advanced Functions U or Calculus and Vectors U. For those applicants who present with more than one of these Mathematics courses, the highest grade will be used to calculate the admission average.

Applicants with Qualifications Equivalent to Ontario Secondary School

Applicants from other provinces and countries must achieve the equivalent to the qualifications listed in the Grade 12 U or M course requirements in their secondary school graduation year.

Transfer Applicants

Transfer applicants will be admitted to the B.H.Sc. (Honours) Program from other programs at McMaster and from other post-secondary institutions. The process will be competitive and will be based on the student's academic qualifications and a Supplementary Application. Enrolment is limited. Students interested in being considered for admission to Level II of the B.H.Sc. (Honours) Program must have completed the equivalent of six units of university Level I Biology and six units of university Level I Chemistry. A cumulative average of at least 9.5 (minimum overall average of B+) will be required for admission.

Curriculum

B.H.Sc. (Honours)

{2276}

NOTE

While registration in HTH SCI 4X03 will occur in Level IV, students will begin studies in Level I. Detailed course information is available at <http://www.fhs.mcmaster.ca/bhsc/courses/regcourses.htm>.

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I courses

LEVEL I: 30 UNITS

- 6 units HTH SCI 1I06
- 6 units CHEM 1A03, 1AA3
- 6 units HTH SCI 1E06
- 3 units HTH SCI 1G03
- 9 units Electives
- 1 course SCIENCE 1A00

LEVEL II: 30 UNITS

- 3 units HTH SCI 2A03
- 3 units HTH SCI 2E03
- 3 units HTH SCI 2F03
- 3 units HTH SCI 2FF3
- 3 units HTH SCI 2G03
- 3 units HTH SCI 2J03
- 3 units HTH SCI 2K03
- 9 units Electives

LEVEL III: 30 UNITS

- 3 units HTH SCI 3E03
- 3 units HTH SCI 3G03
- 3 units HTH SCI 3GG3
- 3 units HTH SCI 3H03
- 18 units Electives

LEVEL IV: 30 UNITS

- 6-9 units HTH SCI 4A09 or 4B06
- 3 units HTH SCI 4X03 (See Note above.)
- 18-21 units Electives

B.H.Sc. (Honours) - Biomedical

{2277}

Sciences Specialization (Effective 2008-2009)

NOTE

While registration in HTH SCI 4X03 will occur in Level IV, students will begin studies in Level I. Detailed course information is available at <http://www.fhs.mcmaster.ca/bhsc/courses/regcourses.htm>.

REQUIREMENTS

121 units total (Levels I to IV), of which no more than 48 units may be Level I courses

LEVEL I: 30 UNITS

- 6 units HTH SCI 1I06
- 6 units CHEM 1A03, 1AA3
- 6 units HTH SCI 1E06
- 3 units HTH SCI 1G03
- 9 units Electives
- 1 course SCIENCE 1A00

LEVEL II: 31 UNITS

- 6 units CHEM 2OA3 and 2OB3; or CHEM 2BA3 and 2BB3
- 3 units HTH SCI 2A03
- 3 units HTH SCI 2G03
- 3 units HTH SCI 2K03
- 3 units HTH SCI 2N03
- 1 unit HTH SCI 2P01
- 6 units BIOCHEM 2B03, 2BB3
- 6 units Electives

LEVEL III: 30 UNITS

- 3 units HTH SCI 3E03
- 3 units HTH SCI 3G03
- 3 units HTH SCI 3V03
- 3 units HTH SCI 3W03
- 3 units HTH SCI 3X02
- 1 unit HTH SCI 3Z01
- 3 units from BIOCHEM 3A03, 3P03
- 3 units BIOCHEM 3D03
- 3 units BIOCHEM 4E03
- 6 units Electives

LEVEL IV: 30 UNITS

3 units	HTH SCI 4LL3
3 units	HTH SCI 4X03
6 units	from BIOCHEM 3H03, 3N03, 3Y03, 4H03, 4Q03, HTH SCI 4I13, 4J03, MOL BIOL 4H03
9 units	BIOCHEM 4F09
9 units	Electives

Bursaries

B.H.Sc. (Honours) students are eligible to apply for one of the following bursaries provided they are Canadian citizens and demonstrate financial need. Bursary application forms are available online through MUGSI via *My Financial Aid* menu and the quick link *Bursary Application Form* from mid-October to mid-November. Bursaries are intended to offset provincial financial assistance. The following bursaries have been generously donated to assist Bachelor of Health Sciences (Honours) students in financial need:

- Ruth Murray Memorial B.H.Sc. Bursary
- Loucks Family and Friends B.H.Sc. Bursary
- Ron and Gina Fraser Health Sciences Bursary

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

Academic Regulations**STUDENT ACADEMIC RESPONSIBILITY**

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

ACCESS TO COURSES

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases priority is given to students from particular programs or Faculties.

All students are encouraged to register as soon as MUGSI/SOLAR is available to them.

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

MINOR

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

CONTINUATION IN THE PROGRAM

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

If a CA of 3.5 to 5.4 is obtained, a student must transfer to another program for which he/she qualifies, or register in the B.H.Sc. (Honours) Program as an irregular student for one reviewing period. During that period a student cannot take B.H.Sc. (Honours) Program courses. At the end of that period a student may apply for readmission to the B.H.Sc. (Honours) Program.

If a CA of 3.0 to 3.4 is obtained, a student will be placed on academic probation. A student may continue in the program for one reviewing period as an irregular student but cannot take B.H.Sc. (Honours) Program courses. The purpose of this period is to prepare a student for a program outside the B.H.Sc. (Honours) Program. A student may be on academic probation only once.

If a CA of less than 3.0 is obtained, a student may not continue at the University.

WORKLOAD

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

LETTERS OF PERMISSION

Students enrolled in the B.H.Sc. (Honours) Program may apply to the Office of the Assistant Dean to take courses at another university on a Letter of Permission. Request for Letter of Permission Forms are available from the B.H.Sc. web site at <http://www.fhs.mcmaster.ca/bhsc/registered/documents/LetterofPermission.pdf>. Students must achieve a grade of at least C- to receive credit.

Students are responsible to forward the transcript from the other university directly to the Assistant Dean (MDCL-3308). If a grade of C- or better is attained, the transcript designation reads *COM* indicating complete, or *NC* indicating not complete if less than a C- grade is attained.

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

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

LEVEL OF REGISTRATION

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

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

A student who *may Not Continue at the University* may apply for reinstatement. Students seeking reinstatement should complete the *Reinstatement Request Form* available at the Office of the Registrar (Gilmour Hall, Room 108). The completed form and the \$50.00 fee must be submitted to the Office of the Registrar by **July 15** for September entry and **November 30** for January entry.

The form should explain the reasons for the student's inadequate performance, corroborated by two letters of support, and should also include relevant documentary evidence such as, for example, a physician's letter documenting an illness that may have impacted upon the student's prior academic performance. Reinstatement cases will be carefully screened and the evidence considered will include the student's academic performance before and following admission to McMaster, as well as the nature of the reasons cited in the letter, the letters of support and the accompanying documentation. **Reinstatement is not guaranteed.**

If students are reinstated to the University, their Cumulative Average will be re-set to 0.0 on zero units, although students may, at the discretion of the Faculty, retain credit for prior work. Following reinstatement, students will be on academic probation and must complete a minimum of 60 units of work after reinstatement to be eligible for graduation with Distinction or other recognition based on the Cumulative Average. If at any review after reinstatement the student's Cumulative Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.

REGISTRATION AND COURSE CHANGES

It is the responsibility of the student to ensure that the program of work undertaken meets the requirements for the degree. It is highly recommended that you review your personal degree audit via MUGSI on the working day following each time you drop or add courses and seek academic counselling from the B.H.Sc. (Honours) Program Office if you have any questions. Dates for final registration and course changes appear in the *Sessional Dates* section of this Calendar and are enforced.

SPRING COUNSELLING

Academic counselling is available throughout the year from the B.H.Sc. (Honours) Program Office. It is recommended that students make an appointment with an advisor from this office during the March/April counselling period. Level I students must indicate their intention to continue in the B.H.Sc. (Honours) Program at that time.

GRADUATION

A CA of 5.0 is required for graduation.

Students who successfully complete Level III of the program may request permission from the B.H.Sc. (Honours) Program Office to graduate with a three-level B.H.Sc. degree. Please refer to the *General Academic Regulations* section in this Calendar for additional information related to graduation.

THE MICHAEL G. DEGROOTE SCHOOL OF MEDICINE

WEB ADDRESS: <http://www.fhs.mcmaster.ca/mdprog/>

Michael G. DeGroote Centre for Learning and Discovery, Room 3101
Ext. 22141

Assistant Dean

A.J. Neville/B.Med.Biol., M.B.Ch.B., M.Ed., M.R.C.P., F.R.C.P., F.R.C.P.C.

Program Administrator

C. Oudshoorn.

The School of Medicine, established in 1965 and renamed the Michael G. DeGroote School of Medicine in 2004, offers major programs in undergraduate, postgraduate and graduate medical education. The clinical programs use not only the teaching hospital and ambulatory care and research facilities at the McMaster University Medical Centre division of Hamilton Health Sciences, but also the clinical teaching units at several of the major Hamilton hospitals and community health-care centres.

The Undergraduate Medical Program for the MD degree was initiated in 1969, graduating its first students in May 1972. In August 2008, 176 students will be admitted to the program.

New Waterloo-Wellington And Niagara Region Campuses

For the incoming class in 2007, 15 of the 162 positions were designated to the new campus in Waterloo-Wellington. For the incoming class in 2008, an additional 15 positions will be added in the Niagara Region. All applicants invited to the McMaster MMI (Multiple-Mini Interview) will be asked to rank their site choice (Hamilton, Waterloo-Wellington or Niagara Region) as 1, 2, 3 or no preference. Offers of admission to the medical school will be made from the master rank list irrespective of geographical preference. Subsequent to filling the 176 positions, registrants to the class will be offered a position based on their preference and geographical background. The offer of admission will be binding to a specific site.

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

Postgraduate training programs currently include: Anesthesia, Community Medicine, Critical Care, Emergency Medicine, Family Medicine, Internal Medicine (and subspecialties), Laboratory Medicine (and subspecialties), Obstetrics and Gynecology, Pediatrics (and subspecialties), Psychiatry, Radiology, and Surgery (and subspecialties).

More details on these postgraduate programs are available from the Postgraduate Medical Education Office.

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

The Undergraduate Medical Program {7880}

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

UNDERGRADUATE MD PROGRAM GOALS

The Undergraduate MD Program at McMaster University fosters a cooperative, supportive and respectful environment. The curriculum evolves continuously, responsive to the changing needs of Ontario society, nurturing the development of the following competencies at the time of graduation:

1. Medical expert - students will be able to apply scientific principles from human biology, behaviour and population health to the solution of health problems; they will have the ability to seek out new information and evaluate this information critically.
2. Communicator/Collaborator - students will demonstrate effective communication skills, sensitive to the needs of patients and cognizant of the roles of other members of the health care team in delivering patient care.
3. Advocate/Resource Manager - graduating students will be knowledgeable about the determinants of health and be proactive advocates for their individual patients and for healthy public policy within the context of the health care system.
4. Scholar/Learner - students will be self-directed lifelong learners, whose exposure at McMaster to role models in research and clinical care will encourage them to apply innovative approaches to solving health care problems.
5. Self-reflective Practitioner - graduating students will be expected to have developed an awareness of the influence of their attitudes, values and assumptions, how these affect their practice of medicine and the impact of the practice of medicine on themselves as individuals.

THE COMPASS CURRICULUM

In September 2005, the Undergraduate MD Program at McMaster University inaugurated a completely new curriculum called the COMPASS curriculum. The curriculum focuses on the mastery of fundamental concepts in medicine. It continues the McMaster tradition of problem-based learning but incorporates research findings from cognitive psychology. The curriculum is structured on the integration of critical concepts and each step of the curriculum is based on the growth of important concepts learned previously. Tutorial problems are selected to illustrate these concepts in a clinical setting and when students are exploring tutorial problems, which remain the focus of learning, they will be directed towards asking questions of what and why and how as much as what is the diagnosis. The curriculum is specifically designed with designated curricular time for deliberate practice applying the concepts that have been learned.

The pre-clerkship curriculum is divided into five Medical Foundations as shown in the curriculum outline. A novel feature of the curriculum is a horizontal Professional Competencies curriculum which runs throughout the three years of the program. As in the Foundations tutorial-based curriculum, students will work in small groups throughout the Professional Competencies curriculum which interdigitates and remains connected to the Foundations curriculum throughout the pre-clerkship and on into the clerkship. The core competencies of the Professional Competencies curriculum are effective communication, lifelong learning, self-awareness and personal growth, moral reasoning and ethical judgment, professionalism and role recognition, social and community context of health care, using science to guide practice, basic clinical skills and clinical reasoning. The Professional Competencies curriculum is also problem-based and includes inter-professional education and competency-based assessment using portfolios and learning plans. Some of the content areas addressed in this component of the curriculum are medical ethics, health economics, communications, etc.

LEARNING METHODS

To achieve the objectives of the Undergraduate Medical Program, students are introduced to patients within the first Foundation of the curriculum. In this way, students understand the relevance of what they are learning, maintain a high degree of motivation and begin to understand the importance of responsible professional attitudes.

The students are presented with a series of tutorial problems, requiring for their solution the understanding of underlying biological, population and behavioural principles, the appropriate collection of data and the critical appraisal of evidence. The faculty function as learning resources or guides. Learning by a process of inquiry is stressed.

The central focus of the program is the tutorial. The class is divided into small groups of seven students, each with a tutor. In the tutorial session students develop a series of learning objectives from each tutorial case and negotiate how they will approach their learning tasks. They then acquire the knowledge

and skills to meet the objectives of the Foundation in which they are working. They also learn to work as a team, helping and learning from peers. The study habits and sense of responsibility to self and others provide a basis for lifelong working and learning habits. Attendance is mandatory. In the Professional Competencies curriculum, students work in groups of 10, with two facilitators, one an MD, the other a non-MD.

Students admitted to the Undergraduate Medical Program have the responsibility and privilege of taking an active role in the planning and evaluation of the education program. Through representation on most policy-making and implementing committees, students can influence decisions in such areas as education, philosophy, faculty recruitment and curriculum design. It is expected that all students will participate in the continuing reappraisal and improvement of the program. Such participation is a hallmark of the Program.

STUDENT EVALUATION METHODS

The evaluation format has been designed to complement learning in the Undergraduate Medical Program. Evaluation methods have been developed to measure how well the student achieves the stated educational objectives in the various Foundations of the program. Continual evaluation of the student occurs within the tutorial setting with input from their peers, faculty preceptors and the tutor.

One objective evaluation exercise is required in each Foundation. At the completion of the Foundation, the tutor is responsible for the final summary statement of student learning progress. The tutor prepares a written summary of the student's performance in the tutorials and all associated activities during that Foundation. A copy of the evaluation summary is given to the student and to the student advisor while the original is kept in the student's evaluation file.

In addition to the tutorial-based evaluation, the accumulation of medical knowledge is assessed at regular intervals by means of the Personal Progress Index. This is in a multiple-choice format. Results are given to the students for self-evaluation and, in summary form, to the student advisor. The Personal Progress Index is in addition to, and does not replace, tutorial- and performance-based evaluation. The Program monitors student progress, and responds to students showing persistently low progress.

The acquisition of clinical and professional skills is evaluated by clinical skills preceptors in each Foundation and in the Clerkship, and additionally by Objective Structured Clinical Evaluations (OSCE's) which are run on an annual basis.

The Evaluation Committee has the responsibility of working with the Medical Program to assist with the development and implementation of valid and reliable evaluation methods to provide timely and helpful information to assist students and faculty in assessing progress and performance. Continuation in the Program is subject to satisfactory performance.

Curriculum Plan - COMPASS Curriculum

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC									
							Professional Competencies													
							Medical Foundations 1					↕								
							Intro to Determinants of Health													
							Cardio/Resp/Heme													
←-----Professional Competencies-----→																				
Medical Foundations 2	Medical Foundations 3	Medical Foundations 4	Elective		Vacation		Medical Foundations 5	Clerkship Intro	Clerkship	Vacation										
Homeostasis I Energy Balance (GI, Endo, Nutrition)	Homeostasis II Renal, Acid Base, BP Reproduction and Pregnancy Genetics I	Host Defense Neoplasia Genetics II					Movement Control Interactive and Communicating			↕										
←-----Professional Competencies-----→																				
Clerkship Two weeks vacation sometime in August																				
←-----Professional Competencies-----→																				
Professional Competencies																				
Clerkship		Concept Integration and Review																		



Orientation



Integration

MEDICAL FOUNDATION 1: The introductory component of this block of curriculum address patterns of determinants of health. The premise of this portion of the curriculum is that health care systems do not account for much of the systematic differences in health status within or among populations in advanced industrial economies and that health care students need to understand why people get sick in the first place and why people get well. Social epidemiologists see that causes of ill health in populations are different from causes of ill health in individuals.

After this introductory look at determinants of health, the curriculum moves on to address the first of the major concept themes in the curriculum, that of oxygen supply and exchange. In addressing problems that arise from inspired air right through to oxygen at the cellular level, students will learn much related to the respiratory, hematologic and cardiovascular systems.

MEDICAL FOUNDATION 2: This is the first of the two Foundations that addresses aspects of homeostasis, particularly that of energy balance, including issues related to the GI tract, endocrine system and nutrition.

MEDICAL FOUNDATION 3: This Foundation covers the second part of homeostasis, including the balance of acid and base, blood pressure and renal function and then goes on to address reproduction and pregnancy and a number of issues in genetics related to reproduction.

MEDICAL FOUNDATION 4: This Foundation addresses host defence, which includes immunology and infectious disease, and then moves on to look at neoplasia and the genetics of neoplasia.

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

An integration week between each of these Medical Foundations allows students to review on a continuous basis material learned up to each integration point. In this way, students can build their knowledge in a systematic way.

THE CLERKSHIP: While the Clerkship will be firmly linked to the pre-clerkship concept-based curriculum and will include continuing delivery of the Professional Competencies curriculum, this is now the time for students to participate in the direct care of patients as they learn about the management of health and illness. The tutorial cases are now real patients or populations. Students become self-sufficient in contemporary medicine, able to sense when today's medicine becomes out-of-date by adopting good habits of learning and assessment. The Clerkship program consists of rotations in medicine, geriatrics, orthopedic surgery, surgery, family medicine, anesthesia, psychiatry, pediatrics, obstetrics and gynecology and emergency medicine. There is also elective time, one half of which must be spent in clinical activity. The compulsory components of the Clerkship are carried out in teaching practices and in all the teaching hospitals in the Hamilton region; in community hospitals, including those in St. Catharines, Guelph, Brantford, Burlington, Niagara Falls and the Kitchener-Waterloo region. Students are expected to travel outside the Hamilton area for clerkship rotations. Students are responsible for their own transportation and associated costs in order to complete rotation requirements. It is anticipated that further rotations will be developed in rural, under-served and remote areas. The elective experience can be spent in various activities utilizing local, regional or distant resources.

ELECTIVES

Elective studies form an integral part of the 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 Program are:

1. **Block Electives:** These are blocks of curriculum time dedicated to full-time elective activities. Their satisfactory completion is a mandatory component of the Undergraduate Medical Program. Block Electives occur after Medical Foundation 4 and during the Clerkship. Clinical electives in the MD Program must be organized so that each student has an elective experience in a minimum of three different disciplines, each of which will take place for a minimum of two 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 program, but are used to explore or review a specific area of knowledge or practice in more detail. It is particularly important that the student's advisor be involved in all decisions concerning the selection and carrying out of horizontal electives.
3. **Enrichment Electives:** There are arrangements in place for a small number of students from each class to devote longer periods of time (from six to 12 months) to the pursuit of special academic experiences. The intent is to encourage students to explore special *frontier* areas of medicine and health care. Examples include: research training and experience; community health projects; international health opportunities. These experiences are often undertaken following Medical Foundation 5 or during the first half of Clerkship. Some experiences may potentially have partial funding (e.g. by student research fellowships).

MD/PH.D. PROGRAM

Senate approved the establishment of the MD/Ph.D. in Medical Sciences or Biochemistry, which will provide an MD/Ph.D. curriculum in an integrated format offered by the Faculty of Health Sciences and the School of Graduate Studies. This program will take advantage of the excellence within both of the Faculty and the School, allowing students to complete all the requirements of the MD curriculum and the Ph.D. curriculum in shorter completion times. It is anticipated that the program will accept up to three students annually to reach a steady capacity of approximately 10-15. Direct admission to the combined program is possible for students with a four-year Honours B.Sc. or B.H.Sc. (Honours) degree with a strong background in the biological sciences - Biochemistry, Biology, Microbiology, Molecular Biology. Applicants are required to apply through OMSAS for medical admission and separately to the Graduate Program/Department of interest (<http://www.mcmaster.ca/graduate>) and must be acceptable to both. Please note that the criteria for admission to the MD/Ph.D. Program are **more stringent** than those for admission to the Undergraduate Medical Program. Applicants who are not selected by the MD/Ph.D. Program are still eligible that same year for the Undergraduate Medical Program.

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 will be required to register with the College of Physicians and Surgeons of Ontario (CPSO). Students intending to practise outside Ontario are urged to consult the licensing body of that province regarding registration.

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 medical students obtain the post-MD program of their choice, and to help program directors obtain the students of their choice. It provides an orderly method for students to decide where to train and for program directors to decide which applicants they wish to enrol. For both students and directors, it removes the factors that generate unfair pressures and premature decisions.

Further information is available from Cathy Oudshoorn, MD Program Administrator, (905) 525-9140, ext. 22141.

BASIC CARDIAC LIFE SUPPORT TRAINING

All students are required to provide evidence of a current certificate in Basic Cardiac Life Support (Adult and Child CPR) by October 31st of each academic year. Certification normally expires after a one year period. Courses are readily available in most communities. Information will be sent to successful applicants prior to registration.

Specific questions can be directed to Cathy Oudshoorn, MD Program Administrator, (905) 525-9140, ext. 22141.

IMMUNIZATION

The Ontario Public Hospitals Act requires that all persons working in a hospital setting meet certain criteria regarding surveillance for infectious diseases. In order for the requirement of the legislation to be met, once students have been enrolled in the MD Program, they must annually complete Pre-Clinical Communicable Disease Screening through the Student Health Services. More information will be sent to successful applicants prior to registration. Specific questions can be directed to Cathy Oudshoorn, MD Program Administrator, (905) 525-9140, ext. 22141.

POLICE RECORDS CHECK

Through the course of their medical school program, all medical students will serve vulnerable populations. In an effort to protect these vulnerable people against potential risk of harm, the Ontario Faculties of Medicine and many clinical agencies require that all medical students provide confirmation of the absence of a criminal conviction or outstanding criminal charges. **An offer of admission is contingent upon provision of a Police Records Check, at the applicant's expense.** At the beginning of each subsequent academic year in the Undergraduate Medical Program, students will be required to sign a criminal record and disclosure form to confirm that there has been no change in the information contained in the Police Records Check.

The Police Records Check includes a Vulnerable Sector Screening and check of the Royal Canadian Mounted Police (RCMP), National Canadian Police Information Centre (CPIC) database for the following:

- All records of Criminal Code (Canada) convictions
- All pardoned sexual offences
- All records of convictions under the Controlled Drugs and Substances Act
- All records of convictions under the Narcotic Control Act
- All records of convictions under the Food and Drug Act
- Any undertakings to enter into a Surety to Keep the Peace
- Any Restraining Orders issued under the Criminal Code (Canada) or the Family Act
- All outstanding warrants and charges

The Michael G. DeGroot School of Medicine will review the files of any applicants who have presented a *Not Clear* Police Records Check to determine what action, if any, will be taken.

Admission Policy for the Medical Program

The official admission policy and deadlines for the Undergraduate Medical Program for entry in late August 2008 shall be as published in the 2008 Ontario Medical School Information Booklet. This booklet is available through:

Ontario Medical School Application Service (OMSAS)

170 Research Lane

Guelph, Ontario, N1G 5E2

(519) 823-1940

<http://www.ouac.on.ca/omsas/>

email: omsas@ouac.on.ca

Please note that the admission policy is reviewed annually, and the admission requirements from the previous year may not apply. Because of the nature of the selection procedures, deadlines are strictly enforced. All relevant documentation must be provided by the specified deadlines. Applicants must follow the instructions precisely. All applicants should be aware that the Admissions Office is committed to the protection of personal information. Use of personal information is strictly limited to the appropriate handling of applications, record-keeping for those admitted to the program, and research intended to further the efficacy of Medical Education Program procedures. **The University reserves the right to change the admission requirements at any time without notice.**

ADMISSION AND REGISTRATION

Registration in the Undergraduate Medical Program implies acceptance by the student of the objectives of the program, and the methods which evaluate progress toward the achievement of those objectives. The following describes the regulations governing admission and registration in the Undergraduate Medical Program. Candidates applying for entry in 2008 must register their intention to apply with the Ontario Medical School Application Service (OMSAS) by September 15, 2007. The final application deadline is October 1, 2007. The deadline is **strictly enforced**.

ADMISSION POLICY AND PROCEDURE

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

Application to the medical program implies acceptance by the applicant of the admission policies and procedures, and the methods by which candidates are chosen for the program.

Applications received in the Fall of 2007 are for the academic year commencing late August 2008. Applicants who will not be ready or able to begin studies at that time may withdraw their applications without prejudice. Application fees cannot be refunded.

Registration on the OMSAS web site must be completed by September 15, 2007. Final applications must be submitted by October 1, 2007, 4:30 p.m. EDT. Several hundred applicants will be invited for interviews in Hamilton in March or April. From this group a class of 176 is selected.

All applicants are notified in writing, by McMaster University, of the results of their application. These letters are mailed to applicants on May 15, 2008.

FALSIFICATION OF ADMISSION INFORMATION

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

ACADEMIC ELIGIBILITY REQUIREMENTS

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

All applicants must fulfill the requirements described below in both a) and b).

a) By June 2008, applicants must have completed a minimum of three years of undergraduate work. Only degree credit courses taken at an accredited university will be considered. To satisfy the minimum requirements, academic credentials obtained from a Canadian University must be from an institution that is a full member of the Association of Universities and Colleges of Canada (AUCC) or the Council of Ontario Universities (COU). The applicant must be able to demonstrate a high level of academic achievement consistently throughout their undergraduate career.

A minimum of 15 full-courses, or 30 half-courses (three years) of Undergraduate university work from a recognized university is required. There is no requirement that applicants carry a full course load. A year is the full block of work specified for a year or level of the program as indicated on the university transcript and in the appropriate university calendar. If requested, applicants must provide evidence that this requirement has been met by June 30th of the year of entry. Any discrepancy in interpretation of full block of work will be settled using the OMSAS definition.

An applicant who has completed a diploma at a CEGEP must have completed by June 2008, at least two additional full academic years of degree credit work at an accredited university.

Applicants who have completed the requirements for a baccalaureate degree in less than three years by October 1, 2007 are also eligible.

b) By October 1, 2007, applicants must have achieved an overall simple average of at least a 3.0 on the OMSAS 4.0 scale. While an overall simple average of at least 3.0 on the OMSAS 4.0 scale meets the minimal criterion for consideration for admission, prospective applicants should be aware that given the rapidly rising level of competition for a limited number of positions, a significantly higher GPA would provide them with a more reasonable chance of admission. Due to changes from year to year in the level of competitiveness, an exact figure in this regard cannot be provided.

c) Marks on supplementary and summer courses will be included in the grade point average calculation.

d) Graduate experience of applicants will be considered in the admission process. Graduate work will not be considered unless it is complete and the degree has been conferred by the application deadline, October 1, 2007. Individual grades received for course work taken as part of a graduate degree will not be included in the calculation of the grade point average.

ABORIGINAL APPLICANTS

Applicants who wish to be considered under the Aboriginal (Indian, Inuit or Metis, as recognized in the Constitution Act, 1982) application process will also be required to provide a letter of recommendation from their First Nation, Band Council, Tribal Council, Treaty, community or organizational affiliation.

Aboriginal applicants are required to complete the Undergraduate MD Program application package as provided by the Ontario Medical School Application Service (OMSAS).

Applicants must meet the same minimum academic criteria for admission as set out for the general pool of candidates and have an overall GPA of at least 3.0 as calculated on the OMSAS 4.0 scale.

GEOGRAPHICAL CONSIDERATION

The geographical status of the applicant is determined from the Autobiographic Sketch. Applicants may be asked to provide evidence of geographical status. In selecting applicants for interview, the bona fide place of residence will be based upon: 1) the province of Ontario; or 2) the rest of Canada and other countries. To qualify for Ontario status, an applicant must be a Canadian citizen or permanent resident by October 1, 2007, and have resided for at least three years in the province of Ontario since the age of 14 by the date of possible entry into the program.

TRANSCRIPT REQUIREMENTS AND**TRANSCRIPT REQUEST FORMS (TRF)**

All transcripts from Ontario universities must be ordered by OMSAS via the TRF. It is required that applicants will request all other transcript materials prior to September 15, 2007 to allow adequate time for processing requests and for receipt at OMSAS by the prescribed deadline. If an applicant is registered at a post-secondary institution at the time of the application deadline and that registration is not reported on the transcript, the applicant must arrange to have the Registrar of the institution send a **Statement of Registration** to OMSAS by October 1, 2007. This statement must indicate the in-progress course name(s) and number(s). Evidence to show that applicants requested transcripts and Registrar statements in a timely fashion may be requested by McMaster University. Applicants should retain all receipts and correspondence related to their transcript request.

It is entirely the applicant's responsibility to ensure that all of the above are received at OMSAS by October 1, 2007. Failure by the applicant to meet these requirements will result in the disqualification of the application.

All transcripts must be submitted directly to OMSAS by the post-secondary institutions attended. McMaster requires that applicants provide transcripts of all courses/programs attended at any post-secondary institution. This includes community colleges, CEGEPs, junior colleges, pre-university programs, etc.

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

REGISTRAR STATEMENTS

Please note that the transcripts do not always report the fall/winter/summer 2007/2008 courses in which applicants are registered. In this case, applicants must arrange to have the Registrar of the institution that they are attending send a statement of registration and a list of courses to OMSAS by October 1, 2007. When undergraduate courses are in progress at the time of application and these are not reported on the transcript, applicants must submit a Registrar Statement by October 1, 2007. This is particularly important to establish that the applicant will have satisfied the minimum academic requirement by June 2008. A similar rule applies to graduate work in progress by October 1, 2007.

Graduate students enrolled in a graduate program at the time of application must arrange for their Supervisor, a member of their Supervisory Committee, or the Chair of the Department to provide a letter indicating they are aware the applicant is intending to apply to medical school. Applicants should arrange for this letter to be received at OMSAS by October 1, 2007.

CREDENTIALING OF NON-CANADIAN GRADES

Applicants, Canadian or non-Canadian, who have not met the minimum course number criterion utilizing their Canadian data and require inclusion of their international education data to meet the minimum course number criterion are required to have their foreign transcript assessed by World Education Services (WES). Credentialing assessment means converting foreign academic credentials into their Ontario educational equivalents. A course-by-course evaluation along with the calculation of an overall GPA is required. Applicants must have their transcripts sent directly from their university to WES and OMSAS and be able to prove (with dated letter and dated post office receipt) that an attempt was made to have the transcript issued by their university and sent to OMSAS by October 1, 2007. Those requiring WES assessment must also ensure that transcripts are received by WES in time for their assessment to reach OMSAS by October 1, 2007.

AUTOBIOGRAPHICAL SUBMISSION

Applicants must provide an Autobiographical Submission which is a description about their preparedness for medicine and suitability for the McMaster Undergraduate Medical Program.

The Autobiographical Submission Booklet is included in the on-line application provided by OMSAS.

Detailed instructions with regard to the length and format of responses to the Autobiographical Submission are provided on the OMSAS web site. Those instructions are considered to be part of the Admission Policy and Procedures for the McMaster Undergraduate Medical Program.

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

ENGLISH LANGUAGE PROFICIENCY

Each student granted admission to McMaster's Undergraduate Medical Program must be proficient in spoken and written English. All application materials must be submitted in English, including the Autobiographic Sketch, otherwise the application will not proceed further in the admissions process.

Applicants whose first language is not English must satisfy by October 1, 2007, at least one of the following conditions:

1. provide evidence that a score of at least 580 on the paper-based TOEFL or 237 on the computer-based test or 86 on the iBT with a minimum score of 20 in each of the four components, or the equivalent on other recognized tests has been achieved (McMaster University code is #0936); or
2. have attended an educational institution, where instruction was in English, for at least three years; or
3. have resided for at least four years in an English-speaking country.

INTERVIEWS

Several hundred applicants will be invited to Hamilton for an interview. Because the interviews involve many other people, applicants must attend on the date and time specified. Attendance at an in-person interview is mandatory in order to be considered for admission. Applicants are responsible for their own travel expenses.

The interview process entitled the Multiple Mini Interview (MMI), is primarily composed of a series of ten-minute encounters over a two-hour period. Due to the nature of the MMI, videoconference or telephone interviews are not possible.

SELECTION

All the information resulting from the process described above, as well as the Confidential Assessments from referees, may be reviewed and used in the final selection.

Applicants will be notified in writing by McMaster University of the results of their application. These letters are mailed to applicants on May 15, 2008.

Anyone accepting an offer of admission must provide, within two weeks of acceptance, a cheque in the amount of \$1,000 (Canadian), non-refundable, which will subsequently be applied towards tuition.

APPLICATION FOR DEFERRED REGISTRATION

Deferred registration may be granted only under exceptional circumstances. Deferred registration may be requested only by those candidates offered a place in the class on May 15, and who have accepted that offer. The request for deferral must be submitted within two weeks of the offer of admission.

SPECIAL APPLICANTS

The Special Applicant Pool is on hold this admission cycle.

INTERNATIONAL APPLICANT POOL

The International Applicant Pool is on hold this admissions cycle. Interested International applicants may still apply through the regular pool.

ADVANCED STANDING/TRANSFER

The structure of the McMaster Program requires that all students begin in Medical Foundation 1. There is no provision for advanced standing or transfer into the program.

UNSUCCESSFUL APPLICANTS

Application files, including transcripts, from one year are not held over to another year. If an unsuccessful applicant wishes to reapply, a new application package, including supporting documentation must be submitted, using the OMSAS Application, the OMSAS Information Booklet, and the McMaster Autobiographical Submission for the new admission selection cycle.

RETENTION OF DOCUMENTS

All documentation submitted in support of an application for admission becomes the property of the University and is not returnable. If an applicant is not accepted, or fails to enroll following acceptance, the identifiable documentation will be destroyed at the end of the admissions cycle in keeping with university policy.

Financial Information

Financial difficulties are among the most frequent problems experienced by students in undergraduate medical schools. At McMaster, these are intensified by the lack of opportunity for summer employment.

In this situation, it is incumbent on students admitted to the MD Program to clarify immediately their personal financial situation and to secure or identify sufficient support to meet their financial obligations over the subsequent three years. The Undergraduate MD Program cannot assume this responsibility.

In 2006-2007, the academic fees (tuition and student supplementary fees) for a student in the McMaster Undergraduate Medical Program were:

CANADIAN CITIZENS AND LANDED IMMIGRANTS

Year I	\$15,600.00
Year II	\$15,022.00
Year III	\$15,022.00

In addition, the cost of books and diagnostic equipment for a Year I student was approximately \$3,000. It is strongly recommended that students purchase the full complement of medical equipment necessary for clinical skills. Equipment lists and special prices will be offered to medical students within the first few months of medical school. Students are also responsible for their transportation costs related to clinical study.

Financial assistance is available to Ontario residents from the federal and provincial governments through the Ontario Student Assistance Program (OSAP). To be eligible a student must be a Canadian Citizen or permanent resident of Canada and fulfill certain requirements for residency in Ontario. Students who are legal residents of other provinces need to check with their respective provincial financial aid programs about eligibility for support prior to acceptance. In addition, the following sources of funding are available to undergraduate medical students:

BURSARIES

There is an extensive bursary program which has been developed by the Faculty of Health Sciences and the central University campus. Bursaries are awarded to students who are Canadian citizens and demonstrate financial need. All bursaries are distributed during the late fall of each year. Bursaries are intended to offset provincial financial assistance and cannot supplement the full cost of medical education.

The following list of bursaries is available to Undergraduate Medical Students who are Canadian citizens. The following bursaries have been generously donated to assist medical students in financial need:

- Adrachies (Archie) Yian Moughalian Memorial Bursary
- Altana Pharma Family Medicine Bursary
- Andrew Talalla Memorial Bursary
- Burlington Medical Society Bursary
- Cholowsky Family Multiple Sclerosis Bursary

- CIBC Medical Bursaries in Breast Cancer
- Daniel and Natalie Strub Bursary
- Daniel Giannini Bursary
- Dr. Leo Celini Bursary
- Dr. Leonard E. Levine Bursary
- Gail Henning Memorial Bursary
- J.W. Harry Butcher Estate Bursary
- MD Class of '80 Gyan Ahuja Bursary
- Medical Student Opportunity Trust Bursary
- Michael G. DeGroot School of Medicine Bursary
- Ontario Medical Association Student Bursary Fund
- Ragonetti Family Bursary
- Ripley Estate Bursaries
- Ron and Gina Fraser Health Sciences Bursary
- Ronald Pye Bursary
- Ruth Tomlinson Memorial Bursaries
- Schenkel Medical Assistance Fund
- Scotiabank Breast Cancer Bursary
- Scotiabank McMaster Medical Bursary
- Scotiabank Pediatric Medical Bursary
- William A. Vanderburgh Estate Bursary

There are many other bursaries provided through the central campus bursary program, which will be disbursed to students each year. Information about each award, criteria and amounts will be provided to all medical students each fall. For further information about bursaries, please contact Cathy Oudshoorn, (905) 525-9140, ext. 22141.

ACADEMIC AWARDS

The Undergraduate Medical Program has in the past indicated its preparedness to recognize students who distinguish themselves and the University by virtue of their scholarship and their contribution to the university community. At the same time, the School has indicated that the terms of reference for such awards should neither compromise the spirit of cooperative scholarship which characterizes its MD Program nor replace its priority of concern for financial assistance awards.

A small but growing number of estates and agencies have donated funds to the University and the Undergraduate Medical Program for purposes of recognizing scholastic merit among medical students. In order to meet the requirements of these awards within the spirit of cooperative scholarship, these funds are available to support individual students in their pursuit of specific elective projects or activities.

Students are required to submit an application through the MD Program Office, outlining the nature of their work and the need for funds. For further information, contact Cathy Oudshoorn, (905) 525-9140, ext. 22141.

MEDICAL OFFICER TRAINING PLAN

The Department of National Defence administers a program for medical students known as the Canadian Forces Medical Officer Training Plan. Under this plan, students may be subsidized (tuition, plus pay) throughout their undergraduate medical studies and residency. To qualify for enrolment a student must be acceptable without condition in a program in medicine in a Canadian university or in an accredited Residency Program.

Further information on this program and 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 55 Bay Street North. Telephone (905) 521-0928.

LOAN FUNDS

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

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

B.H.SC. MIDWIFERY PROGRAM {6501}

WEB ADDRESS: <http://www.fhs.mcmaster.ca/midwifery/>

Michael G. DeGroot Centre for Learning and Discovery, Room 3103
Ext. 26654

Assistant Dean

E. Hutton/B.N.Sc., M.Sc.N., Ph.D.

Program Administrator

C. Fernie

Program Overview

The Midwifery Education Program at McMaster University leads to a Bachelor of Health Sciences (B.H.Sc.) in Midwifery. The program reflects the philosophy of midwifery in Ontario. Midwifery is potentially one of the most important components of women's health care in Ontario. Midwives' expertise in the care of normal pregnancy and childbirth arises from their understanding of childbearing as a social, cultural and biological process and from their ability to competently exercise clinical skills and decision-making. Midwifery education provides the base for sound professional practice. The educational program is an integral part of the evolution of the profession of midwifery in Ontario and Canada. The program helps create future leaders and teachers. It assures practice and teaching as a continuum so that learning environments become available across Ontario. Midwives, as primary health care providers, should have well-developed interpersonal skills.

They must be competent in areas of health education, counselling and interprofessional collaboration. Applicants to the program will be assessed for their ability to exhibit and further develop these important personal/professional qualities. Midwives provide care and advice to women during pregnancy, labour and the postpartum period; conduct deliveries and provide care for newborn babies. The Midwifery Education Program is a collaborative venture shared by McMaster, Ryerson and Laurentian Universities.

Curriculum

The four year program which spans nine terms, includes courses from basic sciences, social sciences, health sciences, women's studies and electives, in addition to clinical courses. A variety of course formats include distance learning through teleconferencing and print-based self-study courses. Teaching methods include lecture format, small group tutorials, self-directed activities and practical learning experiences.

INTENSIVES

Intensives provide the opportunity for the students to group together for several days for workshops/clinical skills sessions. All intensives are held at McMaster University and generally last one week. In Level IV, the intensive session includes students from all three institutions, intensives are part of the curriculum and therefore, attendance is mandatory.

CLINICAL COURSES

Clinical courses consist of a clinical placement and concurrent problem-based weekly tutorials. Students are assigned to a midwifery practice for an extended period of time to ensure continuity of care to expectant mothers and supervision from a clinical preceptor. Throughout the program, students will be placed in more than one midwifery practice and will gain clinical experience in a hospital setting and with an obstetrician. Efforts are made to assist students in being assigned to the clinical practice of their choice, however, due to limited placements, students may have to relocate or travel for clinical placements. Travel and living expenses are the responsibility of the student.

REQUIREMENTS

133 units total (Levels I to IV)

LEVEL I: 31 UNITS

6 units	HTH SCI 1D06*
6 units	HTH SCI 1C06
6 units	WOMEN ST 1A03*, 1AA3*
4 units	HTH SCI 3C04 (Term 2)*
3 units	MIDWIF 1D03 (Term 1)
3 units	HTH SCI 1J03* (Term 1)
3 units	Electives from the Faculties of Health Sciences, Humanities, or Social Sciences (Term 2)*

LEVEL II: 30 UNITS

- 3 units HTH SCI 2M03 (Term 1)
- 15 units MIDWIF 2H15 (Term 2)
- 3 units MIDWIF 2F03 (Term 1)
- 3 units MIDWIF 2G03 (Term 1)
- 6 units Electives from the Faculties of Health Sciences, Humanities, Social Sciences (Term I)*

LEVEL III: 42 UNITS

- 15 units MIDWIF 3G15 (Term 1)
- 9 units MIDWIF 3A09 (Term 2)
- 3 units MIDWIF 3F03* (Term 2)
- 15 units MIDWIF 3H15 (Term 3)

LEVEL IV: 30 UNITS

- 15 units MIDWIF 4A15 (Term 1)
- 15 units MIDWIF 4B15 (Term 2)

*Transfer credit may be available.

Admission Procedures and Requirements

Admission into the Midwifery Education Program is reserved for candidates who meet all requirements and who satisfy the academic regulations of the university. It is recommended that applicants have completed at least one year of university studies prior to application. All certified transcripts from secondary and post secondary universities previously attended must be forwarded to the Office of the Registrar. The application deadline is February 1 each year. Applications received after February 1 will not be considered. Please note that required courses must be completed at the time of application (excluding current High School students). **All documents submitted with the application become the property of the university. Successful applications remain on file.**

All applicants must have completed the following course requirements in order to be considered for admission:

A full course credit in:

1. Science (Biology or Chemistry - both strongly recommended)
 2. English
 3. a Social Science (Anthropology, Family Studies, Geography, History, Law, Psychology, Sociology)
- 70% in each course is required.

It is recognized that applicants apply to the program with varying educational backgrounds. Applicants can fulfill the courses required from the following educational backgrounds:

Applicants Directly from Ontario Secondary Schools

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

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

Prior/Current College Diploma Studies

Applicants with Ontario College Studies or equivalent must have full courses that are equivalent to the Grade 12 U or M courses in the three required subjects as stated above. **In addition, a minimum of 70% must be obtained in each of the three required subject areas and a minimum overall average of 70% in college work must be obtained.** Applicants with CEGEP background should consult the *Ontario Secondary School Course Equivalents Chart* found in the *Admission Requirements* section of this Calendar.

Prior/Current University Students

Applicants with prior or current university studies, at the time of application must have Grade 12 U or M courses from high school or equivalent university courses in three of the required subject areas noted above. Students must have 70% in each of the three required subjects. In addition, the applicant's overall average from the **ten best most recent course work** must be a minimum of 70%.

Mature Students

Mature students must have completed the three required subjects as noted in the basic requirements, and have obtained a minimum grade of 70% in **each** course. Students who do not meet the basic academic requirements as listed below are advised to take Grade 12 U or M courses or introductory university level courses. *The two years absence from formal studies clause may be waived for those who take Grade 12 or U or M course upgrading.* The following University requirements for Mature Students also apply. A student must:

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

Prior Midwifery Education or Experience

For applicants with prior Midwifery Education or Experience, Ryerson University, through the division of Continuing Education, offers the International Midwifery Pre-Registration Program. The purpose of this program is to provide internationally educated midwives with assessment and education which will prepare them to register as midwives in Ontario.

Aboriginal Applicants

Applicants who wish to be considered under the Aboriginal (Indian, Inuit or Metis, as recognized in the Constitution Act, 1982) application process will also be required to provide a letter of recommendation from their First Nation, Band Council, Tribal Council, Treaty, community or organizational affiliation.

Aboriginal applicants will also be required to apply to the Ontario Universities Application Centre (<http://www.ouac.on.ca>) and complete a Midwifery on-line application form by February 1 of the year in which they are applying. All appropriate transcripts from secondary and post secondary education must be submitted to the Office of the Registrar by February 1.

Applicants must meet the same minimum academic criteria for admission as set out for the general pool of candidates.

Transfer Credit

Students with previous university education may be eligible for transfer credits for non-clinical courses in Levels I and II. Transfer credits will be determined on an individual basis. Please see *Credit in Courses by Special Assessment* in the *Admission Requirements* section of this Calendar.

Selection Procedure

The Midwifery Education Program has a limited number of placements and the admission process is very competitive. The admission requirements stated are minimum requirements. Preference will be given to applicants with the best qualifications. The actual standing required for admission in recent years has been an average in the low to mid 80's. The program has a two step selection procedure:

1. Assessment of academic eligibility.
2. Admission interview — 60 applicants will be invited to Hamilton for an interview. The interview process will consist of nine ten-minute interviews. Candidates must attend on the date and at the time specified.

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

Offers of admission will be made following the interview process.

Offers based on interim grades will be conditional upon maintaining satisfactory performance on final grades.

UNSUCCESSFUL APPLICANTS

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

APPLICATION FOR DEFERRED REGISTRATION

Deferred registrations are not normally granted in the Midwifery Education Program. Under **exceptional circumstances**, applications for deferral will be reviewed by the Admissions Committee for those candidates offered a place in the program. 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 an on-line application to the program must be received by the University no later than **February 1** of the year in which registration is expected. All certified transcripts from secondary and post secondary education previously attended must be forwarded to the Office of the Registrar and received by February 1. Applications received after February 1 will not be considered.

Financial Information

In 2006-2007 the tuition fees for a student in Level I of the Midwifery Education Program were \$4,530.89 for an eight month academic term. Supplementary fees are estimated at \$275.00 per year.

Financial assistance is available from the federal and provincial governments through the Ontario Student Assistance Program (OSAP). Students intending to apply for OSAP may begin their application process to OSAP once they are notified about receiving an interview. The final status of an application can be confirmed with OSAP at a later date.

Additional costs include books, supplies, and other learning resources estimated at \$500.00-\$1000.00.

Students should expect to cover their own travel and accommodation costs during the program. The program strongly suggests that students join both the College of Midwives Subscriber Status and the Association of Ontario Midwives as a student member.

Academic Regulations**STUDENT ACADEMIC RESPONSIBILITY**

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

ACCESS TO COURSES

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases priority is given to students from particular programs or Faculties. All students are encouraged to register as soon as MUGSI/SOLAR is available to them.

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

The Midwifery Education Program reserves the right, at any point during the term, to remove a student from a clinical placement or laboratory setting if the student exhibits unsafe clinical practice or behaviour that places clients or others at risk and/or violates the Midwifery Act of Ontario. Such removal will result in the student receiving an F grade and may result in dismissal from the Program.

CONTINUATION IN THE PROGRAM

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

GOOD STANDING

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

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

PROBATION

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

1. obtains a CA less than 6.0 in graded courses;
2. obtains a grade of less than C- in HTH SCI 1D06 or a grade of less than B- in MIDWIF 1D03 and 2G03;
3. obtains a grade of less than C- in more than one of HTH SCI 1C06, 1J03, 2M03, 3C04 and MIDWIF 2F03;
4. receives an F or a *Fail/Unsatisfactory* in any clinical course;
5. fails any one course.

If a student receives a CA of less than 6.0 (5.5 to 5.9), he/she may remain in the program, but will be placed on program probation for one reviewing period. A student may be on program probation only once. A student on probation at the completion of Level II, Fall term, must undertake remedial course work and remove the probationary status before proceeding to MIDWIF 2H15. If a student receives a CA of 3.5 - 5.4, he/she may transfer to another program for which he/she qualifies.

A student must obtain a minimum pass grade (D-) except in courses with a higher minimum grade requirement (see items 2. and 3. under *Good Standing* above) when a course is repeated and receive an overall CA of 6.0 at the completion of a probation period. Planned course work for any student on probation must be approved by the Academic Review Committee.

REQUIRED TO WITHDRAW

A student will be required to withdraw from the program if any of the following criteria is met. The student:

1. obtains a Cumulative Average (CA) of less than 6.0 at the end of a probation period;
2. fails two courses in an academic year;
3. fails any two clinical course at any time throughout the program;
4. fails the second attempt at a course or receives a grade in the second attempt below C- for any of HTH SCI 1C06, 1D06, 1J03, 2M03, 3C04, MIDWIF 2F03 or below B- for either of MIDWIF 1D03 or 2G03;
5. fails to complete program requirements for graduation within the maximum allowable time (five years);

DEANS' HONOUR LIST, GRADUATION WITH DISTINCTION, PROVOST'S HONOUR ROLL

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

For the Provost's Honour Roll, students will be assessed if they have a CA of 12.0 and have not received a failing, provisional or unsatisfactory grade in any course throughout the program.

GRADUATION REQUIREMENTS

A student is eligible for graduation when all of the following criteria are met. The student must:

1. complete all required courses, including electives, with a CA of at least 6.0 including a minimum grade of C- in HTH SCI 1D06 and a minimum grade of B- in MIDWIF 1D03 or 2G03;
2. complete HTH SCI 1C06, 1J03, 2M03, 3C04, MIDWIF 2F03 with a minimum grade of C- with the exception of a D+ or D in one of those courses;
3. complete all clinical courses with a Pass/Satisfactory grade;
4. complete all courses for the degree within five years.

The practice of midwifery is regulated by the College of Midwives under the Midwifery Act, 1991 and the Regulated Health Professions Act, 1991.

The Midwifery Education Program monitors and documents students' clinical experience in order that students meet minimum practice requirements to be eligible for registration to practice. Graduation from the Midwifery Education Program does not guarantee registration with the College of Midwives of Ontario. All applicants to the College must meet additional registration requirements. New graduates are required to work in an established practice for their first year of registration.

Regulatory requirements are subject to change from time to time.

THE SCHOOL OF NURSING

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

Health Sciences Centre, Room 2J36

Ext. 22694

Assistant Dean, Undergraduate Nursing Education

Janet Landeen/B.Sc.N., M.Ed., Ph.D., R.N.

Program Administrator

A. Cholewka/B.A.

Coordinator of Studies

O. Lunyk Child/B.Sc.N., M.Sc.N., R.N.

Student Advisors

E. Reeves (McMaster site)

M. Davis (Mohawk site)

J. Kehoe (Conestoga site)

In 1942, McMaster University began its first program in Nursing, a cooperative effort between the University and the Hamilton General Hospital. Since the establishment of McMaster University's School of Nursing in 1946, students have received a Bachelor of Science in Nursing degree upon graduation. The program has functioned completely under the supervision of the University, while enjoying the full cooperation of community hospitals and agencies in the operation of its clinical courses. In July 1974, the Schools of Nursing and Medicine became the Faculty of Health Sciences.

In 1982, the Post Diploma Stream of the B.Sc.N. Program was introduced. In 2005, the Post Diploma Registered Nurse Stream began. These categories of admission were created to provide Diploma Registered Nurses and Diploma Registered Practical Nurses with the opportunity to work towards a B.Sc.N. degree. In 2007, the Basic-Accelerated Stream was implemented to allow students with significant university preparation in the sciences to pursue baccalaureate nursing education in a shorter time frame.

McMaster University is one of ten Ontario universities collaborating with the Council of Ontario University Programs in Nursing to offer a Primary Health Care Nurse Practitioner Program. The program, which commenced in September 1995, enabled diploma-prepared Nursing students to obtain a B.Sc.N. degree and a Nurse Practitioner Certificate. The final intake for diploma-prepared nurses was September 2004. Those students who hold a Nursing Baccalaureate degree receive the Nurse Practitioner certificate upon completion of the program.

In 1994, the first Ph.D. candidates entered the Clinical Health Sciences (Nursing) graduate program which is offered by the School of Graduate Studies through the Faculty of Health Sciences. M.Sc. candidates entered in the fall term of 1995. All enquiries about the Nursing graduate program should be directed to the Graduate Programs Office, HSC-3N10, (905) 525-9140, ext. 22983.

Information Sessions for high school students are hosted by the Student Liaison Office during the school year. For more details about these sessions or to register for a visit, please call the Office of the Registrar at (905) 525-4600. Applicants not applying directly from high school who require an application package should call (905) 525-9140, ext. 22232.

The provincial legislation on entry to practice requires all new graduating nurses to have a baccalaureate degree in Nursing. In response, McMaster University, Mohawk College and Conestoga College have formed an educational consortium to offer the McMaster Nursing degree through the McMaster Mohawk Conestoga B.Sc.N. Program. Currently the Basic (D) and Registered Practical Nurse (E) Streams are offered at all sites. Students wishing to register in the B.Sc.N. Program at McMaster should pay particular attention to the information which immediately follows this introduction. Those students who wish to register in the B.Sc.N. Program at either Mohawk or Conestoga College should refer to the *Collaborative B.Sc.N. (D) Stream* references throughout the *School of Nursing* section of the Calendar. Students are also advised to contact the Office of the Registrar at either Mohawk or Conestoga College for additional information.

The B.Sc.N. Program

The B.Sc.N. Program promotes the development of nursing as a caring, client-centred, scientific and humanistic profession. With an emphasis on problem-based, small group, self-directed learning, the program provides a general baccalaureate education in nursing for the preparation of professional nurses who will practise in a variety of health-care settings. Central to our mission is the preparation of nurses who will work to enhance the quality of health of individuals, families, communities and society. In fulfilling its mission, the B.Sc.N. Program promotes skills in its graduates to prepare them for life-long, self-directed learning, critical thinking, advocacy and collective action.

As students progress in the B.Sc.N. Program, they will find an increasing emphasis on interpersonal and communication skills, independent learning, and leadership qualities. Applicants should evaluate their own potential for developing abilities to interact with others and to assume leadership roles. Learning is a process of inquiry, a skill to develop as a life-long activity in an environment conducive to openness and sharing among faculty and students. Emphasis on small group tutorials and self-directed learning promotes the development of self-evaluation skills and critical thinking abilities. Extensive multimedia, laboratory and library resources support a belief in the importance of independent study. Students apply concepts from Nursing and related disciplines to their experiences in classroom and clinical settings. (Opportunities exist for international and outpost clinical practice experiences.)

Evaluation by self, peers and faculty is part of an on-going assessment process of the achievement of clinical, course, and program objectives.

GOALS

Graduates of the McMaster University B.Sc.N. Program will be prepared to provide, facilitate and promote professional practice in a variety of health care contexts and with diverse clients (individual, family, group, communities, populations) who have stable and unstable outcomes and multi-factorial influences (internal and external) on their health status within an ethic of professional caring. Graduates will:

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

Admission Policy and Procedure

ADMISSION POLICY

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

Application to the B.Sc.N. Program in the Faculty of Health Sciences implies acceptance of admission policies, procedures and the methods by which applicants are chosen for the program.

There are five streams of study leading to the completion of the B.Sc.N. degree. The Basic (A) Stream and Collaborative B.Sc.N. (D) Stream require four years of study, and are available to those applying directly from an Ontario secondary school with Grade 12 U or M courses; to those who have qualifications equivalent to Grade 12 U or M courses; and to applicants with other qualifications who meet the admission requirements.

The Post Diploma (B) Stream is available to Diploma Registered Nurses only. Graduates of an approved diploma nursing program who are admitted to the B.Sc.N. Program are granted 42 units of advanced credit and may complete the program in five academic terms if taken on a full-time basis.

The Post Diploma (E) Stream is available to Diploma Prepared Registered Practical Nurses only. Graduates of an approved Diploma Practical Nurse Program who are admitted are granted 30 units of advanced credit. Students may complete the program in three academic years if taken on a full-time basis.

The Basic-Accelerated (F) Stream is open to applicants who have completed another university degree or have a substantial number of university degree credits. This program is available on a full-time basis and requires five terms of study taken over one calendar and one academic year.

The requirements and application deadlines vary depending on the applicant's background. An applicant supplying documentation or evidence which, at the time or subsequently, is found to be falsified will be withdrawn from consideration. Any student admitted to the program having submitted false documentation will be withdrawn.

Detailed medical information, including a record of completion of required immunizations, will be required upon acceptance into all Streams of the B.Sc.N. program and the Ontario Primary Healthcare Nurse Practitioner Certificate Program and annually thereafter. Evidence of CPR certification must also be presented annually: Basic Cardiac Life Support Certificate (BCLS) equivalent to the Heart and Stroke Foundation's Level C, Basic Rescuer (for Targeted Responder). Students are required to obtain an annual satisfactory Police Record Check.

The School of Nursing is committed to equality of opportunity. Disability is not grounds for exclusion from the School. Every attempt will be made to remove barriers and create accommodation provided any accommodation maintains the same academic and clinical standards for all students and does not require significant program change. Applicants should refer to the *School of Nursing Admissions Procedure and Guidelines for Applicants with Disability* available from the School of Nursing Admissions Office (905) 525-9140, ext. 22232 and consult the Centre for Student Development at (905) 525-9140, ext. 24711 or TTY (905) 528-4307.

ADMISSION PROCEDURE

Applicants from Ontario Secondary Schools (A) Stream

Applicants currently completing Grade 12 U or M courses apply through the Ontario Universities' Application Centre (OUAC). (See address below.) Application forms are available in secondary school guidance offices or on-line at <http://www.ouac.on.ca/101>. Applications for all studies beginning in September must be received by OUAC no later than **May 1**. Secondary schools will forward mid-term and final transcripts directly to OUAC in support of applications.

Applicants With Qualifications Equivalent to Ontario Secondary School (A) Stream

Applicants apply online to the Ontario Universities' Application Centre (OUAC) at <http://www.ouac.on.ca>. Applicants must also have official transcripts forwarded from their secondary school to the McMaster B.Sc.N. Program by **May 1**.

Return to:

Ontario Universities' Application Centre (OUAC)
170 Research Lane
Guelph, ON, N1G 5E2
<http://www.ouac.on.ca>

Applicants with Other Qualifications (A) and Post Diploma Applicants (B) and (E (McMaster Site)) Streams

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

Applications for all studies beginning in September must be received by **February 15**.

Ontario Universities' Application Centre (OUAC)
170 Research Lane
Guelph, ON, N1G 5E2
<http://www.ouac.on.ca>

Admissions Coordinator (Nursing)
McMaster University, HSC-2J34
1200 Main Street West
Hamilton, ON, L8N 3Z5

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

Applicants must contact the Ontario College Application Services (OCAS) for an application package. Applicants should also forward all official academic documentation, including all university transcripts if applicable, to the College they wish to attend.

Return to:

Ontario College Application Services (OCAS)
370 Speedvale Ave. West
P.O. Box 810
Guelph, ON N1H 6M4
<http://www.ocas.on.ca>

Applicants for Basic-Accelerated (F) Stream

Applicants apply online to the Ontario Universities' Application Centre (OUAC) at <http://www.ouac.on.ca>. The Supplementary Application must be downloaded from <http://www.fhs.mcmaster.ca/nursing/> or contact the Admissions Coordinator (Nursing) (See above.). Applications for all studies beginning in September must be received by **February 15**.

Admission Requirements

A student who plans to enter the Undergraduate Nursing Program may qualify under one of the categories described below.

I. BASIC (A) STREAM

Applicants Directly from Ontario Secondary Schools

Note: Normally to be considered in this category, applicants to the program must:

1. apply within two years of completion of the Grade 12 U or M course requirements and
2. not have attended any post secondary educational program during the two-year period.

The selection method for Ontario secondary school applicants is by academic qualifications. Early conditional offers of admission are made in late March or early April based on the following:

- a) six appropriate midterm/interim Grade 12 U or M course grades, or
 - b) at least three final Grade 12 U or M course grades plus enrolment in the appropriate three additional Grade 12 U or M courses.
- Offers based on interim grades will be conditional upon maintaining satisfactory performance on final grades.

REQUIREMENTS

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

2007-2008 ONLY:

1. English U;
2. One of Geometry and Discrete Mathematics U, Advanced Functions and Introductory Calculus U, or Mathematics of Data Management U;
3. Biology U;
4. Chemistry U;
5. Two additional Grade 12 U or M courses to total six.

EFFECTIVE 2008-2009:

1. English U;
2. One of Advanced Functions U, Calculus and Vectors U or Mathematics of Data Management U;
3. Biology U;
4. Chemistry U;
5. Two additional Grade 12 U or M courses to total six.

Applicants with Qualifications Equivalent to Ontario Secondary School

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

Applicants with Other Qualifications

For applicants not applying directly from Secondary School or without the necessary Grade 12 U or M or equivalents, selection is based on academic qualifications and a rating obtained on a questionnaire. The response to the questionnaire is assessed by teams normally representing the faculty, the students or alumni, and the community.

Applicants may be invited to a personal interview at McMaster. Applicants are responsible for their own travel expenses. Failure to attend the interview will result in cancellation of the application. The scores awarded by the assessors are final.

Applicants will be informed of the admission decision by mid-June. Where courses are in progress at the time of admission, the offer of admission will be conditional upon the applicant achieving a final Cumulative Average of B- in the required course work.

Applicants with a University Degree or with University Degree Credits

Applicants normally should:

1. achieve a Cumulative Average of at least B- in all university degree credit courses taken. A minimum of 12 units or equivalent are required. (These courses may be taken as a full-time or part-time student. University correspondence degree courses are acceptable.)
2. apply online to OUAC at <http://www.ouac.on.ca> using Form 105D and pay the required fees by February 15;
3. submit the completed Supplementary Application and four copies of the response to the questionnaire provided in the application package and all transcripts to McMaster by February 15.

Note: University degree credit courses completed prior to admission will be assessed for advanced credit by the Office of the Coordinator of Studies following admission to the program. Applicants with significant university science courses should refer to admission requirements for the Basic-Accelerated (F) Stream.

Applicants From a Pre Health Sciences Program

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

Applicants normally must:

1. complete a full pre health sciences program at any Ontario College of Applied Arts and Technology (CAAT) including at least two terms (two credits) of Biology, Chemistry, Mathematics and English. Applications will not be considered from applicants who possess one credit only in the required subjects;
2. achieve a cumulative average in the pre health sciences program that meets the minimum cut-off average of Ontario secondary school applicants to the program;
3. apply online to OUAC at <http://www.ouac.on.ca> using Form 105D and pay the required fees no later than February 15;
4. download the Supplementary Application package found at <http://www.fhs.mcmaster.ca/nursing/> or request a package from the Admissions Coordinator at (905) 525-9140 ext 22232;
5. submit the Supplementary Application, four copies of the response to the questionnaire as outlined on the Supplementary Application and all secondary and postsecondary education transcripts to McMaster by February 15.

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

Applicants From Other Degree Nursing Programs

Applicants who are enrolled in a Nursing degree program at a university or in a college/university consortium may apply to transfer to the McMaster site to earn a McMaster B.Sc.N. degree. Applicants will not be considered for studies above Level II. Availability of space and placement in the program will be determined by the level Coordinator in consultation with course planners and all potential applicants should contact the Coordinator of Studies to determine if there is space for transfer applicants.

Applicants must:

1. be currently enrolled in or have completed Level I of a B.Sc.N. Program with an overall Cumulative Average of at least B- (70%) and at least a B- average in nursing and science courses;
2. achieve a satisfactory score on a questionnaire comprised of two questions found on the Supplementary Application at <http://www.fhs.mcmaster.ca/nursing/education/undergrad/undergradadmissions.htm>.

Applications for transfer into the B.Sc.N. Program to commence studies in September must be received by the Ontario Universities Application Centre (OUAC) in Guelph no later than June 30.

Applicants must submit the following to the Admissions Coordinator by June 30 (See address above.):

1. official transcript for all university work taken;
2. four (4) copies of the response to the questionnaire found on the Supplementary Application at <http://www.fhs.mcmaster.ca/nursing/education/undergrad/undergradadmissions.htm>;
3. an official letter from the Dean/Director of the program in which the applicant is currently enrolled stating that the applicant is in good standing in that program;
4. course descriptions and outlines for all nursing and science courses for assessment of advanced credit.

II. POST DIPLOMA (B) STREAM

Selection is based on academic qualifications and the rating obtained on a questionnaire. The response to the questionnaire is assessed by teams normally representing the faculty, the students or alumni, and the community.

Applicants will be informed of the admission decision by mid-June. Applicants enrolled in diploma nursing programs at the time of application normally must be eligible to write College of Nurses of Ontario registration examinations no later than August of the year of application to the B.Sc.N. Program.

Applicants normally must:

1. possess a current College of Nurses of Ontario annual registration payment card or be eligible for reciprocity, or be eligible to write and subsequently pass the Registration examinations.
2. have an Ontario diploma in nursing or the equivalent with a minimum overall average of 2.7 (B-).
3. apply online at <http://www.ouac.on.ca> using Form 105D to OUAC and pay the required fees no later than February 15;
4. submit a completed original and three copies of the response to the questionnaire provided in the application package, a photocopy of the current College of Nurses of Ontario annual registration payment card and transcripts to McMaster by February 15.

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

Applicants From Other Degree Nursing Programs

Applicants enrolled in a Nursing degree program at another university who wish to apply to transfer to the McMaster (B) Stream should contact the Admissions Coordinator for (See address above.) for information.

III. COLLABORATIVE B.SC.N. PROGRAM (D) STREAM {MOHAWK AND CONESTOGA SITES}

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

Applicants Directly from Ontario Secondary Schools

Normally to be considered in this category, applicants to the program must:

1. apply within two years of completion of the Grade 12 U or M requirements and
2. not have attended any post secondary educational program during the two-year period.

REQUIREMENTS

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

2007-2008 ONLY:

1. English U;
2. One of Geometry and Discrete Mathematics U, Advanced Functions and Introductory Calculus U or Mathematics of Data Management U;
3. Biology U;
4. Chemistry U;
5. Two additional Grade 12 U or M courses to total six.

EFFECTIVE 2008-2009:

1. English U;
2. One of Advanced Functions U Calculus and Vectors U or Mathematics of Data Management U;
3. Biology U;
4. Chemistry U;
5. Two additional Grade 12 U or M courses to total six.

Applicants with Qualifications Equivalent to Ontario Secondary School

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

Applicants with Other Qualifications

For applicants not applying directly from secondary school or without the necessary Grade 12 U or M course equivalents, selection is based on academic qualifications. For information on how to qualify, applicants should contact the Office of the Registrar (Admissions), Gilmour Hall, Room 108, McMaster University, Hamilton, ON L8S 4L8.

Applicants With a University Degree or with University Degree Credits

Applicants should:

1. achieve a Cumulative Average of at least B- in all university degree credit courses taken. A minimum of 12 units or equivalent are required. (These courses may be taken as a full-time or part-time student. University correspondence degree courses are acceptable.) All university transcripts must be submitted to the College. Failure to do so will result in withdrawal of the offer of admission. University degree credit courses completed prior to admission will be assessed for advanced credit by the Chair, Nursing Program, at the site where application was made, following admission to the program.
2. apply to Ontario College Application Services (OCAS) along with the required fees by February 1. All applications must be received by OCAS on or before this date to be given equal consideration by the colleges. Please note that February 1 is not a deadline for submitting applications as OCAS will continue to process applications received after this date. You are encouraged, however, to submit your application as early as possible, especially in the case of oversubscribed programs where there are often enough qualified applications received by the equal consideration date (February 1) to fill the program.

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

Applicants from a Pre Health Sciences Program

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

Applicants normally must:

1. complete a full pre health sciences program at any Ontario College of Applied Arts and Technology (CAAT) including at least two terms (two credits) of Biology, Chemistry, Mathematics and English. Applications will not be considered from applicants who possess credit only in the required subjects;
2. achieve at least a 70% cumulative average in the pre health sciences program;

3. apply to Ontario College Application Services (OCAS) along with the required fees by February 1. All applications must be received by OCAS on or before this date to be given equal consideration by the colleges. Please note that February 1 is not a deadline for submitting applications as OCAS will continue to process applications received after this date. You are encouraged, however, to submit your application as early as possible, especially in the case of oversubscribed programs where there are often enough applications from qualified applicants received by the equal consideration date (February 1) to fill the program.

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

Applicants From Other Degree Nursing Programs

Applicants who are enrolled in a Nursing degree program at another university or in another college/university consortium may apply to transfer to the Mohawk or Conestoga site to earn a McMaster B.Sc.N. degree. Applicants will not be considered for studies above Level II. The Post Diploma B.Sc.N. is not available at the College sites. Availability of space and placement in the program will be determined by the level Coordinator in consultation with course planners.

All potential applicants should contact the appropriate site to determine if there is space for transfer applicants. For Mohawk, contact the Chair, B.Sc.N. Program; for Conestoga, contact the Chair, Nursing Program.

Applicants must:

1. be currently enrolled in or have completed Level I of a B.Sc.N. Program with an overall Cumulative Average of at least B- (70%) and at least a B- average in nursing and science courses.
2. achieve a satisfactory score on a questionnaire comprised of two questions found on the Supplementary Application at <http://www.fhs.mcmaster.ca/nursing/education/undergrad/undergradadmissions.htm>.

Note: Applicants do not complete the Supplementary Application form.

Applications for transfer into the B.Sc.N. Program to commence studies in September must be received by the Ontario Colleges Application Service (OCAS) in Guelph no later than May 15.

Applicants must submit the following to the Registrar's Office at the appropriate College by May 15:

1. official transcripts of all university work taken.
2. four (4) copies of the response to the questionnaire found on the Supplementary Application at <http://www.fhs.mcmaster.ca/nursing/education/undergrad/undergradadmissions.htm>.
3. an official letter from the Dean/Director of the program in which the applicant is currently enrolled stating that the applicant is in good standing in that program.
4. course descriptions and outlines for all nursing and science courses for assessment of advanced credit.

IV. POST DIPLOMA PRACTICAL NURSE (E) STREAM (McMASTER)

Selection is based on academic qualifications and the rating on a questionnaire. The response to the questionnaire is assessed by teams normally representing the faculty, the students or alumni and the community.

Applicants will be informed of the admission decision by mid June. Applicants enrolled in a diploma practical nurse program at the time of application normally must be eligible to write the College of Nurses of Ontario (CNO) practical nurse registration examinations no later than August of the year of application to the B.Sc.N. program.

Applicants normally must:

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

Note: Potential applicants who possess a certificate in practical nursing should seek upgrading to diploma practical nurse at a College of Applied Arts and Technology or apply to a basic B.Sc.N. program (see admission criteria for Streams A and D);

3. complete Form 105D on-line at <http://www.ouac.on.ca> and pay the required fees no later than February 15;
4. submit the Supplementary Application form found at <http://www.fhs.mcmaster.ca/nursing/> or request it from the Admissions Coordinator at (905) 525-9140 ext 22232;
5. submit four copies of the response to the questionnaire as outlined in the Supplementary Application package, a photocopy of the current CNO annual registration payment card and transcripts to McMaster by February 15.

**DIPLOMA REGISTERED PRACTICAL NURSE (R.P.N.)
TO B.Sc.N. PROGRAM (E) STREAM
(MOHAWK AND CONESTOGA SITES)**

The program of study for Diploma Registered Practical Nurses Stream (E) prepares students for practice as Registered Nurses. Stream (E) students enter at Level II. Level II Nursing courses are designed to assist in the transition of students to baccalaureate studies. The curriculum is planned for three academic years of full-time study or up to seven years of part-time study. Upon successful completion of this program, the graduate will be awarded the B.Sc.N. degree by McMaster University.

Enrolment in this program is limited. Possession of the minimum admission requirements does not guarantee admission to the program. Selection is based on academic qualifications. Applicants normally must:

1. possess a current College of Nurses of Ontario (CNO) annual registration payment card or be eligible to write and subsequently pass the Practical Nurse Registration Examinations;
2. have a diploma in practical nursing (two year program) from an Ontario College of Applied Arts and Technology or equivalent with a minimum overall average of 70% or higher.
3. apply to the Ontario College Application Services (OCAS) along with the required fees by February 1. All applications must be received by OCAS on or before February 1 to be given equal consideration by the college.

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

V. BASIC-ACCELERATED (F) STREAM

The Basic-Accelerated (F) Stream is available to those applying from a university science program of studies. Students may complete the program of studies in five academic terms.

Normally to be considered in this category, applicants to the program must:

1. achieve a Cumulative Average of at least B- in all university degree credit courses taken.
2. complete a minimum of 54 units of university credit which include:
 - six units of Psychology
 - six units of Human Physiology or six units of Anatomy and Physiology
 - six units of Biochemistry (preferred) or six units of Chemistry and*
 - three units of Statistics (recommended but not required).
3. apply online at <http://www.ouac.on.ca> using Form 105D to OUAC and pay the required fees no later than February 15;
4. submit the completed Supplementary Application and four copies of the response to the questionnaire provided in the application package and all transcripts to McMaster by February 15.

PART-TIME STUDENTS

It is possible to complete the B.Sc.N. Program on a part-time basis. University and program regulations governing full-time undergraduate students will govern part-time students although there are additional guidelines for part-time study.

As enrolment is limited, places reserved for part-time students at each level will be restricted. Normally, nursing courses are available only during the day. Electives may be taken either in the day or evening. Counselling sessions will be available for part-time students after admission.

UNSUCCESSFUL APPLICANTS ((A), (B) AND (E) STREAMS)

Applications are not held over from one year to another. An unsuccessful applicant may reapply to the B.Sc.N. Program by submitting a new application, including supporting documentation.

APPLICATION FOR DEFERRED REGISTRATION

Deferred registration is granted only under exceptional circumstances to those candidates who have been admitted and have accepted the offer. Registration may be deferred for one year only. The request for deferral, outlining the reasons for the request, must be postmarked no later than July 31 of the year for which deferral is requested.

Curriculum for the B.Sc.N. Program

BASIC (A) STREAM

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The Faculty has planned the curriculum so that the study of nursing, the physiological, psychological and social sciences, and the humanities are interrelated and span the entire program. In Level I, the amount of nursing experience is relatively small; the major proportion of study is in the behavioural and natural sciences. The nursing component increases progressively through Levels II, III, and IV, as the study of natural sciences is completed. Normally, because of timetable constraints, courses must be taken in the level indicated in the curriculum.

ELECTIVES

Thirty units of electives are to be selected from disciplines of the student's choice, of which a minimum of 12 units are to be chosen from courses designated as Level II or above. Normally a maximum of nine units of electives may be selected from Nursing and Health Sciences elective courses. For some courses, the amount of duplication of required content will preclude their being used for elective credit in the B.Sc.N. Program.

Basic (A) Stream students are eligible to enrol in the following COLLAB elective courses: COLLAB 2F03 (Mohawk site) and COLLAB 2K03 (Conestoga site). Please see COLLAB courses in the *Course Listings* section of this Calendar under *Nursing Consortium (D) Stream* for more information.

REQUIREMENTS

LEVEL I: 32 UNITS

(UNITS GRADED: 32)

- 12 units HTH SCI 1AA3, 1BB3, 1H06
- 8 units NURSING 1F04, 1G04
- 6 units PSYCH 1A03 and 1AA3
- 6 units Electives
- 1 course NURSING 1A00

LEVEL II: 30 UNITS

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

- 6 units HTH SCI 2H03, 2HH3
- 15 units NURSING 2L03, 2M03, 2N03, 2P03, 2Q03
- 9 units Electives

LEVEL III: 32 UNITS

(UNITS GRADED: 24; UNITS PASS/FAIL: 8)

- 7 units HTH SCI 3B03, 3C04
- 16 units NURSING 3S03, 3T03, 3U02, 3X04, 3Y04
- 9 units Electives

LEVEL IV: 30 UNITS

(UNITS GRADED: 16; UNITS PASS/FAIL: 14)

- 2 units HTH SCI 4L02
- 22 units NURSING 4P04, 4Q04, 4J07, 4K07
- 6 units Electives

TOTAL UNITS: 124

REGISTRATION TO PRACTISE NURSING

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

DIPLOMA R.N. (B) STREAM

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The program of study for Diploma Registered Nurses is integrated with existing course offerings. The practice of nursing in diverse clinical settings will occur in all academic terms. The curriculum is designed to build on the existing knowledge and skills of the students, to prevent duplication of learning experiences and to prepare the students to function in an expanded role in community and institutional settings.

The curriculum is planned for five academic terms if taken on a full-time basis. If taken on a part-time basis, students are normally allowed six years after the first Nursing course to complete the program requirements.

ELECTIVES

Twenty-four units of electives are to be selected from disciplines of the student's choice, of which a minimum of 12 units are to be chosen from courses designated as Level II or above. For some courses, the amount of duplication of required content will preclude their being used for elective credit in the B.Sc.N. Program.

REQUIREMENTS**ADVANCED CREDIT: 42 UNITS****LEVEL III: 45 UNITS****(UNITS GRADED: 45)****TERMS 1 AND 2: 33 UNITS**

21 units HTH SCI 1CC7, 2C07, 3B03, 3C04
 12 units NURSING 3MM3, 3N03, 3T03, 3VV3
 1 course NURSING 1A00

SPRING TERM: 6 UNITS

6 units Electives

SUMMER TERM: 6 UNITS

6 units Electives

LEVEL IV: 34 UNITS**(UNITS GRADED: 22; UNITS PASS/FAIL: 12)****TERMS 1 AND 2: 34 UNITS**

2 units HTH SCI 4L02
 20 units NURSING 4P04, 4Q04, 4S06, 4T06
 12 units Electives

TOTAL UNITS: 121**REQUIREMENTS FOR STUDENTS WHO ENTERED PRIOR TO SEPTEMBER 2001**

All B.Sc.N (B) Stream students who entered the program prior to September 2001 have the option of continuing under the curriculum in effect when they entered as published in the Calendar of the year of entry. Alternatively, students may take advantage of the program requirements which took effect in September 2001. All students are strongly encouraged to contact the Coordinator of Studies for individual counselling to decide upon their program of study. Students require a minimum of 121 units to graduate.

COLLABORATIVE B.SC.N. (D) STREAM**CONESTOGA SITE**

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MOHAWK SITE

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The Faculty has planned the curriculum so that the study of nursing, the physiological, psychological and social sciences, and the humanities are interrelated and span the entire program. In Level I, the amount of nursing experience is relatively small; the major proportion of study is in the behavioural and natural sciences. The nursing component increases progressively through Levels II, III, and IV, as the study of natural sciences is completed. Normally, because of timetable constraints, courses must be taken in the level indicated in the curriculum.

ELECTIVES

The curriculum followed at both sites is equivalent to the curriculum for the B.Sc.N. Basic (A) Stream. However, the specified Psychology component and 15 units of elective courses are college-based courses which have been assigned the McMaster designation COLLAB and are open only to Nursing students at the Mohawk and Conestoga sites as specified in prerequisite statements. For course descriptions, please see COLLAB courses in the *Course Listings* section of this Calendar under *Nursing Consortium (D) Stream*. Mohawk and Conestoga students must take 15 units of COLLAB electives and 15 units of McMaster electives. Enrolment in some COLLAB courses may be limited.

Thirty units of electives are to be selected from disciplines of the student's choice, of which a minimum of 12 units are to be chosen from courses designated as Level II or above. Normally a maximum of nine units of electives may be selected from Nursing and Health Sciences elective courses. For some courses, the amount of duplication of required content will preclude their being used for elective credit in the B.Sc.N. Program.

REQUIREMENTS**LEVEL I: 32 UNITS****(UNITS GRADED: 32)**

12 units HTH SCI 1AA3, 1BB3, 1H06
 8 units NURSING 1F04, 1G04
 6 units COLLAB 1A03 and 1B03 (Mohawk Site) or COLLAB 1C03 and 1D03 (Conestoga Site)
 6 units Electives
 1 course NURSING 1A00

LEVEL II: 30 UNITS**(UNITS GRADED: 24; UNITS PASS/FAIL: 6)**

6 units HTH SCI 2H03, 2HH3
 15 units NURSING 2L03, 2M03, 2N03, 2P03, 2Q03
 9 units Electives

LEVEL III: 32 UNITS**(UNITS GRADED: 24; UNITS PASS/FAIL: 8)**

7 units HTH SCI 3B03, 3C04
 16 units NURSING 3S03, 3T03, 3U02, 3X04, 3Y04
 9 units Electives

LEVEL IV: 30 UNITS**(UNITS GRADED: 16; UNITS PASS/FAIL: 14)**

2 units HTH SCI 4L02
 22 units NURSING 4P04, 4Q04, 4J07, 4K07
 6 units Electives

TOTAL UNITS: 124**REGISTRATION TO PRACTISE NURSING**

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

DIPLOMA R.P.N. (E) STREAM**MCMASTER SITE**

{6388}

CONESTOGA SITE

{6383}

MOHAWK SITE

{6384}

The program of study for Diploma Registered Practical Nurses Stream (E) prepares students for practice as Registered Nurses. It builds on the knowledge and skills acquired in the diploma practical nurse program. Stream (E) students receive 30 units of advanced credit and enter at Level II. The two Level II nursing courses are designed to assist in the transition of students to baccalaureate studies. Students are integrated with both Basic and Post-Diploma students for most courses. The curriculum is planned for three academic years of full-time study or six years of part-time study.

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 Level II or above. For some courses the amount of duplication of required content will preclude use for elective credit in the B.Sc.N. program. Normally a maximum of nine units of Nursing and/or Health Sciences electives may be selected. College site nursing students will take 12 units of Collab electives and 12 units of McMaster electives.

REQUIREMENTS**ADVANCED CREDIT: 30 UNITS****LEVEL II: 31 UNITS****(UNITS GRADED: 31; UNITS PASS/FAIL: 0)**

14 units HTH SCI 1CC7, 2C07
 11 units NURSING 2A04, 2AA4, 3LL3
 6 units Electives
 1 course NURSING 1A00

LEVEL III: 32 UNITS**(UNITS GRADED: 25; UNITS PASS/FAIL: 7)**

7 units HTH SCI 3B03, 3C04
 13 units NURSING 2Q03, 3S03, 3T03, 3X04
 12 units Electives

LEVEL IV: 30 UNITS**(UNITS GRADED: 16; UNITS PASS/FAIL: 14)**

2 units HTH SCI 4L02
 22 units NURSING 4P04, 4Q04, 4J07, 4K07
 6 units Electives

TOTAL UNITS: 123

REGISTRATION TO PRACTISE NURSING

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

BASIC-ACCELERATED (F) STREAM {6382}

Students admitted to this stream will enter Level II of the B.Sc.N. Curriculum. Students are required to meet the residency requirement of the university as outlined in the *General Academic Regulations* section of this calendar.

REQUIREMENTS**ADVANCED CREDIT: 54 UNITS****UNITS TAKEN AT MCMASTER: 69****(UNITS GRADED: 41)****TERM 1: 15 UNITS**

6 units HTH SCI 2H03, 3B03
9 units NURSING 2I06, 3LL3
1 course NURSING 1A00

TERM 2: 15 UNITS

3 units HTH SCI 2HH3
12 units NURSING 2J04, 3S03, 3U02, 3VV3

SPRING/SUMMER TERM: 11 UNITS

11 units NURSING 3T03, 3X04, 3Y04

TERM 4: 15 UNITS

4 units HTH SCI 3C04
11 units NURSING 4J07, 4P04

TERM 5: 13 UNITS

2 units HTH SCI 4L02
11 units NURSING 4K07, 4Q04

TOTAL UNITS: 69**REGISTRATION TO PRACTISE NURSING**

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

Nurse Practitioner Certificate Program {6399}

The Ontario Primary Health Care Nurse Practitioner Certificate Program is a post degree program. Degree-prepared nurses require 12 months on a full-time basis or up to 36 months on a part-time basis to complete the Nurse Practitioner Certificate.

ADMISSION REQUIREMENTS

Selection is based on academic qualifications, professional experience, clinical references, and personal questionnaire scores. The response to the questionnaire is assessed by teams normally representing the faculty, the students or alumni and the community. The scores awarded by the assessors are final. Applicants will be informed of the admission decision by May.

Applicants must:

1. possess an Ontario baccalaureate degree in nursing or the equivalent with a minimum overall average of 70%. In cases where the minimum grade is not achieved, consideration may be given to university credit work completed following graduation which demonstrates equivalent academic ability;
2. hold a current College of Nurses of Ontario annual registration payment card;
3. have the equivalent of a minimum of two years full-time nursing practice within the past five years as evidenced by the employer-completed *Verification of Employment* form(s);
4. submit Form 105D to OUAQ along with the required fees by March 1;

5. submit a copy of the current College of Nurses annual registration payment card, the relevant professional experience form, verification of employment form(s), two clinical reference forms, a personal questionnaire response, official transcripts from a degree nursing program, copies of any additional professional registrations, memberships or certificates listed on the relevant professional experience form (i.e., RNAO, CPR) to McMaster by March 1.

Preference will be given for:

- Ontario residents
- work experience in nursing that has been continuous
- practical experience in one or more of the following areas: primary health care, ambulatory care, public health, community health, long term care, emergency care or outpost nursing
- hands-on practical experience

REQUIREMENTS**TERMS 1 AND 2: 26 UNITS****(UNITS GRADED: 26)**

26 units NURSPRAC 4AA5, 4AB5, 4P03, 4R03, 4TA5, 4TB5
1 course NURSING 1A00

SUMMER TERM: 13 UNITS**(UNITS GRADED: 3; UNITS PASS/FAIL: 10)**

13 units NURSPRAC 4C13

TOTAL UNITS: 39**EXTENDED CLASS OF REGISTRATION (RN/EC)**

Upon successful completion of the Ontario Primary Health Care Nurse Practitioner Certificate program, nurses registered with the College of Nurses of Ontario are eligible to write the extended class licensing examination through the College of Nurses of Ontario (CNO). Updates regarding this process are available to registered students on the Nurse Practitioner network

Nursing Leadership/**{6396}****Management Program**

The Nursing Leadership/Management Program, which was previously administered and is currently endorsed by the Canadian Nurses Association, was transferred to McMaster in 1993. The Program is offered to Registered Nurses located throughout Canada and internationally by means of distance education. It is also offered locally through individual self-directed study and tutorial.

The course work is designed to familiarize Registered Nurses with the theory and clinical application necessary to function effectively in a formal or informal leadership position. Content includes theory and techniques of management, leadership, organizational development and change, motivation, labour relations, legal implications, ethics, finance and the Canadian Health Care System.

Enrolment is by approval of the Coordinator. Further information may be obtained through the Program Office.

ACADEMIC REGULATIONS

Students in the Nursing Leadership/Management Program are subject to the *General Academic Regulations* of the University and the regulations of the B.Sc.N. Program.

CURRICULUM

6 units NURSING 4B06
1 unit NURSING 4C01
3 units NURSING 4I03
3 units NURSING 4FF3
3 units NURSING 4HH3

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

Academic Regulations**STUDENT ACADEMIC RESPONSIBILITY**

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

ACCESS TO COURSES

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases priority is given to students from particular programs or Faculties. All students are encouraged to register as soon as MUGSI/SOLAR is available to them.

In addition to meeting the General Academic Regulations of the University, students enrolled in the B.Sc.N. Program shall be subject to the following program regulations.

Registration in the B.Sc.N. Program implies acceptance on the part of the student of the objectives of that program and the methods by which progress toward the achievement of those objectives is evaluated.

Since the academic regulations are continually reviewed, the University reserves the right to change the regulations.

The University also reserves the right to cancel the academic privileges of a student at any time should the student's scholastic record or conduct warrant so doing. The B.Sc.N. Program reserves the right to remove a student from a clinical placement or laboratory setting at any point during the term if the student exhibits unsafe clinical practice or behaviour that places the patient or others at risk. Such removal will result in the student receiving a grade of F in the course and may result in dismissal from the program. The clinical activities associated with any clinical course must be successfully achieved for attainment of a passing grade in the course.

If a student drops a required course, written confirmation of return must be submitted to the Coordinator of Studies by the end of the drop and add period of the term prior to the anticipated date of reregistration in the course. Failure to notify the Coordinator of Studies may result in students being refused registration in the course based on resource limitations.

B.Sc.N. Program Academic Regulations

Basic (A), (D); Post Diploma (B), (E); and Basic-Accelerated (F) Streams

A student must:

1. achieve a Cumulative Average (CA) of at least 3.5;
2. achieve a grade of at least C- in the graded Nursing and required Health Sciences courses. A grade of D-, D or D+ is permissible in six units of Level I Health Sciences courses (Basic (A) (D) Streams) or one Level I Health Sciences course (Post Diploma (B) and (E) Streams) and in only one required Health Sciences course beyond Level I (all streams);
3. achieve a Pass designation in all clinical courses and the clinical component of NURSING 1F04 and 1G04; or NURSING 2A04 and 2AA4.

The following courses are designated clinical courses:

- Basic (A) and (D) Streams: NURSING 2L03, 2P03, 3X04, 3Y04, 4J07, 4K07
- Diploma Registered Nurses (B) Stream: NURSING 4S06, 4T06
- Registered Practical Nurses (E) Stream: NURSING 3X04, 4J07, 4K07
- Basic-Accelerated (F) Stream: NURSING 2J04, 3X04, 3Y04, 4J07, 4K07

All clinical courses above Level I are evaluated on a Pass/Fail basis. Areas of excellence in practice are noted in a detailed evaluation summary for each course.

(A course for which credit has not been given may be repeated only when approval is given by the Coordinator of Studies in consultation with the program Reviewing Committee.)

Post Diploma students must submit proof of current registration with the College of Nurses of Ontario before registration in Level IV of the Program is approved.

Nurse Practitioner Certificate Stream

A post-degree 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 4AA5, 4AB5, 4C13, 4TA5, 4TB5;
2. achieve a grade of B- in NURSPRAC 4P03, 4R03.

The following courses are designated clinical courses:

- NURSPRAC 4AA5, 4AB5, 4C13, 4TA5, 4TB5

CONTINUATION IN THE PROGRAM

Students are reviewed at the end of each term. To continue in the B.Sc.N. Program a student must obtain a CA of at least 3.5. A student whose CA is at least 3.0 may, at the discretion of the Coordinator of Studies in consultation with the program Reviewing Committee, proceed in the program and will be placed on program probation. A student may be placed on program probation only once during the program.

FAILURE

A student whose CA is less than 3.5, and who has not been granted program probation, may not continue in the program.

A student who fails to obtain a CA of 3.5 at the completion of the program probation may not continue in the program.

A student may normally repeat a level of work only once.

If a student fails to meet the minimum grade requirements in the required graded Nursing and required Health Sciences courses or a Pass designation in the clinical nursing courses, the student may, at the discretion of the Coordinator of Studies in consultation with the program Reviewing Committee, be allowed to repeat the course in which the minimum grade or Pass requirement has not been met. If a student fails to meet the minimum grade or Pass requirements after repeating the course, he or she may not continue in the program. A student may normally be allowed to repeat only one clinical and one non-clinical Nursing or Health Sciences course during the program.

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

Collaborative B.Sc.N. Program (D) Stream, R.P.N. to B.Sc.N. (E) Stream

Mohawk and Conestoga Sites

In addition to meeting the General Academic Regulations of the University, (please refer to the *General Academic Regulations* section of the Calendar) as well as the academic regulations specific to the School of Nursing, (please refer to *Academic Regulations* in the *School of Nursing* outline in this section of the Calendar), Mohawk and Conestoga B.Sc.N. students are also subject to the following regulations.

Program Approval: Selection of courses must be approved by the Chair of the Program at the site to which the student is admitted. Where the Calendar indicates that a faculty office, Associate Dean or Dean of Studies must be contacted, students should contact the Student Advisor at the appropriate site (Conestoga or Mohawk College). Before courses are selected, students are requested to determine the requirements for the program as outlined in the appropriate sections of this Calendar and to follow the instructions in the registration package.

Academic Standing: The College Reviewing Committees shall be comprised of members from the Colleges and the University; these Committees shall be chaired by the Coordinator of Studies (McMaster).

Required to Withdraw: Students must follow the withdrawal procedures for the respective College.

Letters of Permission: Letters of Permission must be approved by the Student Advisor at the site to which the student is admitted.

Academic Records: Student files shall be kept at the respective College site for reference and audit purposes.

Examinations: A Mohawk College, Conestoga College or McMaster student photo identification card is required at all examinations.

Travel Expenses: Students are responsible for arranging their own travel to and from learning settings external to the College and for covering any costs incurred. All students who register in the B.Sc.N. Program are expected to travel to any learning setting in Hamilton and surrounding area, including Halton, Peel, Brant, Haldimand-Norfolk Niagara and Wellington regions (Mohawk) and Kitchener-Waterloo and surrounding area, including Wellington, Brant and Halton regions (Conestoga).

Honours Biology and Pharmacology Program (Co-op)

This is a joint program between the Faculty of Health Sciences and the Faculty of Science (Department of Biology). The Pharmacology courses, which are run in a small group, problem-based format, are the responsibility of the Faculty of Health Sciences, drawn from the following departments: Biomedical Sciences, Medicine, Obstetrics and Gynecology, and Pathology.

Please see the *Faculty of Science, Department of Biology* section of this Calendar for admission requirements.

Medical Radiation Sciences Program

This Diploma-Degree program is offered jointly in a fully integrated format by McMaster University in partnership with Mohawk College of Applied Arts and Technology. Graduates are awarded the McMaster Bachelor of Medical Radiation Sciences degree as well as the Ontario College Advanced Diploma in Medical Radiation Sciences from Mohawk College.

Please see *Medical Physics and Applied Radiation Sciences* in the *Faculty of Science* section of this Calendar for admission requirements.

FACULTY OF HUMANITIES

WEB ADDRESS: <http://www.humanities.mcmaster.ca>

EMAIL ADDRESS: humanities@mcmaster.ca

Chester New Hall, Room 112

Ext. 27423

Dean of Humanities

S. Crosta/B.A., M.A., Ph.D.

Associate Dean of Humanities

Appointment Pending

Assistant Dean (Studies)

P.A. Kalnins/B.A.

Academic Advisors

D. Hayward

E. Herrell/B.Sc.

J. Osterman/B.A., B.Admin.

Career Services, Liaison and Study Abroad Coordinator

R. Muhic-Day/B.A., M.A.

The Faculty of Humanities is dedicated to cultivating a teaching and research community which reflects the highest standards of our disciplines and to undertaking bold ventures in new arenas of interdisciplinary inquiry. We strive for a balance between the best traditions of Humanities education and the new forms of knowledge emerging within and at intersections of disciplines. By learning from past and pressing issues facing our global world today, we promote advances in knowledge that make innovative, positive differences in diverse peoples' lives.

We provide a research-intensive educational environment in which students learn to value independent thinking and critical reflection on the nature of knowledge and how knowledge can be used to better the human condition. Our mission is to ensure that students acquire the analytical skills, historical depth, and appreciation of diverse cultures needed to assume leadership roles as responsible, ethical, and path breaking scholars, cultural workers, creative artists, or policy makers. We prepare our students to be thoughtful and engaged citizens in a global world.

The attainment of precise knowledge and fresh insights through lectures, class discussions, reflection, analysis and writing is the essence of study in the Faculty of Humanities' seven academic units. These are:

- School of the Arts
- Department of Classics
- Department of Communication Studies and Multimedia
- Department of English and Cultural Studies (English; Combined Honours in Cultural Studies and Critical Theory)
- Department of French
- Department of History
- Department of Linguistics and Languages (German, Hispanic Studies, Italian, Japanese, Polish, Russian)
- Department of Philosophy

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

- Combined Honours in Comparative Literature
- Honours Linguistics
- Honours Linguistic Cognitive Science
- Combined Honours in Peace Studies
- Combined Honours in Women's Studies
- Combined B.A. in Indigenous Studies
- Interdisciplinary Minor in Archaeology

PROGRAMS AND DEGREES

A. Level I Programs

HUMANITIES I

PROGRAM NOTES

1. A full-course load for Humanities I is 30 units. (The final digit in course numbers indicates the unit weight of a course. A 6-unit course is taught from September to April and a 3-unit course is a half-year course which may be taught either from September to December or January to April). Admission to a Level II program normally requires completion of six units of the relevant subject. In order to be considered for admission to a Level II program, students should consult the admission statements for the Level II programs when selecting their Level I courses.
2. The Faculty offers INQUIRY 1HU3, Inquiry in the Humanities. Humanities I students may choose this course as an elective. For a course description see *Inquiry* or *Humanities* in the *Course Listings* section of this Calendar.
3. Humanities I students are permitted to take up to 12 units of work in any single subject.
4. Students with a 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. **ART 1F03, 1FF3:** Entrance to any Honours Art Program requires the permission of the School of the Arts as these programs and courses have limited enrolments. Students who wish to enrol in ART 1F03 and 1FF3 must first complete a portfolio interview. Portfolio interviews occur between January and April each year for entrance in September of the same calendar year. Only those students who contact the Office of the School of the Arts before March 1 to book appointments for portfolio interviews will be guaranteed consideration for entrance into ART 1F03 and 1FF3. (Late applicants will only be interviewed if space availability permits.) The portfolio should contain a variety of works in different media that represent the applicant's creative abilities and interests. Aptitude in art, academic ability and demonstrated commitment to the discipline are considered in the selection process. In exceptional circumstances, where distance does not allow for an interview, portfolios may be submitted in the form of colour slides or photographs. Acceptance into ART 1F03 and 1FF3 will be verified with written confirmation from the School of the Arts. School of the Arts verification and a Letter of Acceptance from the University guarantee a space in the program as long as the student meets the minimum academic requirements as outlined under School of the Arts programs in this section of the calendar. **Applicants for this course should use the MHA OUAC code.**
7. Students wishing to take Music courses other than MUSIC 1A03 or 1AA3 must make arrangements with the School of the Arts for qualifying tests.

COURSE LIST 1

ART	1F03, 1FF3 (See Note 6 above.) Students in ART 1F03 and 1FF3 must also register in SCIENCE 1A00 when completing their registration.
ART HIST	1A03, 1AA3
CLASSICS	1A03, 1B03, 1M03
CMST	1A03
COMP LIT	1A03, 1AA3
CSCT	1B03, 1BB3
ENGLISH	1A03, 1AA3, 1B03, 1BB3, 1C06
FRENCH	1A06, 1K06, 1Z06
GREEK	1Z03, 1ZZ3
HISTORY	1A03, 1AA3, 1B03, 1BB3, 1M03
LATIN	1Z03, 1ZZ3
LINGUIST	1A03, 1AA3
MMEDIA	1A03, 1B03
MUSIC	1A03, 1AA3, 1CC3, 1D03, 1Y03, 1YY3 (See Note 7 above.)
PEACE ST	1A03, 1B03
PHILOS	1A03, 1B03, 1C03, 1D03, 1E03
THTR&FLM	1A03, 1B03
WOMEN ST	1A03, 1AA3

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COURSE LIST 2

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

GERMAN	1B03, 1BB3, 1Z06
HISPANIC	1A03, 1AA3, 1Z06, 2D03, 2DD3
INQUIRY	1HU3
ITALIAN	1A03, 1AA3, 1Z06, 1ZZ6
JAPANESE	1Z06
POLISH	2A03, 2AA3
RUSSIAN	2A03, 2AA3

REQUIREMENTS:

Students admitted to Humanities I {0700} must complete 30 units as follows:

12 units from Course List 1 (should include six units in each of two subjects listed above)

18 units Electives, which may include courses from Course Lists 1 and 2

MUSIC I

REQUIREMENTS

Students admitted to Music I {0370} must complete 33 units of work as follows:

21 units MUSIC 1CC3, 1D03, 1E06, 1G03, 1Y03, 1YY3

12 units Electives

B. Degree Programs

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

SINGLE HONOURS PROGRAM

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

COMBINED HONOURS PROGRAM

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

MINOR

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

This involves two years of study, beyond Level I, concentrated in the work of a single discipline.

The content and the requirements of single Honours, Combined Honours and other B.A. programs are found after the *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 *Course Listings*.

Not only are students from other Faculties able to take individual courses which have no prerequisites, but they are also able to transfer into any of the degree programs offered by the Faculty of Humanities. For the majority of programs in the Faculty, admission may be gained after the successful completion of any Level I program at the university, providing this includes the necessary program requisites as outlined in the admission statement for each Humanities program as described under Programs for the B.A., B.A. (Honours) and B.Mus. Degrees.

SECOND LANGUAGE PROFICIENCY

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

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

PART-TIME STUDY

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

ACADEMIC REGULATIONS

STUDENT ACADEMIC RESPONSIBILITY

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

ACCESS TO COURSES

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that they are able to complete program admission requirements, course requisites and courses required for their program of study in a timely manner. Unless otherwise specified, registration is on a first-come basis and in some cases priority is given to students from particular programs or Faculties. Where students are selecting from a list of required courses, access to a specific course is not guaranteed when there is another course available to meet a specific degree requirement. All students are encouraged to register as soon as MUGSI/SOLAR is available to them.

Students enrolled in Humanities programs, in addition to meeting the general Academic Regulations of the University, shall be subject to the following Faculty Regulations and Policies.

ADMISSION TO LEVEL II PROGRAMS

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

1. In February, a Majors Fair is held by departments in the Faculty of Humanities to discuss undergraduate programs, course offerings, career opportunities, etc.;
2. Mid-March to Mid-April, students seeking admission to a Level II program for the following Fall/Winter session, especially for a limited enrolment program such as Multimedia, must complete an application for admission to Level II through MUGSI. The application allows students to rank four program choices, and students will be notified of their eligibility for these choices on their grade reports in June.

TRANSFER TO THE FACULTY OF HUMANITIES

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

REINSTATEMENT TO THE FACULTY OF HUMANITIES

A student who may not continue at the University may apply for reinstatement; however, **reinstatement is not automatic or guaranteed.** Application for reinstatement must be made to the Office of the Registrar using the *Reinstatement Request Form* by the deadline for the session. See the *Sessional Dates* section of this Calendar.

The form should explain the reasons for the student's inadequate performance, 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.

If students are reinstated at the University, their Cumulative Average will be re-set to 0.0 on zero units, although students may (at Faculty discretion) retain credit for prior work. Following reinstatement, students will be on academic probation and must complete a minimum of 60 units of work after reinstatement to be eligible for Graduation with Distinction or other recognition based on the Cumulative Average.

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

COURSE SELECTION AND COURSE CHANGES

Students are responsible for ensuring that their course selection meets the requirements of the degree program in which they are registered, that prerequisites have been met, and that the appropriate permission(s) has been obtained, if required. They should review their personal degree audit each time they cancel or add courses, and contact an Academic Advisor in the Office of the Dean of the Faculty of Humanities if they have questions, **particularly if the degree audit shows unused courses.** Students should also be aware that changes to their course load may affect their fees and their eligibility for scholarships and financial aid such as OSAP.

OVERLOAD

Fall/Winter Session: Normally students may not register in more than 30 units during the Fall/Winter Session (33 units for students in Music I). A student with outstanding deferred examinations or incomplete term-work will not be permitted to overload in the following term. Students may take an overload up to six units under the following circumstances:

1. if a student has a Sessional Average of at least 7.0 in the immediately preceding review period; or
2. if the student is registered in the final Level of his/her program.

Spring/Summer Session: Students wishing to register in more than 12 units during the Spring/Summer Session or more than six units in either term of that Session, may do so only with the permission of the Office of the Associate Dean, Humanities.

SUMMER SCHOOL

Students who have been granted deferred examination or term-work privileges for courses taken in the preceding Winter session must secure the advance permission of the Office of the Dean of the Faculty of Humanities before registering in Spring/Summer courses. A decision will be made based upon the academic record of the student and the amount of work outstanding.

LETTER OF PERMISSION

Students in good academic standing, who wish to attend another university to take courses for credit toward a McMaster degree, must first request a Letter of Permission from the Office of the Dean of the Faculty of Humanities. A Letter of Permission is automatically cancelled if a student is placed on academic probation, program probation, or required to withdraw from the University. Students should take note of any conditions on the Letter of Permission that might apply, including the requirement of a grade of at least C- for transfer credit. Courses taken at another university cannot be used to satisfy the University's minimum residence requirement, will not be included in the calculation of the averages at McMaster, and therefore cannot be used to raise standing. The transcript designation will read *COM*, indicating *Complete*, when a C- or better is attained. It is the student's responsibility to ensure that an official transcript from the host university is sent to the Office of the Dean of the Faculty of Humanities to receive credit for work taken.

SUMMER IMMERSION PROGRAMS IN FRENCH

Students must obtain approval from the Office of the Dean of the Faculty of Humanities prior to participating in any language immersion program.

The government-sponsored summer language bursary program offers university students the opportunity to take French courses at a large number of accredited institutions. Students wishing to attend another university in order to participate in a language immersion program must: (a) petition the Office of the Dean of the Faculty of Humanities, (b) submit detailed course descriptions for assessment, and (c) obtain a Letter of Permission.

Students registered in a program in French may take a maximum of six units of credit in this manner as elective work only. Students not registered in a program in French may take up to 12 units of credit.

EXCHANGE PROGRAMS WITHIN CANADA

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

THIRD YEAR STUDY ELSEWHERE/HUMANITIES STUDY ABROAD

Humanities Study Abroad During Level III of Honours Programs

There are two ways to undertake international studies during Level III of an Honours program: (i) a Formal Exchange Program or (ii) a Third Year Study Elsewhere Program.

(i) Formal Exchange Program

During Level III of Honours Programs

Formal Exchange Programs are those in which McMaster University has an agreement with another institution involving a temporary exchange of students. Exchange students register and pay tuition fees and supplementary fees at McMaster. No tuition is paid at the other institution. See the *General Academic Regulations* section in this Calendar and the sections on *Eligibility* and *Application* below.

(ii) Third Year Study Elsewhere Honours Program

Qualified Level III students may undertake studies at a university abroad for one or two terms in the Third Year Study Elsewhere Program. This program is not available at universities with which McMaster University has a Formal Exchange Agreement.

Students register at McMaster but do not pay tuition to 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 for Study Abroad

Students registered in any Honours or Combined Honours program in the Faculty of Humanities may apply to replace all or part of the work of their third year with an acceptable program of study taken at a university or equivalent institution approved by the Faculty of Humanities.

To be eligible to take part in this program, students must have completed at least 60 units of work with a Cumulative Average of at least 7.0. Individual programs may have additional requirements. All requirements must be satisfied by the end of the Fall/Winter session (September-April) preceding the commencement of study elsewhere. Students taking part in this program do not have the option of graduating with a three-year B.A. degree on the basis of work completed in this program, but must return to McMaster University to complete their final 30 units of work.

Students may receive up to 30 units of credit for a full year of study at another institution. The awarding of all credit for work completed elsewhere may be confirmed only after departments have received transcripts and reviewed students' academic achievements following their return and after they have officially registered for Level IV. In certain cases, students may be recommended for the Deans' Honour List on the basis of work completed elsewhere.

Application for Study Abroad

Students interested in applying for this program should consult Rowena Muhic-Day, the Career Services, Liaison and Study Abroad Coordinator, Chester New Hall, Room 102/A and the students' department(s) or School approximately one year before planning to begin their study abroad (i.e. during the Fall term of the year in which they enter Level II). A plan for the completion of the academic program, approved by the program counsellor(s), must be submitted together with the application to the Coordinator no later than the end of January. However, application for some exchanges may be due as early as December.

PROGRAMS OFFERED BY THE FACULTY OF HUMANITIES

SCHOOL OF THE ARTS

WEB ADDRESS: <http://sota.humanities.mcmaster.ca>

The School of the Arts offers programs in:

- Art
- Art History
- Music
- Theatre & Film Studies

In addition, Minors are available in: Art History, Music and Theatre & Film Studies.

PROGRAMS IN ART AND ART HISTORY

NOTE

Students intending to do graduate work in the field of Art History should note that most universities offering such programs require undergraduate work in French, German or Italian for admission. These students are strongly encouraged to include one of these language courses as early as possible in their program.

Honours Arts & Science and Art History

(B.Arts.Sc.; See Arts & Science Program)

Honours Art

{2028}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Enrolment in Honours Art is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program and: (a) a Cumulative Average of at least 6.0, (b) an average of at least 7.0 in ART 1F03 and 1FF3 and (c) the successful completion of ART HIST 1A03 and 1AA3.

NOTES

1. Students in Honours Art must complete the following courses before registering in Level III or IV Art courses: ART 2A03, 2AA3, 2B03, 2BB3, 2C03, 2CC3, 2F03, 2FF3.
2. Students must achieve a minimum grade of B- in ART 3E06 before registering in ART 4E12.
3. Students wishing to obtain a Minor in Art History should note that six, and only six, units of Art History required in the Art program may be counted toward the Minor of 24 units.

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 45 units ART 2A03, 2AA3, 2B03, 2BB3, 2C03, 2CC3, 2F03, 2FF3, 3D03, 3E06, 4E12
- 9 units from ART 3F03, 3G03, 3H03, 3I03
- 6 units ART HIST 2D03, 3AA3
- 6 units Levels III and IV Art History
- 3 units Levels II, III or IV Art History
- 21 units Electives

Combined Honours in Art and Another Subject

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program and: (a) a Cumulative Average of at least 6.0, (b) an average of at least 7.0 in ART 1F03 and 1FF3 and (c) the successful completion of ART HIST 1A03 and 1AA3.

NOTES

1. Students in Combined Honours Art must complete ART 2A03, 2AA3, 2B03, 2BB3, 2C03, 2CC3, 2F03, 2FF3 before registering in Level III or IV Art courses.

2. Because ART HIST 2D03 is required in all Art History programs, students registered in the Combined Honours Art and Art History program will substitute three units elective for ART HIST 2D03.
3. Students must achieve a minimum of B- in ART 3E06 before registering in ART 4C06.

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 39 units ART 2A03, 2AA3, 2B03, 2BB3, 2C03, 2CC3, 2F03, 2FF3, 3D03, 3E06, 4C06
- 6 units ART HIST 2D03, 3AA3 (See Note 2 above.)
- 36 units Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
- 9 units Electives to total 120 units

Honours Art History

{2029}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in ART HIST 1A03 and 1AA3.

NOTES

1. Before choosing Level III courses, students should become familiar with the prerequisites for Level IV courses.
2. Upper-level students may wish to pursue an internship in an art museum or gallery by completing HUMAN 3W03 or 4W03 and should consult with the Art History Counsellor for advice.

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 18 units ART HIST 2A03, 2B03, 2C03, 2D03, 2I03, 2Z03
- 9 units Level III Art History
- 12 units Levels III and IV Art History
- 6 units from ART HIST 4AA3, 4BB3, 4C03, 4E03, 4H03, 4V03, 4X03
- 45 units Electives

Combined Honours in Art History and Another Subject

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in ART HIST 1A03 and 1AA3.

NOTES

1. Students combining Honours Art History with Honours Art must not register in ART HIST 3P03. These students will be required to substitute three units of Level III or IV Art History in lieu of ART HIST 3P03.
2. Before choosing Level III courses, students should become familiar with the prerequisites for Level IV courses.

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 18 units ART HIST 2A03, 2B03, 2C03, 2D03, 2I03, 2Z03
- 6 units Level III Art History
- 3 units from ART HIST 4AA3, 4BB3, 4C03, 4E03, 4H03, 4V03, 4X03
- 9 units Levels III and IV Art History
- 36 units Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
- 18 units Electives to total 120 units

B.A. in Art History

{1029}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 3.5 including an average of at least 4.0 in ART HIST 1A03 and 1AA3.

REQUIREMENTS

90 units total (Levels I to III)

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

9 units ART HIST 2A03, 2B03, 2C03

6 units from ART HIST 2D03, 2I03, 2Z03

15 units Levels III and IV Art History

30 units Electives

Minor in Art History

24 units of Art History, of which no more than six units may be from Level I

PROGRAMS IN DRAMA

(SEE PROGRAMS IN THEATRE & FILM STUDIES)

PROGRAMS IN MUSIC**NOTES**

1. Completion of a Music degree requires considerable daytime attendance.
2. Normally, students who possess an undergraduate degree in Music will not be admitted to a B.Mus. degree program as a second undergraduate degree.

MUSIC I {0370}**REQUIREMENTS**

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

21 units MUSIC 1CC3, 1D03, 1E06, 1G03, 1Y03, 1YY3

12 units Electives

Honours Music (B.Mus.) {2370}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

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

NOTES

1. The courses appearing in Course List 1 are specifically intended to prepare students to attend a Faculty of Education and for a career in school and music teaching. Students interested in Music Education are advised to consult the Music Counsellor during their first year for advice on fulfilling the entrance requirements of Faculties of Education.
2. Students who intend to pursue graduate studies in music or who wish to use the music degree as preparation for post-graduate studies in other professions should select a significant number of the courses in Course List 2.

COURSE LIST 1

MUSIC 3AA3, 3J03, 3K03, 3L03, 3M03, 3N03, 3O03, 3P03, 3V03, 4K03, 4L03, 4M03, 4N03, 4OC3, 4OI3, 4P03, 4Q03, 4V03

COURSE LIST 2

MUSIC 3CM3, 3CT3, 3H03, 3Y03, 3YY3, 4C03, 4H03, 4R03, 4Y03

COURSE LIST 3

MUSIC 2A03, 2F03, 2I03, 2II3, 2Z03, 3G03, 3T03, 3U03, 3Z03, 4G03, 4S03, 4U03, 4Z03, 4ZZ3

COURSE LIST 4

MUSIC 3E03, 3E06, 3SS3, 4E03, 4E06, 4SS3 (Lesson fees are charged to students taking these courses.)

REQUIREMENTS

123 units total (Levels I to IV)

33 units Music I

24 units MUSIC 2CC3, 2D03, 2E06, 2G03, 2H03, 2Y03, 2YY3

3 units from MUSIC 2A03, 2F03, 2I03, 2II3, 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 wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

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

COURSE LIST 1

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

COURSE LIST 2

MUSIC 2A03, 2F03, 2G03, 2I03, 2II3, 2Z03, 3T03, 3U03, 3Z03

REQUIREMENTS

120 units total (Levels I to IV)

33 units Music I program

21 units MUSIC 2CC3, 2D03, 2E06, 2H03, 2Y03, 2YY3

12 units from Course List 1

6 units from Course Lists 1 and 2

36 units Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)

12 units Electives to total 120 units

B.A. in Music

{1378}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of Music I and a Cumulative Average of at least 3.5.

NOTES

1. Students from another Level I program may be admitted with a Cumulative Average of at least 3.5, a weighted average of 4.0 in MUSIC 1A03 and 1AA3, and a successful audition.
2. Students registered in the B.A. Music program who wish to transfer into the Honours B.Mus. program must apply through the Dean's Office before the end of classes in their final year of study.

COURSE LIST 1

All Level II, III and IV Music courses, except MUSIC 2G03, 3G03, 4G03

REQUIREMENTS

90 units total (Levels I to III)

33 units Music I program

15 units MUSIC 2CC3, 2D03, 2H03, 2Y03, 2YY3

12 units from Course List 1

30 units Electives

Minor in Music

24 units of Music of which no more than nine units may be from Level I, subject to the prerequisites and qualifying tests specified in this Calendar.

DIPLOMA IN MUSIC PERFORMANCE

The Diploma is intended to recognize a concentration in the area of music performance and is available to two distinct groups of people:

1. Students who are enrolled in, or graduates of, a Music degree program at McMaster; and
2. Students enrolled in, or graduates of, other McMaster degree programs, as well as musicians in the community, such as graduates from the Royal Conservatory of Music, Mohawk College, or other universities, etc., who wish to receive formal recognition for their musical achievements.

GROUP 1 - MCMASTER STUDENTS**ADMISSION**

Registration in, or completion of, a degree program in Music. Students should meet with the Academic Counsellor for Music in the School of the Arts as early as possible in their degree program.

GROUP 2 - OTHERS**ADMISSION**

Completion of a music audition/examination consisting of:

1. Demonstration of technique (a level equivalent to at least 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. Interview; and
6. MUSIC 1E06 or equivalent, e.g., A.R.C.T. (Associate of the Royal Conservatory of Music).

In lieu of the above, students concentrating in jazz must complete an audition demonstrating equivalent experience in jazz performance.

Auditions take place between January and March. Applicants must contact the School of the Arts to arrange for an audition. Advanced credit, up to a maximum of 15 units, may be determined on an individual basis.

REQUIREMENTS

The Diploma will require completion of **24 units** as follows:

15 units from MUSIC 2E06 (or 2EE6); 3E06 (or 3EE6); 3SS3, 4G03, 4SS3, 4U03

9 units MUSIC 4E09

- Lesson fees: Lesson fees are charged over and above tuition for MUSIC 2E06, 2EE6, 3E06, 3EE6, 3SS3, 4E09 and 4SS3. Students registered in Honours Music will not be charged extra fees for MUSIC 2E06.

- For those registered in a degree program at McMaster University, MUSIC 4E09 must be taken over and above the total number of units required for a McMaster degree. Because this course may not be used for credit towards any McMaster degree, students pursuing the Diploma must plan their work to accommodate nine extra units.

PROGRAMS IN THEATRE & FILM STUDIES

The School of the Arts offers a broadly based program of study in the history, theory, and critical understanding of dramatic performance in both live and recorded media. Program requirements at Level II are designed to expose students to the breadth of the study. Level III courses offer more specific approaches to the study of theatre and film. A limited amount of student specialization within the program is possible at this level. The Honours Seminars at Level IV focus on independent research. Students are advised to note carefully the prerequisites for all courses. Students are also advised to take note which courses are offered in alternate years.

Honours Arts & Science and Theatre & Film Studies

(B.Arts.Sc.; See Arts & Science Program)

NOTE

Students registered in Honours Theatre & Film Studies are encouraged to complete courses in related art forms.

Honours Theatre & Film Studies {2551}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in THTR&FLM 1A03 and 1B03.

NOTE

A number of courses that directly pertain to Theatre & Film Studies are offered by other departments: Classics, Comparative Literature, English and Cultural Studies, French, Kinesiology and Women's Studies. These are recommended as electives listed at the end of the Theatre & Film course descriptions. Up to nine units from the list may be made available as substitutes for Theatre & Film courses, and counted toward the fulfillment of a program in Theatre & Film Studies. Students are advised that there may be restrictions on enrolment in these courses.

REQUIREMENTS

120 units total (Levels I to IV)

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

12 units Level II Theatre & Film courses with at least nine units from THTR&FLM 2AA3, 2BB3, 2C03, 2D03, 2E03, 2F03 (Students may take only one of THTR&FLM 2AA3 or 2BB3.)

27 units Level III or IV Theatre & Film
6 units Level IV Theatre & Film courses including at least three units from THTR&FLM 4C03, 4D03, 4E03, 4F03
45 units Electives

Combined Honours in Theatre & Film Studies and Another Subject

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in THTR&FLM 1A03 and 1B03.

NOTE

A number of courses that directly pertain to Theatre & Film Studies are offered by other departments: Classics, Comparative Literature, English and Cultural Studies, French, Kinesiology and Women's Studies. These are recommended as electives listed at the end of the Theatre & Film course descriptions. Up to nine units from the list may be made available as substitutes for Theatre & Film courses, and counted toward the fulfillment of a program in Theatre & Film Studies. Students are advised that there may be restrictions on enrolment in these courses.

REQUIREMENTS

120 units total (Levels I to IV)

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

12 units Level II Theatre & Film courses with at least nine units from THTR&FLM 2AA3, 2BB3, 2C03, 2D03, 2E03, 2F03 (Students may take only one of THTR&FLM 2AA3 or 2BB3.)

18 units Level III or IV Theatre & Film

6 units Level IV Theatre & Film courses including at least

three units from THTR&FLM 4C03, 4D03, 4E03, 4F03. Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)

36 units Electives to total 120 units

B.A. in Theatre & Film Studies {1551}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 3.5 including an average of at least 4.0 in THTR&FLM 1A03 and 1B03.

REQUIREMENTS

90 units total (Levels I to III)

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

12 units Level II Theatre & Film courses with at least nine units from THTR&FLM 2AA3, 2BB3, 2C03, 2D03, 2E03, 2F03 (Students may take only one of THTR&FLM 2AA3 or 2BB3.)

12 units Level III or IV Theatre & Film

36 units Electives

Minor in Theatre & Film Studies

24 units of Theatre & Film

DEPARTMENT OF CLASSICS

WEB ADDRESS: <http://www.humanities.mcmaster.ca/~classics>

Honours Arts & Science and Classics

(B.Arts.Sc.; See Arts & Science Program)

NOTES

1. Students in a Classics program may choose courses from the following subfields: Ancient History and Society, Ancient Philosophy, Classical Archaeology and Art History, Classical Literature in Translation, Greek Language and Literature, Latin Language and Literature.

2. With the approval of the Department of Classics and the Office of the Dean of the Faculty of Humanities, students who have completed 60 units of work of any Honours program in Classics may replace all or part of their Level III work by courses of study at a university or equivalent institution abroad. Consult the Department for further details.
3. Students may receive up to six units of credit for archaeological field work at an approved Classical site. Consult the Department for further details.
4. Students are encouraged to include at least six units of Greek or Latin in their program. GREEK 1Z03, 1ZZ3 and LATIN 1Z03, 1ZZ3, if not completed in the Level I program, may be taken as elective courses. Students intending to do graduate work in the field of Classics should note that most universities offering such programs require several years of undergraduate work in both Greek and Latin for admission. These students are strongly encouraged to include Greek and Latin courses as early as possible in their program.
5. Students intending to do graduate work in the field of Classics may wish to include an independent study course (CLASSICS 4T03) in the final level of their program.

PROGRAMS FOR STUDENTS ENTERING IN 2007-2008

Honours Classics {2130}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 and a grade of at least B- in three units of Level I Classics, Greek or Latin. (Students with Grade 12 Greek U may substitute three units of Level II Greek; students with Grade 12 Latin U may substitute three units of Level II Latin.)

REQUIREMENTS

120 units total (Levels I to IV)

30 units	from the Level I program completed prior to admission into the program
15 units	Level II Classics, Greek, Latin (may include Level I Greek or Latin)
15 units	Level III Classics, Greek, Latin (may include Level II Greek or Latin)
6 units	Level IV Classics, Level III or IV Greek; Level III or Level IV Latin
12 units	Levels II, III, IV Classics, Greek or Latin
42 units	Electives

Combined Honours in Classics and Another Subject

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 and a grade of at least B- in three units of Level I Classics, Greek or Latin courses. (Students with Grade 12 Greek U may substitute three units of Level II Greek; students with Grade 12 Latin U may substitute three units of Level II Latin.)

REQUIREMENTS

120 units total (Levels I to IV)

30 units	from the Level I program completed prior to admission into the program
12 units	Level II Classics, Greek, Latin (may include Level I Greek or Latin)
9 units	Level III Classics, Greek, Latin (may include Level II Greek or Latin)
6 units	Level IV Classics, Level III or IV Greek, Level III or IV Latin
9 units	Levels II, III, IV Classics, Greek or Latin
36 units	Courses specified for the other subject (Combinations with Social Sciences may require more than 36 units.)
18 units	Electives to total 120 units

B.A. in Classics

{1130}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 3.5 and a grade of at least C- in three units of Level I Classics, Greek or Latin courses. (Students with Grade 12 Greek U may substitute three units of Level II Greek; students with Grade 12 Latin U may substitute three units of Level II Latin.)

REQUIREMENTS

90 units total (Levels I to III)

30 units	from the Level I program completed prior to admission into the program
9 units	Level II Classics, Greek, Latin (may include Level I Greek or Latin)
9 units	Level III Classics, Greek, Latin (may include Level II Greek or Latin)
6 units	Levels II and III Classics, Greek, Latin (may include Level I Greek or Latin)
36 units	Electives

PROGRAMS FOR STUDENTS WHO ENTERED PRIOR TO SEPTEMBER 2007

Honours Classics

(PROGRAM A: ANCIENT HISTORY AND ARCHAEOLOGY) {2131}

REQUIREMENTS

120 units total (Levels I to IV)

30 units	from the Level I program completed prior to admission into the program
24 units	from CLASSICS 2B03, 2C03, 2K03, 2LA3, 2LB3, 2LC3, 2LD3, 2Y03, 2YY3, 2Z03, 3EE3, 3G03, 3H03, 3HH3, 3M03, 3MM3, 3Q03, 3S03, 3TT3, 3X03
6 units	from CLASSICS 4B03, 4BB3, 4E03, 4T03
24 units	Levels II, III and IV Classics, Greek, Latin
36 units	Electives

Honours Classics

(PROGRAM B: CLASSICAL LANGUAGES AND LITERATURE) {2132}

REQUIREMENTS

120 units total (Levels I to IV)

30 units	from the Level I program completed prior to admission into the program
6 units	from CLASSICS 2D03, 2E03, 3EE3, 3I03, 3TT3, 3X03
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

(PROGRAM A: ANCIENT HISTORY AND ARCHAEOLOGY)

REQUIREMENTS

120 units total (Levels I to IV)

30 units	from the Level I program completed prior to admission into the program
21 units	from CLASSICS 2B03, 2C03, 2K03, 2LA3, 2LB3, 2LC3, 2LD3, 2Y03, 2YY3, 2Z03, 3EE3, 3G03, 3H03, 3HH3, 3M03, 3MM3, 3Q03, 3S03, 3TT3, 3X03
6 units	from CLASSICS 4B03, 4BB3, 4E03, 4T03
9 units	Levels II, III and IV Classics, Greek, Latin
36 units	Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
18 units	Electives to total 120 units

Combined Honours in Classics and Another Subject

(PROGRAM B: CLASSICAL LANGUAGES AND LITERATURE)

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 6 units from CLASSICS 2D03, 2E03, 3EE3, 3I03, 3TT3, 3X03
- 24 units Greek or Latin
- 6 units Levels II, III and IV Classics, Greek, Latin
- 36 units Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
- 18 units Electives to total 120 units

B.A. in Classics

{1130}

NOTE

Students are encouraged to include at least six units of Greek or Latin in their program. GREEK 1Z03, 1ZZ3 and LATIN 1Z03, 1ZZ3, if not completed in the Level I program, may be taken as elective courses.

REQUIREMENTS

90 units total (Levels I to III)

- 30 units from the Level I program completed prior to admission into the program
- 12 units Level II Classics, Greek or Latin
- 12 units Level III Classics, Greek or Latin
- 36 units Electives

Minor in Classics

24 units of Classics, Greek or Latin, of which no more than six units may be from Level I

Minor in Greek

24 units of Greek, of which no more than six units may be from Level I

Minor in Latin

24 units of Latin, of which no more than six units may be from Level I

INTERDISCIPLINARY MINOR IN ARCHAEOLOGY

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

DEPARTMENT OF COMMUNICATION STUDIES AND MULTIMEDIA

WEB ADDRESS: <http://csmm.humanities.mcmaster.ca/>

PROGRAMS FOR STUDENTS ENTERING IN 2007-2008

Honours Communication Studies {2163}

Communication Studies is an academic discipline which encompasses many fields of inquiry. Graduates of this program will have an advanced knowledge of the nature, function and evolution of communication, and will develop both practical and theoretical skills necessary to pursue careers in the field of communications.

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including a grade of at least B- in CMST 1A03.

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 9 units CMST 2A03, 2B03, 2C03
- 3 units from CMST 1B03, 2CC3
- 3 units MMEDIA 1A03 (must be completed by the end of Level II)

- 9 units from CMST 2DD3, 2K03, 2Z03, 3AA3, 3C03, 3D03, 3I03, 3K03, 3MM3, 3Q03 which must include at least three units of Level II and three units of Level III courses
- 9 units from CMST 2BB3, 2G03, 2H03, 2I03, 2R03, 2RR3, 2S03, 3BB3, 3H03, 3SS3, 3UU3 which must include at least three units of Level II and three units of Level III courses
- 6 units from LINGUIST 1A03, 1AA3, CMST 2E03, 2F03, 3G03, 3V03, 3Y03, MMEDIA 2I03 which may include no more than three units of Level I courses
- 6 units from Levels II or III Communication Studies, MMEDIA 2D03, 3B03, 3E03, 3K03
- 6 units Level IV Communication Studies
- 39 units Electives

Combined Honours in Communication Studies and Another Subject

Communication Studies is an academic discipline which encompasses many fields of inquiry. Graduates of this program will have an advanced knowledge of the nature, function and evolution of communication and will develop both practical and theoretical skills necessary to pursue careers in the field of communications.

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 and a grade of at least B- in CMST 1A03.

NOTE

Because MMEDIA 1A03 is required for admission into the Honours Multimedia program, students registered in the Combined Honours Communication Studies and Multimedia program will substitute three units elective for MMEDIA 1A03.

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 9 units CMST 2A03, 2B03, 2C03
- 3 units from CMST 1B03, 2CC3
- 3 units MMEDIA 1A03 (must be completed by the end of Level II)
- 3 units from CMST 2DD3, 2K03, 2Z03
- 3 units from CMST 3AA3, 3C03, 3D03, 3I03, 3K03, 3MM3, 3Q03
- 3 units from CMST 2BB3, 2G03, 2H03, 2I03, 2R03, 2RR3, 2S03
- 3 units from CMST 3BB3, 3H03, 3UU3, 3SS3
- 3 units from CMST 2E03, 2F03, 3G03, 3V03, 3Y03, MMEDIA 2I03
- 3 units from Levels II or III Communication Studies, MMEDIA 2D03, 3B03, 3E03, 3K03
- 3 units Level IV Communication Studies
- 36 units courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
- 18 units Electives to total 120 units

PROGRAMS FOR STUDENTS WHO ENTERED PRIOR TO SEPTEMBER 2007

Honours Communication Studies

Communication Studies is an academic discipline which encompasses many fields of inquiry. Graduates of this program will have an advanced knowledge of the nature, function and evolution of communication, and will develop both practical and theoretical skills necessary to pursue careers in the field of communications.

NOTES

1. Students in this program must complete two of the following Streams:

The Language and Social Life Stream involves the study and discovery of patterns in human language and society. Focus is placed on the art and science of persuasion, linguistic methods and the importance of language in political and social life. **The Cultural Studies Stream** focuses on the critical analysis of popular culture through film, the visual arts and a variety of other forms. Unique to the Communication approach to Cultural Studies is a focus on empirical analysis as well as the social, political and cognitive significance of popular cultures.

The Performance Studies Stream examines artistic and everyday performances. These performances range from theatre, concerts and performance art to story telling, ceremonies and public protests. Students will examine and analyze performances and their meanings and effects with particular emphasis on the relationships between these performances and their consequences with a particular emphasis on the role of actions in social communication.

The Mass Communication Stream focuses on the organization and functioning of information media such as television, radio, the Internet and the press as major institutions and sources of knowledge and understanding about society.

- It is strongly recommended that students in the Language and Social Life Stream take LINGUIST 1A03 and 1AA3 in Level I or Level II in order to take upper level linguistics courses.
- Some courses are listed in more than one Stream. Students can receive credit in only one stream for such courses.
- It is recommended that students, especially those in the Language and Social Life Stream, take six units of a language other than English.

COURSE LIST 1 - LANGUAGE AND SOCIAL LIFE STREAM

- 6 units CMST 2E03, 3G03
 3 units from CMST 4J03, 4L03
 9 units from CMST 2F03, 2U03, 2V03, 2W03, 3C03, 3D03, 3E03, 3V03, 3WW3, 3Y03, 4D03, 4G03, 4H03, 4I03, 4J03, 4L03, 4R03, 4S03, 4T03; PSYCH 2C03, 2H03, 3U03, 3UU3

COURSE LIST 2 - CULTURAL STUDIES STREAM

- 3 units CMST 2BB3
 3 units from CMST 4C03, 4M03
 12 units from CMST 2F03, 2I03, 2M03, 2MM3, 2N03, 2O03, 2S03, 2T03, 2X03, 2Y03, 3BB3, 3CC3, 3F03, 3P03, 3SS3, 3T03, 3TT3, 3UU3, 3WW3, 3XX3, 4FF3

COURSE LIST 3 - PERFORMANCE STUDIES STREAM

- 6 units CMST 2G03, 4C03
 6 units from CMST 2H03, 2P03, 2R03, 2RR3, 2S03, 3U03
 6 units from CMST 2F03, 2Q03, 3H03, 3L03, 3M03; KINESIOL 3JJ3, 3T03

COURSE LIST 4 - MASS COMMUNICATION STREAM

- 6 units CMST 2K03, 4E03
 3 units from CMST 2L03, 2Z03
 3 units from CMST 3C03, 3D03
 6 units from CMST 2F03, 2L03, 2Z03, 3C03, 3D03, 3I03, 3K03, 3MM3, 4D03

REQUIREMENTS

120 units total (Level I to IV)

- 30 units from the Level I program completed prior to admission into the program
 12 units CMST 2A03, 2B03, 2C03, 2D03
 3 units from CMST 3K03, 3N03, 3Q03
 3 units from CMST 4CC3, 4N03, 4Q03, 4QQ3
 36 units from Course Lists (See Note 1 above.)
 36 units Electives

Combined Honours in Communication Studies and Another Subject

NOTES

- Communication Studies is an academic discipline which encompasses many fields of inquiry. Graduates of this program will have an advanced knowledge of the nature, function and evolution of communication, and will develop both practical and theoretical skills necessary to pursue careers in the field of communications. Students in this program must complete one of the following Streams:

The Language and Social Life Stream involves the study and discovery of patterns in human language and society. Focus is placed on the art and science of persuasion, linguistic method and the importance of language in political and social life.

The Cultural Studies Stream focuses on the critical analysis of popular culture through film, the visual arts and a variety of other forms. Unique to the Communication approach to Cultural Studies is a focus on empirical analysis as well as the social, political and cognitive significance of popular cultures.

The Performance Studies Stream examines artistic and everyday performances. These performances range from theatre, concerts and performance art to story telling, ceremonies

and public protests. Students will examine and analyze performances and their meanings and effects with particular emphasis on the relationships between these performances and their consequences with a particular emphasis on the role of actions in social communication.

The Mass Communication Stream focuses on the organization and functioning of information media such as television, radio, the Internet and the press as major institutions and sources of knowledge and understanding about society.

- It is strongly recommended that students in the Language and Social Life stream take LINGUIST 1A03 and 1AA3 in Level I or Level II in order to take upper level linguistics courses.
- It is recommended that students, especially those in the Language and Social Life Stream, take six units of a language other than English.

COURSE LIST 1 - LANGUAGE AND SOCIAL LIFE STREAM

- 6 units CMST 2E03, 3G03
 3 units from CMST 4J03, 4L03
 9 units from CMST 2F03, 2U03, 2V03, 2W03, 3C03, 3D03, 3E03, 3V03, 3WW3, 3Y03, 4D03, 4G03, 4H03, 4I03, 4J03, 4L03, 4R03, 4S03, 4T03; PSYCH 2C03, 2H03, 3U03, 3UU3

COURSE LIST 2 - CULTURAL STUDIES STREAM

- 3 units CMST 2BB3
 3 units from CMST 4C03, 4M03
 12 units from CMST 2F03, 2I03, 2M03, 2MM3, 2N03, 2O03, 2S03, 2T03, 2X03, 2Y03, 3BB3, 3CC3, 3F03, 3P03, 3SS3, 3T03, 3TT3, 3UU3, 3WW3, 3XX3, 4FF3

COURSE LIST 3 - PERFORMANCE STUDIES STREAM

- 6 units CMST 2G03, 4C03
 6 units from CMST 2H03, 2P03, 2R03, 2RR3, 2S03, 3U03
 6 units from CMST 2F03, 2Q03, 3H03, 3L03, 3M03; KINESIOL 3JJ3, 3T03

COURSE LIST 4 - MASS COMMUNICATION STREAM

- 6 units CMST 2K03, 4E03
 3 units from CMST 2L03, 2Z03
 3 units from CMST 3C03, 3D03
 6 units from CMST 2F03, 2L03, 2Z03, 3C03, 3D03, 3I03, 3K03, 3MM3, 4D03

REQUIREMENTS

120 units total (Level I to IV)

- 30 units from the Level I program completed prior to admission into the program
 12 units CMST 2A03, 2B03, 2C03, 2D03
 3 units from CMST 3K03, 3N03, 3Q03
 3 units from CMST 4CC3, 4N03, 4Q03, 4QQ3
 18 units from one of the Course Lists (See Note 1 above.)
 36 units Courses specified for the other subject.
 18 units Electives to total 120 units

Multimedia

WEB ADDRESS: <http://csmm.humanities.mcmaster.ca/>

Honours Arts & Science and Multimedia

(B.Arts.Sc.; See Arts & Science Program)

Combined Honours B.A. in Multimedia and Another Subject

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Enrolment in this program is limited and highly competitive. Selection is based on academic achievement in Level I Multimedia courses but requires, as a minimum, completion of any Level I program and a Cumulative Average of at least 6.0 including a grade of at least B- in each of MMEDIA 1A03, 1B03.

NOTES

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

- The Combined Honours in Multimedia program is not available to students who already possess an undergraduate degree. As an alternative, such students may be interested in the Certificate/Diploma in Web Design and Development offered through the Centre for Continuing Education. Please refer to the *Certificate and Diploma Programs* section of this calendar under the heading *Centre for Continuing Education*.
- Students must complete MMEDIA 4A03 and 4B03 in the same academic year.

COURSE LIST 1

CMST 2T03, COMP SCI 1MA3, 2SC3, 3SE3; LINGUIST 4D03; MMEDIA 2C03, 2D03, 2E03, 2F03, 2G03, 2H03, 2I03, 2J03, 3C03, 3D03, 3E03, 3F03, 3G03, 3H03, 3I03, 3J03, 3K03, 4C03, 4D03; MUSIC 2F03; THTR&FLM 2E03; WOMEN ST 2D03

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 18 units MMEDIA 2A03, 2B03, 3A03, 3B03, 4A03, 4B03
- 3 units from MMEDIA 2C03, 3G03
- 15 units from Course List 1
- 36 units Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
- 18 units Electives to total 120 units

COMPARATIVE LITERATURE

WEB ADDRESS: <http://www.humanities.mcmaster.ca/~complit>

Honours Arts & Science and Comparative Literature

(B.Arts.Sc.; See Arts & Science Program)

Combined Honours in Comparative Literature and Another Subject

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

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including a grade of at least B- in COMP LIT 1A03 or 1AA3; whichever of these two courses was not completed in Level I must be taken in Level II.

NOTES

- Students registered in the Comparative Literature program are encouraged to substitute up to 12 units of a language other than English as part of the Comparative Literature requirements, with the approval of the Director of the Program.
- Graduate programs in Comparative Literature require proficiency in a second language. Students who plan to pursue graduate studies in Comparative Literature are strongly encouraged to include a second language beyond the introductory level in their program.
- Upon completion of 60 units of work and with the approval of the Director of Comparative Literature and of the Office of the Dean of the Faculty of Humanities, one or both terms of Level III of this program may be replaced by courses of study at a university or universities under the Humanities Study Elsewhere Program.

REQUIREMENTS

120 units total (Level I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 15 units from COMP LIT 2A03, 2AA3, 2BB3, 2CC3, 2F03, 3BB3, 3G03, 3HH3, 3JJ3, 3MM3, 3N03, 3QQ3, 3SS3, 3WW3
- 6 units from COMP LIT 4A03, 4D03, 4E03, 4F03, 4T03
- 15 units Levels II, III, IV Comparative Literature (See Note 1 above.)
- 36 units Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
- 18 units Electives to total 120 units

Minor in Comparative Literature

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

DEPARTMENT OF ENGLISH AND CULTURAL STUDIES

WEB ADDRESS: <http://www.humanities.mcmaster.ca/~english/>

Programs Offered by the Department of English and Cultural Studies

Honours Arts & Science and English

(B.Arts.Sc.; See Arts & Science Program)

AREAS OF STUDY

The Department has defined four areas of study. Students should consult the Program Notes for their specific program to determine their requirements regarding these areas. Level II and III courses are allocated to the areas as follows:

	AREA	ENGLISH COURSES
AREA 1	Early British Literature	2B06, 3C06, 3I06, 3K06, 3L06, 3V06
AREA 2	Later British Literature	2I06, 3G06, 3M06, 3N06
AREA 3	Canadian, American and Post-Colonial	2G06, 2X06, 2Y06, 3R06
AREA 4	Theory and Cultural Studies	2A03, 2K06, 2M03, 2MM3, 3A03, 3AA3, 3J03, 3JJ3, 3Q03, 3QQ3

Honours English

{2200}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units of Level I English.

NOTES

- When registering, students should distribute their required English courses (see *Requirements* below) as follows:
 - > Level II 18 units of Levels II and/or III English
 - > Level III 18 units of Levels II and/or III English
 - > Level IV six units of Levels II and/or III English; 12 units of Level IV English seminars. (No student may take more than 12 units of Level IV seminars.)
- 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.
- Most graduate programs in English require proficiency in a second language. Students who plan to pursue graduate studies in English are strongly encouraged to include in their program a second language beyond the introductory level.

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 12 units from Area 1 English courses
- 6 units from Area 2 English courses
- 6 units from Area 3 English courses

12 units	from Area 4 English courses
6 units	from Areas 1-4 and ENGLISH 2D03, 3CC3, 3D03, 3DD3, 3EE3, 3H03, 3RR3, 3S03, 3U03, 3W03, 3X03, 3Y03
12 units	Level IV English seminars
36 units	Electives

Combined Honours in English and Another Subject

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units of Level I English.

NOTES

- 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.)
- 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.
- Most graduate programs in English require proficiency in a second language. Students who plan to pursue graduate studies in English are strongly encouraged to include in their program a second language beyond the introductory level.

REQUIREMENTS

120 units total (Levels I to IV)

30 units	from the Level I program completed prior to admission into the program
6 units	from Area 1 English courses
6 units	from Area 2 English courses
6 units	from Area 3 English courses
6 units	from Area 4 English courses
6 units	from Areas 1-4 and ENGLISH 2D03, 3CC3, 3D03, 3DD3, 3EE3, 3H03, 3RR3, 3S03, 3U03, 3W03, 3X03, 3Y03
6 units	Level IV English seminars
36 units	Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
18 units	Electives to total 120 units

Combined Honours in Cultural Studies and Critical Theory and Another Subject

Cultural Studies and Critical Theory (CSCT) provides students with an opportunity to investigate the texts, practices, theories and concepts that animate modern individual and social experience. CSCT examines a wide range of cultural forms, including those that have been typically overlooked in universities (e.g. television, popular film and fiction, and practices of everyday life), while paying attention to topics such as gender, sexuality and the body, class, race and ethnicity, postcolonialism, subjectivity and representation, ideology and power/knowledge, aesthetics and taste, and technology and culture.

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units from CSCT 1B03, 1BB3, ENGLISH 1A03, 1AA3, 1B03, 1BB3, 1C06.

NOTES

- When registering, students should distribute their required Cultural Studies and Critical Theory courses (see *Requirements* below) as follows:
 - Level II 12 units of Levels II and/or III Cultural Studies and Critical Theory
 - Level III 12 units of Levels II and/or III Cultural Studies and Critical Theory

➤ Level IV six units of Levels II and/or III Cultural Studies and Critical Theory; six units of Level IV Cultural Studies and Critical Theory seminars (No student may take more than six units of Level IV seminars.)

- With permission of the Department, students may substitute CSCT 4X03 for three units of Level IV seminar work in second term. Students who are interested in taking CSCT 4X03 should contact the faculty member chairing the CSCT 4X03 committee early in the first term.
- Most graduate programs in Cultural Studies and/or Critical Theory require proficiency in a second language. Students who plan to pursue graduate studies in these areas are strongly encouraged to include in their program a second language beyond the introductory level.

CORE COURSE LIST

CSCT 2M03, 2MM3, 2P03, 2S03, 3A03, 3AA3, 3CC3, 3Q03, 3QQ3, 3R06

REQUIREMENTS

120 units total (Levels I to IV)

30 units	from the Level I program completed prior to admission into the program
24 units	from Core Course List
6 units	Levels II or III Cultural Studies and Critical Theory
6 units	Level IV Cultural Studies and Critical Theory seminars
36 units	Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
18 units	Electives to total 120 units

B.A. in English

{1200}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 3.5 including an average of at least 4.0 in six units of Level I English.

NOTE

When registering, students should distribute their required English courses (see *Requirements* below) as follows:

- Level II 12 units of Levels II and/or III English
- Level III 18 units of Levels II and/or III English

REQUIREMENTS

90 units total (Levels I to III)

30 units	from the Level I program completed prior to admission into the program
6 units	from Area 1 English courses
6 units	from Area 2 English courses
6 units	from Area 3 English courses
6 units	from Area 4 English courses
6 units	from Areas 1-4 and ENGLISH 2D03, 3CC3, 3D03, 3DD3, 3EE3, 3H03, 3RR3, 3S03, 3U03, 3W03, 3X03, 3Y03
30 units	Electives

Minor in English

Six units of Level I English and 18 units of Levels II and III English

DEPARTMENT OF FRENCH

WEB ADDRESS: <http://www.humanities.mcmaster.ca/~french>

Honours Arts & Science and French

(B.Arts.Sc.; See Arts & Science Program)

The Department of French has an overall theme of Francophonie (the French-speaking world) and Diversity. This theme is reflected in the four areas of study in the following table which serves to give an overview of courses available in each area of concentration. Students are not expected to specialize officially in any one area.

AREA	FRENCH COURSES
Linguistics, Translation and Literary Theory	2G03, 2H03, 3A03, 3CC3, 3GG3, 3H03, 4BB3, 4E03, 4H03, 4I3, 4X03
African and Caribbean Literatures and Cultures	3Z03, 4LL3
Quebec and Franco-Canadian Literatures and Cultures	2E03, 3AA3, 3BB3, 4U03
Franco-European Literatures and Cultures	2F03, 2J03, 2JJ3, 2N03, 3K03, 3KK3, 3Q03, 3QQ3, 3SS3, 3W03, 3WW3, 3Y03, 4D03, 4F03, 4I03, 4J03, 4MM3, 4N03, 4Q03, 4S03, 4V03, 4Y03

NOTE

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

Honours French {2233}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

2007-2008 ONLY: Completion of any Level I program and a Cumulative Average of at least 6.0 including a grade of at least B- in FRENCH 1A06 or 2M06 or a grade of at least B+ in FRENCH 1N06.

EFFECTIVE 2008-2009: Completion of any Level I program and a Cumulative Average of at least 6.0 including a grade of at least B- in FRENCH 1A06 or 2M06.

NOTE

Upon completion of 60 units of work (including 18 units of required Level II French courses), and with the approval of the Department of French and the Office of the Dean of the Faculty of Humanities, Level III of Honours French may be replaced by courses of study at a French-language university.

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 12 units FRENCH 2B03, 2BB3, 3C03, 4A03
- 9 units FRENCH 2E03, 2F03, 2H03
- 3 units from FRENCH 3Z03, 4LL3
- 12 units from FRENCH 2J03 or 2JJ3; 3K03 or 3KK3; 3Q03 or 3QQ3; 3W03 or 3WW3; 3Y03, 4J03, 4S03
- 12 units Levels II, III or IV French
- 6 units Level IV French
- 36 units Electives

Combined Honours in French and Another Subject

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

2007-2008 ONLY: Completion of any Level I program and a Cumulative Average of at least 6.0 including a grade of at least B- in FRENCH 1A06 or 2M06 or a grade of at least B+ in FRENCH 1N06.

EFFECTIVE 2008-2009: Completion of any Level I program and a Cumulative Average of at least 6.0 including a grade of at least B- in FRENCH 1A06 or 2M06.

NOTE

Upon completion of 60 units of work (including 12 units of required Level II French courses), and with the approval of the Department of French and the Office of the Dean of the Faculty of Humanities, up to 15 units of Level III French may be replaced by courses of study at a French-language university.

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 12 units FRENCH 2B03, 2BB3, 3C03, 4A03
- 9 units FRENCH 2E03, 2F03, 2H03
- 3 units from FRENCH 3Z03, 4LL3
- 12 units from FRENCH 2J03 or 2JJ3; 3K03 or 3KK3; 3Q03 or 3QQ3; 3W03 or 3WW3; 3Y03, 4J03, 4S03
- 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 program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

2007-2008 ONLY: Completion of any Level I program and a Cumulative Average of at least 3.5 including a grade of at least C- in FRENCH 1A06 or 2M06 or a grade of at least C+ in FRENCH 1N06.

EFFECTIVE 2008-2009: Completion of any Level I program and a Cumulative Average of at least 6.0 including a grade of at least C- in FRENCH 1A06 or 2M06.

REQUIREMENTS

90 units total (Levels I to III)

- 30 units from the Level I program completed prior to admission into the program
- 9 units FRENCH 2B03, 2BB3, 3C03
- 12 units from FRENCH 2E03, 2F03, 2H03, 3Z03
- 12 units from FRENCH 2J03 or 2JJ3; 3K03 or 3KK3; 3Q03 or 3QQ3; 3W03 or 3WW3; 3Y03, 4J03, 4S03
- 3 units Levels II or III French
- 24 units Electives

PROGRAMS FOR STUDENTS WHO ENTERED PRIOR TO SEPTEMBER 2006**Honours French****PROGRAMA: LANGUAGE AND LITERATURE****{2231}**

Requirements For Students Who Entered Prior to September 2006

NOTE

Upon completion of 60 units of work (including 18 units of required Level II French courses), and with the approval of the Department of French and the Office of the Dean of the Faculty of Humanities, Level III of Honours French may be replaced by courses of study at a French-language university.

COURSE LIST 1

FRENCH 4D03, 4F03, 4I03, 4LL3, 4MM3, 4N03, 4Q03, 4S03, 4U03, 4V03, 4X03, 4Y03

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 12 units FRENCH 2B03, 2BB3, 3C03, 4A03
- 6 units from FRENCH 2G03, 3CC3, 3F03, 4BB3
- 3 units from FRENCH 2J03, 2JJ3
- 3 units from FRENCH 2W03, 2WW3, 3W03, 3WW3
- 3 units from FRENCH 2D03, 2E03, 3AA3, 3BB3, 3Z03, 4U03
- 3 units from FRENCH 3K03, 3KK3
- 3 units from FRENCH 3Q03, 3QQ3
- 3 units from FRENCH 3A03, 3SS3, 4J03
- 9 units from Course List 1
- 9 units Levels III and IV French
- 36 units Electives

Honours French

PROGRAM B:

LANGUAGE, LINGUISTICS AND TRANSLATION {2232}

Requirements For Students Who Entered Prior to September 2006

NOTE

Upon completion of 60 units of work (including 18 units of required Level II French courses), and with the approval of the Department of French and the Office of the Dean of the Faculty of Humanities, 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, 3Y03, 3Z03, 4D03, 4F03, 4I03, 4J03, 4LL3, 4MM3, 4N03, 4Q03, 4U03, 4V03, 4Y03

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 12 units FRENCH 2B03, 2BB3, 2G03, 2H03
- 12 units FRENCH 3C03, 3CC3, 3GG3, 3H03
- 6 units FRENCH 4A03, 4BB3
- 3 units from FRENCH 2J03, 2JJ3
- 3 units from FRENCH 2W03, 2WW3, 3W03, 3WW3
- 9 units from Course List 1
- 9 units from FRENCH 4H03, 4I13, 4S03, 4X03
- 12 units Linguistics courses above Level I
- 24 units Electives

Combined Honours in

French and Another Subject

PROGRAM A: LANGUAGE AND LITERATURE

Requirements For Students Who Entered Prior to September 2006

NOTES

- Students are not permitted to combine this program with Combined Honours French Program B.
- 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 4D03, 4F03, 4I03, 4LL3, 4MM3, 4N03, 4Q03, 4S03, 4U03, 4V03, 4X03, 4Y03

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 12 units FRENCH 2B03, 2BB3, 3C03, 4A03
- 3 units from FRENCH 2J03, 2JJ3
- 3 units from FRENCH 2W03, 2WW3, 3W03, 3WW3
- 3 units from FRENCH 3K03, 3KK3
- 3 units from FRENCH 3Q03, 3QQ3
- 3 units from FRENCH 3AA3, 3BB3, 3Z03, 4U03
- 6 units from Course List 1
- 3 units from FRENCH 3A03, 3SS3, 4J03
- 36 units Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
- 18 units Electives to total 120 units

Combined Honours in

French and Another Subject

PROGRAM B: LANGUAGE AND LINGUISTICS

Requirements For Students Who Entered Prior to September 2006

NOTES

- Students are not permitted to combine this program with Combined Honours French Program A.
- 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, 3W03, 3WW3, 3Y03, 3Z03, 4D03, 4F03, 4I03, 4J03, 4LL3, 4MM3, 4N03, 4Q03, 4S03, 4U03, 4V03, 4Y03

COURSE LIST 2

FRENCH 3A03, 4H03, 4I13, 4X03

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 12 units FRENCH 2B03, 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}

Requirements For Students Who Entered Prior to September 2006

REQUIREMENTS

90 units total (Levels I to III)

- 30 units from the Level I program completed prior to admission into the program
- 12 units FRENCH 2B03, 2BB3, 3C03, 3F03
- 3 units from FRENCH 2J03, 2JJ3
- 3 units from FRENCH 2W03, 2WW3, 3W03, 3WW3
- 6 units from FRENCH 3A03, 3K03, 3KK3, 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, 1N06, 2M06
- 9 units FRENCH 2B03, 2BB3, 3C03
- 3 units from FRENCH 2E03, 2F03, 2J03, 2JJ3, 2W03, 2WW3, 3AA3, 3BB3, 3K03, 3KK3, 3Q03, 3QQ3, 3W03, 3WW3, 3Y03, 3Z03
- 6 units Levels 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 Program)

SUBFIELDS

The Department has defined three fields of study. Students should consult the Program Notes for their specific program to determine the requirements regarding these fields. Level II and III courses are allocated to the fields as follows:

- Europe (including Britain) HISTORY 2CC3, 2DD3, 2EE3, 2F03, 2FF3, 2HH3, 2I13, 2M03, 2MM3, 2Q03, 2QQ3, 2S03, 2U03, 2UU3, 3D03, 3F03, 3FF3, 3I03, 3JJ3, 3L03, 3PP3, 3QQ3, 3RR3, 3SS3, 3T03, 3UU3, 3V03, 3VV3, 3Y03, 3Z03, 3ZZ3
- Ancient and Non-Western World HISTORY 2EE3, 2HH3, 2J03, 2JJ3, 2K03, 2L03, 2LA3, 2LB3, 2LC3, 2LD3, 2LL3, 2U03, 2UU3, 3A03, 3AA3, 3B03, 3BB3, 3C03, 3CC3, 3DD3, 3E03, 3EE3, 3GG3, 3HH3, 3LL3, 3M03, 3MM3, 3TT3, 3X03
- The Americas HISTORY 2AA3, 2D03, 2EE3, 2G03, 2R03, 2RR3, 2T03, 2TT3, 3G03, 3I13, 3J03, 3K03, 3KK3, 3L03, 3N03, 3NN3, 3O03, 3P03, 3U03, 3UU3, 3V03, 3W03, 3WW3, 3Y03

Honours History {2290}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units of Level I History.

NOTES

1. In selecting courses, students must ensure that they take a minimum of six units in each of three fields of History. This requirement must be satisfied by the end of Level III. All Level II and III History courses from the above list may be used towards this requirement.
2. Beginning in 2007-2008, all students entering an Honours History program must take HISTORY 2P03 in Level II as part of their degree requirements. Those students currently registered in this program should follow the requirements as specified on their degree audit and are not required to take HISTORY 2P03.
3. The department recommends that students take one Level IV seminar in Level III and one Level IV seminar in Level IV. Students must complete HISTORY 2P03 before enrolling in a Level IV History seminar.
4. KINESIOL 3A03 (History of Physical Culture and Sports Medicine) may be taken as a substitute for three units of Level III History.

REQUIREMENTS

120 units total (Levels I to IV)

30 units	from the Level I program completed prior to admission into the program
15 units	Level II History
3 units	HISTORY 2P03 (See Note 2 above.)
15 units	Level III History
12 units	Level IV History
45 units	Electives

Combined Honours in History and Another Subject

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units of Level I History.

NOTES

1. In selecting courses, students must ensure that they take a minimum of three units in each of three fields of History. This requirement must be satisfied by the end of Level III. All Level II and III History courses from the above list may be used toward this requirement.
2. Beginning in 2007-2008, all students entering an Honours History program must take HISTORY 2P03 in Level II as part of their degree requirements. Those students currently registered in this program should follow the requirements as specified on their degree audit and are not required to take HISTORY 2P03.
3. No Level IV seminar may be taken before completion of 12 units of History above Level I. Students must complete HISTORY 2P03 before enrolling in a Level IV History seminar.
4. The department recommends that students take one Level IV seminar in Level III and one Level IV seminar in Level IV.
5. KINESIOL 3A03 (History of Physical Culture and Sports Medicine) may be taken as a substitute for three units of Level III History.

REQUIREMENTS

120 units total (Levels I to IV)

30 units	from the level I program completed prior to admission into the program
9 units	Level II History
3 units	HISTORY 2P03 (See Note 2 above.)
6 units	Level III History
12 units	Level IV History
36 units	Courses specified by the other subject. (Combinations with Social Sciences may require more than 36 units.)
24 units	Elective to total 120 units

B.A. in History {1290}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 3.5 including an average of at least 4.0 in any six units of Level I History.

NOTES

1. In selecting courses, students must ensure that they take a minimum of three units in each of three fields of History. All Level II and III History courses from the above list may be used towards this requirement.
2. KINESIOL 3A03 (History of Physical Culture and Sports Medicine) may be taken as a substitute for three units of Level III History.

REQUIREMENTS

90 units total (Levels I to III)

30 units	from the level I program completed prior to admission into the program
12 units	Level II History
12 units	Level III History
36 units	Electives

Minor in History

24 units of History of which no more than six units may be from Level I. Consult the *Course Listings* section for course prerequisites and limited enrolment courses.

COMBINED B.A. IN INDIGENOUS STUDIES AND ANOTHER SUBJECT

For details see *Combined B.A. in Indigenous Studies and Another Subject* section of this Calendar.

JAPANESE STUDIES

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

Combined Honours in Japanese Studies and Another Subject**REQUIREMENTS**

120 units total (Levels I to IV)

30 units	from the Level I program completed prior to admission into the program
18 units	from JAPANESE 2Z03, 2ZZ3, 3A03, 3AA3, 4A03, 4Z03
6 units	JAPAN ST 2P06
12 units	from JAPANESE 3B03, 3CC3, JAPAN ST 2A03, 2C03, 2F03, 3B03, 3E03, 3H03, 3S03, 3UU3, 4A06, 4B03, 4S03, GEO 3HJ3, HISTORY 4BB6, POL 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 1Z06 and JAPAN ST 2P06 and 12 additional units of Japanese or Japanese Studies courses

DEPARTMENT OF LINGUISTICS AND LANGUAGES

WEB ADDRESS: <http://www.humanities.mcmaster.ca/~modlang>

Honours Arts & Science and Linguistics

(B.Arts.Sc.; See Arts & Science Program)

The Department of Linguistics and Languages offers B.A. Honours programs in:

- Linguistic Cognitive Science
- Linguistics

In addition, Minors are available, using electives only, in: German, Hispanic Studies, Italian, Japanese Language and Linguistics.

Language courses in Polish and Russian are also offered by the Department.

Combined Honours in German and Another Subject

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

NOTES

1. It is highly recommended that students include HISTORY 2113 as an elective in this program.
2. Upon completion of 60 units and with the approval of the Department of Linguistics and Languages and the Office of the Dean of the Faculty of Humanities, one or both terms of Level III of this program may be replaced by courses of study at a university or universities under the Humanities Study Elsewhere Program.

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I Program completed prior to admission into the program
- 36 units Levels II, III or IV German
- 36 units courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
- 18 units Electives to total 120 units

Combined Honours in Hispanic Studies and Another Subject

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

NOTE

Upon completion of 60 units and with the approval of the Department of Linguistics and Languages and the Office of the Dean of the Faculty of Humanities, one or both terms of Level III of this program may be replaced by courses of study at a university or universities under the Humanities Study Elsewhere Program.

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I Program completed prior to admission into the program
- 12 units HISPANIC 2C03, 2L03, 2X03, 2XX3
- 24 units Levels II, III or IV Hispanic
- 36 units courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
- 18 units Electives to total 120 units

Combined Honours in Italian and Another Subject

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

NOTE

Upon completion of 60 units and with the approval of the Department of Linguistics and Languages and the Office of the Dean of the Faculty of Humanities, one or both terms of Level III of this program may be replaced by courses of study at a university or universities under the Humanities Study Elsewhere Program.

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I Program completed prior to admission into the program
- 36 units Levels II, III or IV Italian
- 36 units courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
- 18 units Electives to total 120 units

Honours Linguistics

{2312}

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

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in LINGUIST 1A03 and 1AA3. It is strongly recommended that students include six units of a language other than English in their Level I program.

NOTES

1. In this program students are required to study at least two languages for a total of 24 units of language study. The department has defined four language groups (see below) for this purpose. Of the 24 units, students must take at least six units from one language group of their choice, and 18 units of a language from another group (six units at Level I and 12 units above Level I). Please note that some languages begin at Level II and, thus, may only fulfill the six unit requirement from one language group. Students should consult the Departmental Counsellor in Linguistics in selecting their language of concentration.
 - a) **Romance Languages:**
French, Italian, Spanish
 - b) **Classical:**
Greek, Latin, Sanskrit
 - c) **Other Indo-European Languages:**
German, Polish, Russian
 - d) **Non Indo-European Languages:**
Cayuga, Hebrew, Japanese, Mohawk, Ojibwa
2. Upon completion of 60 units of work and with the approval of the Department of Linguistics and Languages and the Office of the Dean of the Faculty of Humanities, one or both terms of Level III may be replaced by courses of study at a university under the Humanities Study Elsewhere Program.
3. For students concentrating in Applied Linguistics, all 24 units of language study required for the program may be taken in one language.
4. Students who wish to qualify for TESL Certification must complete LINGUIST 4B03, 4E03 and 4TE3.

COURSE LIST 1 - THEORETICAL LINGUISTICS

All Linguistics courses above Level I; and all courses taught in a language other than English; CMST 3E03; MMEDIA 2D03, 2I03, 4C03; PHILOS 2B03, 3E03, 3F03, 4D03; PSYCH 2E03, 2H03, 3A03, 3U03, 3UU3

COURSE LIST 2 - APPLIED LINGUISTICS

All Linguistics courses above Level I (See Note 4 above.); and all courses taught in a language other than English; FRENCH 4E03; MMEDIA 4C03; PSYCH 2C03, 2H03, 3A03, 3U03, 3UU3

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 15 units LINGUIST 2L03, 3A03, 3I03, 3II3, 3M03
- 3 units from LINGUIST 2AA3, 2LL3
- 3 units from LINGUIST 2E03, 3P03, 3X03
- 6 units from LINGUIST 3B03, 3C03
- 3 units from LINGUIST 4LB3, 4LC3, 4M03, 4XX3
- 3 units from LINGUIST 4I03, 4N03, 4R03, 4S03
- 3 units from LINGUIST 4B03, 4D03, 4E03, 4T03
- 12 units from one of the languages (above Level I) as specified in Note 1 above
- 6 units from a second language as specified in Note 1 above
- 18 units from Course List 1 or 2 (See Note 4 above.)
- 18 units Electives

Combined Honours in Linguistics and Another Subject

This program is designed for students who want to combine the scientific study of language with another subject of their choice.

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in LINGUIST 1A03 and 1AA3.

NOTES

1. Students are required to complete 18 units of a language other than English for this program with six units at Level I and 12 units above Level I. Please note however, that some languages begin at Level II. Students are also advised that some languages may not offer sufficient units to meet this 18 unit requirement. Students should consult the Academic Counsellor in Linguistics in selecting their language of concentration.
2. Students whose other subject involves the study of a language may substitute the 12 units of language other than English with 12 units from Course List 1.
3. Upon completion of 60 units of work and with the approval of the Department of Linguistics and Languages, and the Office of the Dean of the Faculty of Humanities, one or both terms of Level III may be replaced by courses of study at a university under the Humanities Study Elsewhere Program.

COURSE LIST 1

All Linguistics courses above Level I; and all courses taught in a language other than English; CMST 3E03; MMEDIA 2D03, 2I03, 4C03; PHILOS 2B03, 3E03, 3F03, 4D03; PSYCH 2E03, 2H03, 3A03, 3U03, 3UU3

REQUIREMENTS

120 units total (Levels I to IV)

30 units	from Level I program completed prior to admission into the program
12 units	from LINGUIST 2AA3, 2E03, 2LL3, 3B03, 3C03, 3P03, 3X03, 4B03, 4D03, 4E03, 4I03, 4M03, 4N03, 4R03, 4S03, 4T03, 4XX3, 4Z03
12 units	from LINGUIST 2L03, 3A03, 3I03, 3I13, 3M03
12 units	from a language other than English, above Level I. (See Notes 1 and 2 above.)
36 units	Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
18 units	Electives to total 120 units

Honours Linguistic Cognitive Science {2313}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in LINGUIST 1A03, 1AA3 and PSYCH 1A03.

NOTES

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

SPEECH AND LANGUAGE PATHOLOGY PREPARATION

GERONTOL 2E03; MATH 1M03 or STATS 1A03; STATS 1CC3; KINESIOL 1Y03, 1YY3; LINGUIST 3B03, 3C03, 3X03, 4SL3; PSYCH 2AA3, 2E03, 2H03, 2RA3, 2RB3, 3A03

Students wishing to enter a graduate program in Speech and Language Pathology should take a total of six units of statistics courses.

LANGUAGE AND SOCIAL LIFE

CMST 3C03, 3D03; FRENCH 3CC3, 4BB3, 4E03, 4H03, 4X03; LINGUIST 2E03, 3P03, 3X03, 4I03, 4M03, 4N03, 4R03, 4S03, 4T03, 4ZZ3; MMEDIA 2D03, 2I03, 3B03, 3D03; PSYCH 2C03

COGNITIVE SCIENCE

FRENCH 3CC3, 4BB3, 4E03, 4H03, 4X03; LINGUIST 2AA3, 2LL3, 4D03, 4LB3, 4LC3, 4XX3, 4Z03, 4ZZ3; MMEDIA 2D03, 3B03, 3D03, 3F03, 3J03; PHILOS 2F03, 3F03, 3M03; PSYCH 2C03, 2D03, 2H03, 3A03, 3AA3, 3BN3, 3HH3, 3I13, 3QQ3, 3VV3, 4BN3, 4Z03

2. At some time during the program, students must meet a laboratory requirement by completing one course from Course List 1 below. Enrolment in Psychology Laboratory courses is limited.
3. In this program students are required to complete 12 units of language courses other than English. Students may choose to complete 12 units of one language or six units of two different languages in order to fulfill this requirement.
4. Students taking French courses as a part of this program must be proficient enough to participate in a classroom environment conducted entirely in French, but will have the option of writing assignments and answering exam questions in English.

COURSE LIST 1

LINGUIST 4D03, 4I13; PSYCH 3EE3, 3LL3, 3QQ3, 3V03

REQUIREMENTS

120 units total (Levels I to IV)

30 units	from the Level I program completed prior to admission into the program
15 units	LINGUIST 2L03, 3A03, 3I03, 3I13, 3M03
3 units	from LINGUIST 3C03, PSYCH 3I13
3 units	from LINGUIST 4B03, 4LB3, 4LC3, 4M03, 4XX3, 4Z03, 4ZZ3
6 units	from LINGUIST 3P03, PHILOS 2B03, 3E03, 3F03
6 units	PSYCH 1AA3, 2H03
6 units	from LINGUIST 3B03, PSYCH 3U03, 3UU3
3 units	from PSYCH 2D03, 2E03, 2F03
3 units	from PSYCH 2RA3, 2RR3, SOC SCI 2J03, STATS 1CC3
12 units	from a language other than English (See Note 3 above.)
3 units	from Course List 1
30 units	Electives

Combined Honours in Linguistic

Cognitive Science and Another Subject

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in LINGUIST 1A03, 1AA3 and PSYCH 1A03.

NOTES

1. At some time during the program, students must meet a laboratory requirement by completing one course from Course List 1 below. Enrolment in Psychology Laboratory courses is limited.
2. Students are not permitted to combine this program with the Combined Honours in Linguistics or Combined Honours in Psychology programs.

COURSE LIST 1

LINGUIST 4D03, 4I13; PSYCH 3EE3, 3LL3, 3QQ3, 3V03

REQUIREMENTS

120 units total (Levels I to IV)

30 units	from the Level I program completed prior to admission into the program
12 units	from LINGUIST 2L03, 3A03, 3I03, 3I13, 3M03
3 units	from LINGUIST 3C03, PSYCH 3I13
3 units	from LINGUIST 4B03, 4LB3, 4LC3, 4M03, 4XX3, 4Z03, 4ZZ3
3 units	from LINGUIST 3P03, PHILOS 2B03, 3E03
6 units	PSYCH 1AA3, 2H03
6 units	from LINGUIST 3B03, PSYCH 3U03, 3UU3
3 units	from PSYCH 2RA3, 2RR3, SOC SCI 2J03, STATS 1CC3
3 units	from Course List 1
36 units	Courses specified for the other subject. (See Note 2 above.)
15 units	Electives

Honours Modern Languages
and Linguistics

{2363}

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

NOTES

1. Students are strongly urged to complete LINGUIST 1A03 and 1AA3 in their Level I program. If not, LINGUIST 1A03 and 1AA3 must be included in Level II of their program.
2. Students entering the program with FRENCH 1Z06 must complete FRENCH 1N06 or 2Z06, in addition to the 18 units of French, above Level I.
3. Upon completion of 60 units and with the approval of the Department of Linguistics and Languages and of the Office of the Dean of the Faculty of Humanities, one or both terms of Level III of this program may be replaced by courses of study at a university or universities under the Humanities Study Elsewhere Program.

COURSE LIST 1

All Linguistics courses above Level I; and all courses taught in a language other than English; MMEDIA 1A03, 2D03, 2I03, 3B03, 3D03, 3E03, 4C03; PHILOS 2B03, 3F03, 4D03; PSYCH 2E03, 2H03, 3A03, 3U03

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 18 units from LINGUIST 2A03, 2AA3, 2E03, 3X03, 4B03, 4D03, 4E03, 4I03, 4M03, 4N03, 4R03, 4S03, 4T03
- 18 units from a language other than English (above Level I)
- 18 units from a second language other than English (above Level I)
- 18 units from Course List 1
- 18 units Electives

Minors**Minor in German**

24 units of German, of which no more than six units may be taken from Level I

Minor in Hispanic Studies

24 units of Hispanic Studies, of which no more than six units may be taken from Level I

Minor in Italian

24 units of Italian, of which no more than six units may be taken from Level I

Minor in Japanese Language

24 units of Japanese, of which no more than six units may be taken from Level I

Minor in Linguistics

24 units of Linguistics, of which no more than six units may be taken from Level I

PEACE STUDIES

WEB ADDRESS: <http://www.humanities.mcmaster.ca/~peace>

Honours Arts & Science and Peace Studies

(B.Arts.Sc.; See Arts & Science Program)

Combined Honours in Peace Studies and Another Subject

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in PEACE ST 1A03 and 1B03.

NOTES

- Students should note that certain courses in Course Lists 1 and 2 have their own disciplinary prerequisites.
- Upon completion of 60 units of work and with the approval of both the Director of Peace Studies and the Office of the Dean of the Faculty of Humanities, one or both terms of Level III of this program may be replaced by courses of study at a university or universities under the Humanities Studies Elsewhere program.

COURSE LIST 1

HISTORY 2G03, 3I13, 3KK3; PEACE ST 2AA3, 2I03, 2I13, 2S03, 3A03, 3B03, 3E06, 3F03, 3I03, 3L03, 3M03, 3MM3, 3N03, 3O03, 3RR3, 3VV3, 3W03, 3X03, 3Y03, 3Z03, 4C03

COURSE LIST 2

ANTHROP 2X03, 3T03; BIOLOGY 4EE3; ECON 2F03, 2L03; LABR ST 2A03, 2C03, 3G03; POL SCI 3AA3, 3KK3, 3Q03, 3Y03; RELIG ST 2H03, 2L03, 2MM3; SOCIOL 3KK3

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission to the program
- 3 units PEACE ST 2A03
- 3 units from ANTHROP 3T03, PEACE ST 3M03, RELIG ST 2H03, SOCIOL 3KK3
- 3 units from PEACE ST 4A03, 4B03, 4D03
- 9 units from Course List 1
- 9 units from Course List 2
- 9 units from Course Lists 1 and 2
- 36 units Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
- 18 units Electives to total 120 units

NOTE

With the permission of the Director of Peace Studies, some courses not listed may be substituted, at the appropriate Level, from Anthropology, Biology, English, History, Indigenous Studies, Labour Studies, Philosophy, Religious Studies, Science and Sociology provided that the course prerequisites are fulfilled.

Minor in Peace Studies**REQUIREMENTS**

24 units total

- 6 units PEACE ST 1A03, 1B03
- 18 units from ANTHROP 2X03, 3T03, ECON 2F03, 2L03, HISTORY 2G03, 3I13, 3KK3, LABR ST 2A03, 2C03, 2D03, 3G03, PEACE ST 2A03, 2AA3, 2I03, 2I13, 2S03, 3A03, 3B03, 3E06, 3F03, 3G03, 3I03, 3L03, 3M03, 3MM3, 3N03, 3O03, 3RR3, 3VV3, 3W03, 3X03, 3Y03, 3Z03, 4A03, 4B03, 4C03, 4D03, POL SCI 3AA3, 3KK3, 3Q03, 3Y03, RELIG ST 2E03, 2H03, 2L03, 2MM3, SOCIOL 3KK3

DEPARTMENT OF PHILOSOPHY

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

Honours Arts & Science and Philosophy

(B.Arts.Sc.; See Arts & Science Program)

Honours Philosophy {2420}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 and an average of at least 7.0 in six units of Level I Philosophy or, if no such course was taken, in six units of work acceptable to the Department of Philosophy.

NOTES

- 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.
- Upon completion of 60 units of work and with the approval of the Department of Philosophy and the Office of the Dean of the Faculty of Humanities, one or both terms of Level III may be replaced by courses of study at a designated university abroad.

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 27 units PHILOS 2A06, 2C06, 3A06, 3G03, 3O03, 4H03
- 3 units PHILOS 2B03
- 3 units Levels II, III or IV Philosophy
- 15 units Levels III or IV Philosophy
- 6 units Level IV Philosophy
- 36 units Electives

Combined Honours in Philosophy and Another Subject

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

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ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 and an average of at least 7.0 in six units of Level I Philosophy or, if no such course was taken, in six units of work acceptable to the Department of Philosophy.

NOTES

1. Students intending to do graduate work in Philosophy are advised to include PHILOS 2B03 in their program.
2. Students are advised to note carefully the prerequisites for all courses. Students are also advised to take note which courses are offered in alternate years.
3. Upon completion of 60 units of work and with the approval of the Department of Philosophy and the Office of the Dean of the Faculty of Humanities, one or both terms of Level III may be replaced by courses of study at a designated university abroad.

REQUIREMENTS

120 units total (Levels I to IV)

30 units	from the Level I program completed prior to admission into the program
12 units	PHILOS 2A06, 2C06
3 units	from HUMAN 2C03, PHILOS 2B03
15 units	Levels III or IV Philosophy
6 units	Level IV Philosophy
36 units	Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
18 units	Electives to total 120 units

Honours Philosophy and Biology (B.A.) {2420050}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 and an average of at least 7.0 in six units of Level I Philosophy (or, if no such course was taken, in six units of work acceptable to the Department of Philosophy) and an average of at least 7.0 in BIOLOGY 1A03 and 1AA3 and six units of Level I Mathematics. Students are cautioned to observe that CHEM 1AA3 is the normal prerequisite for BIOLOGY 2B03 and 2C03, which are required courses in the program. **Enrolment in this program is limited.**

NOTES

1. Students are advised to note carefully the prerequisites for all courses. Students are also advised to take note which courses are offered in alternate years.
2. Upon completion of 60 units of work and with the approval of the Department of Philosophy and the Office of the Dean of the Faculty of Humanities, one or both terms of Level III may be replaced by courses of study at a designated university abroad.

REQUIREMENTS

120 units total (Levels I to IV)

30 units	from the Level I program completed prior to admission into the program
12 units	from BIOCHEM 2EE3, BIOLOGY 2A03, 2B03, 2C03, 2D03, 2EE3, 2F03, CHEM 2E03
24 units	from BIOLOGY 2G03, Levels III or IV Biology
18 units	PHILOS 2A06, 2C06, 3O03, 4H03
3 units	PHILOS 2B03
3 units	from PHILOS 2D03, 2F03, 2G03
3 units	from PHILOS 3G03, 3N03
6 units	Levels III or IV Philosophy
3 units	Level IV Philosophy
18 units	Electives

Honours Philosophy and Mathematics (B.A.) {2320420}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0; and successful completion of MATH 1A03 or 1X03; and a grade of at least B- in MATH 1B03 and either MATH 1AA3 or

1XX3; and an average of at least 7.0 in six units of Level I Philosophy or, if no such course was taken, in six units of work acceptable to the Department of Philosophy.

NOTES

1. Students are advised to note carefully the prerequisites for all courses. Students are also advised to take note which courses are offered in alternate years.
2. Upon completion of 60 units of work and with the approval of the Department of Philosophy and the Office of the Dean of the Faculty of Humanities, one or both terms of Level III may be replaced by courses of study at a designated university abroad.

REQUIREMENTS

120 units total (Levels I to IV)

30 units	from the Level I program completed prior to admission into the program
9 units	MATH 2R03, 2X03, 2XX3
3 units	from MATH 2C03, STATS 2D03
12 units	Levels II, III or IV Mathematics or Statistics which must include MATH 3A03, 3X03
12 units	Levels III or IV Mathematics or Statistics which must include at least one course at Level IV
12 units	PHILOS 2A06, 2C06
3 units	PHILOS 2B03
21 units	Levels III or IV Philosophy
3 units	Level IV Philosophy
15 units	Electives

B.A. in Philosophy {1420}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 3.5 and an average of at least 4.0 in six units of Level I Philosophy.

NOTE

Students are advised to note carefully the prerequisites for all courses. Students are also advised to take note which courses are offered in alternate years.

REQUIREMENTS

90 units total (Levels I to III)

30 units	from the Level I program completed prior to admission into the program
12 units	PHILOS 2A06, 2C06
3 units	from HUMAN 2C03, PHILOS 2B03
3 units	Levels II, III or IV Philosophy
6 units	Levels III or IV Philosophy
36 units	Electives

Minor in Philosophy

24 units	from PHILOS 2A06 and 2C06; and 12 additional units of Philosophy, of which no more than six units may be from Level I.

WOMEN'S STUDIES

WEB ADDRESS: <http://www.humanities.mcmaster.ca/~womensst/>

Honours Arts & Science and Women's Studies

(B.Arts.Sc.; See Arts & Science Program)

Combined Honours B.A. in

Women's Studies and Another Subject

Women's Studies may be taken as a Combined Honours degree or as a Minor. All Women's Studies courses are interdisciplinary, allowing students to explore the relationship between different branches of knowledge and to examine critically different approaches to knowledge construction and theoretical positions in understanding the contributions and social locations of women. Graduates of the Program will be able to choose from a wide career list which includes industrial and government consulting, personnel management, labour relations, education and health care professions. The Program's focus on research prepares students for graduate school.

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including a grade of at least B- in each of WOMEN ST 1A03 and 1AA3 or a grade of at least B- in WOMEN ST 1A06.

NOTES

1. Students who have not taken WOMEN ST 1A03 and 1AA3 (or 1A06) because they have transferred from another university may be considered for admission to the program if they are deemed by the Admissions Committee to have fulfilled requirements equivalent to those courses.
2. In Levels II, III and IV, students must take six units of Women's Studies courses appropriate to their level and six additional units of approved discipline-related courses at each level.
3. The courses required for the Women's Studies portion of the Combined Honours program may not include courses offered in the student's other subject area.

REQUIREMENTS

120 units total (Levels I to IV)

30 units	from the Level I program completed prior to admission to the program
6 units	WOMEN ST 2A03, 2AA3
6 units	from RELIG ST 2SS3, SOCIOL 2Q06, WOMEN ST 2F03, 2FF3, 2H03, 2HH3, 2J03, 2K06, 2L03
6 units	WOMEN ST 3A03, 3AA3
6 units	from LABR ST 3E03, WOMEN ST 3B03, 3BB3, 3DD3, 3E03, 3G03, 3GG3, 3H03, 3HH3, 3I03, 3NN3, 3WW3, 3Z03
6 units	WOMEN ST 4A06
6 units	from HISTORY 4I06, KINESIOL 4T03, SOC WORK 4R03, WOMEN ST 4B03, 4C03, 4J03
36 units	Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
18 units	Elective course work above Level I to total 120 units
- With the permission of the Director of Women's Studies, some courses not listed above may be substituted, at the appropriate level, from: Anthropology, Classics, Comparative Literature, English and Cultural Studies, French, Geography and Earth Sciences, History, Kinesiology, Labour Studies, Philosophy, Religious Studies and Sociology.

Minor in Women's Studies

NOTE

The courses required for the Minor may not include courses offered in the student's other subject area.

REQUIREMENTS

24 units total

6 units	WOMEN ST 1A03, 1AA3 (or 1A06)
18 units	Levels II or III Women's Studies courses as listed under <i>Women's Studies</i> in the <i>Course Listings</i> section of this Calendar
-

FACULTY OF SCIENCE

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Dean of Science

J.P. Capone/B.Sc., Ph.D.

Associate Dean of Science

R.B. Day/B.A., M.A., Ph.D.

Assistant Dean

Joanne Smith/B.A.

Student Advisors

R. Campbell/B.Sc.

T. Gammon/B.A., B.A.

C. Mackenzie/B.A.Sc.

R. Tebbutt/B.A.

The Faculty of Science provides studies through the following Departments/Schools:

- Biochemistry and Biomedical Sciences
- Biology
- Chemistry
- Computing and Software
- Geography and Earth Sciences
- Kinesiology
- Mathematics and Statistics
- Materials Science and Engineering
- Medical Physics and Applied Radiation Sciences
- Physics and Astronomy
- Psychology, Neuroscience and Behaviour

In addition, programs of study are available through the following Interdisciplinary areas:

- Computational Biology
- Life Science
- Molecular Biology
- Origins
- Physical Science

PROGRAMS AND DEGREES

A. Level I Programs

The Faculty of Science offers three Level I programs:

SCIENCE I (LAST OFFERED IN 2007-2008)

MATHEMATICS AND STATISTICS I

MEDICAL RADIATION SCIENCES I

Beginning 2008-2009, in addition to Mathematics and Statistics I and Medical Radiation Sciences I, the following Level I programs will be introduced:

ENVIRONMENTAL AND EARTH SCIENCES I

LIFE SCIENCES I

PHYSICAL SCIENCES I

HONOURS KINESIOLOGY I

PROGRAM NOTES

1. INQUIRY 1SC3 may be taken as an elective.
2. Courses must be selected carefully to meet the admission requirements for entry to Level II of a specific program. (See Faculty of Science program descriptions in this section of the Calendar for Level II program admission requirements.) Pre-registration counselling is strongly advised, and students are asked to contact the Office of the Associate Dean of Science (Studies).
3. SCIENCE 1A00 is a one-hour mandatory Health and Safety course which must be completed by all students completing a Level I course with a laboratory experience.
4. SCIENCE 1B00 is a web-based interactive university survival course for Science students. Students are encouraged to complete this course prior to the start of classes.

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 ¹	Introductory Chemistry I
CHEM 1AA3	Introductory Chemistry II
COMP SCI 1FC3	Mathematics for Computing
COMP SCI 1MA3 ²	Computer Based Problem Solving
COMP SCI 1MD3 ²	Introduction to Programming
COMP SCI 1SA3 ²	Computing Fundamentals
ENVIR SC 1A03 ³	Atmosphere and Hydrosphere
ENVIR SC 1B03 ³	The Living Environment
ENVIR SC 1G03 ³	Earth and the Environment
MATLS 1M03	Structure and Properties of Materials
MATH 1AA3	Calculus for Science II
MATH 1B03	Linear Algebra I
MATH 1C03	Introduction to Mathematical Reasoning
MATH 1D03	Algebra and Geometry
PHYSICS 1B03 ⁴	Mechanics and Waves
PHYSICS 1BA3	Introduction to Modern Physics A
PHYSICS 1BB3	Introduction to Modern Physics B
PHYSICS 1F03	Introduction to Astronomy and Astrophysics
PSYCH 1A03	Introduction to Experimental Psychology
PSYCH 1AA3	The Psychology of Interpersonal Behaviour
STATS 1CC3	Introductory Computer-Aided Statistics

¹ CHEM 1R03 may be completed as an elective for those students who did not complete Grade 12 Chemistry U and who wish to proceed to CHEM 1A03.

² Students with little or no previous computer experience may substitute COMP SCI 1SA3 for COMP SCI 1MA3.

³ ENVIR SC 1G03 provides more Level II course and Level II Earth and Environmental Sciences program choices.

⁴ PHYSICS 1P03, which may be completed as an elective, serves as the prerequisite for PHYSICS 1B03 for those students who did not complete Grade 12 Physics U or who completed it with a grade of less than 60%.

LEVEL I PROGRAMS IN THE FACULTY OF SCIENCE (EFFECTIVE 2007-2008)

SCIENCE I (LAST OFFERED IN 2007-2008) {0710}

Effective 2008-2009, the Science I program will be replaced with three Level I programs: Environmental and Earth Sciences I, Life Sciences I, and Physical Sciences I. See requirements below.

REQUIREMENTS: 30 UNITS

3 units	MATH 1A03
3 units	from MATH 1AA3, 1B03, 1D03, STATS 1CC3
6 units	from BIOLOGY 1A03 or 1AA3; CHEM 1A03, PHYSICS 1B03
12 units	from the Science I Course List
6 units	Electives
1 course	SCIENCE 1B00

MATHEMATICS AND STATISTICS I {0320}

NOTE

Completion of COMP SCI 1MD3 is required for admission to the Honours Mathematics and Computer Science program.

REQUIREMENTS: 30 UNITS

12 units	MATH 1B03, 1C03, 1X03, 1XX3
3 units	from the Science I Course List (see above)
15 units	Electives
1 course	SCIENCE 1B00

MEDICAL RADIATION SCIENCES I {0345}

ENROLMENT IN THIS PROGRAM IS LIMITED.

NOTES

1. As places in the Medical Radiation Sciences program are limited, admission is by selection, and possession of published minimum requirements does not guarantee admission.

- The University reserves the right to grant admission to a limited number of students, and to refuse readmission to any student whose academic performance or general conduct has been unsatisfactory, or who has withdrawn from the program for a period in excess of one academic year.
- Students without a grade of at least 60% in Grade 12 Physics U must complete PHYSICS 1P03 in Term I in order to meet the prerequisite of MEDRADSC 1C03 in Term 2.

REQUIREMENTS: 30 UNITS

- 3 units BIOLOGY 1A03
- 3 units CHEM 1A03
- 6 units KINESIOL 1Y03, 1YY3
- 3 units MATH 1A03
- 9 units MEDRADSC 1A03, 1B03, 1C03
- 3 units STATS 1CC3
- 3 units Electives (See Note 3 above.)
- 1 course SCIENCE 1B00

LEVEL I PROGRAMS IN THE FACULTY OF SCIENCE (EFFECTIVE 2008-2009)

HONOURS BACHELOR OF SCIENCE AND BACHELOR OF SCIENCE PROGRAMS:

ENVIRONMENTAL AND EARTH SCIENCES I {0211}

NOTES

- Students without Grade 12 Calculus and Vectors U must complete MATH 1F03.
- Completion of both BIOLOGY 1A03 and 1M03 is required for some Level II Biology courses.
- BIOLOGY 1P03, which may be completed as an elective, serves as the prerequisite for BIOLOGY 1M03 for those students who did not complete Grade 12 Biology U or who completed it with a grade of less than 60%.
- CHEM 1R03, which may be completed as an elective, serves as the prerequisite for CHEM 1A03 for those students who did not complete Grade 12 Chemistry U.
- CHEM 1A03 must be completed by the end of Level II for the Honours Earth and Environmental Sciences and Honours Geoscience programs.

ENVIRONMENTAL AND EARTH SCIENCES COURSE LIST

ASTRON 1F03; BIOLOGY 1A03; CHEM 1AA3; MATH 1A03, 1AA3, 1B03, 1LS3; MATLS 1M03; PHYSICS 1B03, 1BA3, 1BB3, 1F03, 1L03

REQUIREMENTS: 30 UNITS

- 3 units ENVIR SC 1G03
- 3 units from ENVIR SC 1A03, 1B03
- 3 units from MATH 1A03, 1LS3
- 3 units from BIOLOGY 1M03, PHYSICS 1B03, 1L03 (See Note 2 above.)
- 3 units from CHEM 1A03, 1R03 (See Note 4 above.)
- 9 units from Environmental and Earth Sciences Course List
- 6 units Electives (See Note 1 above.)

LIFE SCIENCES I {0312}

NOTES

- Students without Grade 12 Calculus and Vectors U must complete MATH 1F03.
- Completion of both PSYCH 1A03 and 1AA3 is required for admission to all Psychology programs and all Level II Psychology courses.
- Completion of both CHEM 1A03 and 1AA3 is required for admission to all Biochemistry, Biology and Molecular Biology programs.
- Completion of both BIOLOGY 1A03 and 1M03 is required for some Level II Biology courses.

LIFE SCIENCES COURSE LIST

ASTRON 1F03; BIOLOGY 1A03; CHEM 1A03, 1AA3; COMP SCI 1FC3, 1MA3, 1MD3, 1SA3; ENVIR SC 1A03, 1B03, 1G03; KINESIOL 1Y03, 1YY3; MATH 1A03, 1AA3, 1B03, 1LS3; MATLS 1M03; PHYSICS 1B03, 1BA3, 1BB3, 1L03; PSYCH 1AA3

REQUIREMENTS: 30 UNITS

- 9 units from BIOLOGY 1A03, 1M03, PSYCH 1A03, 1AA3
- 3 units from MATH 1A03, 1LS3
- 3 units from PHYSICS 1B03, 1L03
- 9 units from Life Sciences Course List (See Notes 2, 3 and 4 above.)
- 6 units Electives (See Note 1 above.)

MATHEMATICS AND STATISTICS I {0320}

NOTE

Completion of COMP SCI 1MD3 is required for admission to the Honours Mathematics and Computer Science program.

REQUIREMENTS: 30 UNITS

- 12 units MATH 1B03, 1C03, 1X03, 1XX3
- 3 units from the Science I Course List (See above.)
- 15 units Electives

PHYSICAL SCIENCES I {0435}

NOTES

- Completion of both BIOLOGY 1A03 and 1M03 is required for admission to Honours Medical and Health Physics or Honours Physics (Biophysics Specialization).
- MATH 1B03 must be completed by the end of Level II, however, students are strongly encouraged to include it in Level I.

PHYSICAL SCIENCES COURSE LIST

ASTRON 1F03; BIOLOGY 1A03, 1M03; COMP SCI 1FC3, 1MA3, 1MD3, 1SA3; ENVIR SC 1A03, 1B03, 1G03; KINESIOL 1Y03, 1YY3; MATH 1B03; MATLS 1M03; PHYSICS 1L03; PSYCH 1A03, 1AA3

REQUIREMENTS: 30 UNITS

- 6 units CHEM 1A03, 1AA3
- 6 units MATH 1A03, 1AA3
- 3 units PHYSICS 1B03
- 3 units from PHYSICS 1BA3, 1BB3
- 6 units from Physical Science Course List (See Note 1 above.)
- 6 units Electives

HONOURS BACHELOR OF SCIENCE KINESIOLOGY PROGRAM:

HONOURS KINESIOLOGY I {0309}

ENROLMENT IN THIS PROGRAM IS LIMITED.

Effective 2008-2009, the Faculty will offer an Honours Bachelor of Science Kinesiology program. This direct entry program will replace the existing Honours Bachelor of Science (Hon. B.Sc.) degree program currently obtained by Kinesiology students registered in the Faculty of Science.

NOTES

- Application is made to the Honours Kinesiology I program.
- In addition to the Honours Bachelor of Science Kinesiology, the Department of Kinesiology offers an Honours Bachelor of Kinesiology as a program option beyond Level I for Kinesiology students. For further information and program requirements see *Department of Kinesiology* listing in the *Faculty of Social Sciences* section of this Calendar. Both programs provide students the opportunity to complete courses required for various professional degree programs. Students are strongly encouraged to seek advice in determining which program option is best suited for them.
- Kinesiology students intending to complete the Hons.B.Sc.Kinesiology program, who do not have credit in Grade 12 Calculus and Vectors U, should complete MATH 1F03 in Level I.
- Completion of MATH 1A03 or 1LS3 may be deferred until Level II or beyond.

REQUIREMENTS: 30 UNITS

- 18 units KINESIOL 1A03, 1AA3, 1C03, 1E03, 1F03, 1G03
- 3 units from MATH 1A03, 1LS3 (See Note 4 above.)
- 9 units Electives (See Note 3 above.)

BACHELOR OF MEDICAL RADIATION SCIENCES PROGRAM:

MEDICAL RADIATION SCIENCES I {0345}

ENROLMENT IN THIS PROGRAM IS LIMITED.**NOTES**

- Students without Grade 12 Calculus and Vectors U must complete MATH 1F03.
- Students without Grade 12 Physics U must complete PHYSICS 1L03.
- As places in the Medical Radiation Sciences program are limited, admission is by selection, and possession of published minimum requirements does not guarantee admission.

4. The University reserves the right to grant admission to a limited number of students and to refuse readmission to any student whose academic performance or general conduct has been unsatisfactory, or who has withdrawn from the program for a period in excess of one academic year.

REQUIREMENTS: 30 UNITS

- 3 units BIOLOGY 1A03
 6 units KINESIOLOGY 1Y03, 1YY3
 3 units MATH 1A03
 12 units MEDRADSC 1A03, 1B03, 1C03, 1D03
 6 units Electives (See Notes 1 and 2 above.)

B. Degree Programs**Honours Bachelor of Science Programs**

Most Departments or Schools offer an Honours B.Sc. Program and one or more Honours B.Sc. Programs with Specialization. An Honours B.Sc. requires the completion of a set of 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 courses required for the Honours program as well as designated upper level courses in the specialization. Please refer to departmental program descriptions for details.

There are also four Honours Programs that provide a breadth of study in science. Each program requires a concentration of studies from one of the four areas of science: Geoscience, Life Science, Mathematical Science or Physical Science. Students interested in the Honours Geoscience program are encouraged to see *School of Geography and Earth Sciences* in this section of the Calendar. Students interested in the Honours Life Science program are encouraged to see *Honours Life Science Program in Interdisciplinary Programs* in section of the Calendar. Students interested in Honours Mathematical Science are encouraged to see *Department of Mathematics and Statistics* in this section of the Calendar. Students interested in the Honours Physical Science program are encouraged to see *Honours Physical Science in Interdisciplinary Programs* in this section of the Calendar.

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

ORIGINS RESEARCH SPECIALIZATION

The Specialization in Origins Research is designed to re-introduce Natural Science to students through various themes. This specialization may be combined with some B.Sc. Honours programs. See *Origins Research Specialization in Interdisciplinary Programs* in this section of the Calendar for more information.

CO-OP PROGRAMS

The Faculty of Science has Cooperative Education programs, beginning in Level III, in Honours Biochemistry, Honours Biology (Genetics Specialization), Honours Biology and Pharmacology, Honours Chemistry, Honours Earth and Environmental Sciences (last available in 2008-2009), Honours Mathematics and Statistics, Honours Medical and Health Physics, and Honours Physics.

Co-op programs have limited enrolment and admission is by selection. Please see the admission statement for each program in this section of the Calendar. Employment must be full-time during the work term. Students enrolled in the Co-op programs must be registered in full-time studies, including all prescribed courses, during the academic terms of their program (a minimum of 24 units in a full-term; and at least 12 units in a half-term) and will be charged per unit registered. An additional Science Co-op fee will be charged for each academic term of a Co-op program. With written permission from the work term supervisor, academic work may be taken during each four-month period of a work term and the student will be responsible for the additional tuition.

For further information, please consult Science Career and Cooperative Education in the Faculty of Science.

INDUSTRIAL INTERNSHIPS

The Faculty of Science offers students the opportunity to participate in 12-16 month full-time paid work placements in industry that provide students with technical work experience related to their academic curriculum. Internship placements are available to students registered as full time students in good standing in Level II or III of an Honours B.Sc. program and who will have at least 24 units left to complete upon their return. Students who qualify complete pre-employment preparation sessions. Students compete for placements with participating companies through an application and interview process. A fee is assessed following the start of the placement.

For further information, please consult Science Career and Cooperative Education in the Faculty of Science. For Computer Science Internships, please consult the Associate Dean of Science (Studies) or Engineering Co-op and Career Services in the Faculty of Engineering.

MINORS

Within the Faculty of Science, minors are available to students registered in an honours program only. In addition to the University's regulations governing the designation of a Minor, all Departments in the Faculty of Science require the inclusion of at least six units of Level III or IV courses to complete a Minor in a Science subject.

Depending on the student's program, there may be certain minors which are excluded. Please see the Program Notes for individual programs in this section of the Calendar.

Please see *Minors* in the *General Academic Regulations* section of this Calendar for further information. All courses have an enrolment capacity and the Faculty cannot guarantee registration in courses, even when all requisites have been met. Therefore, the completion of a Minor is not guaranteed.

Minors offered by the Faculty of Science include:

- Astronomy
- Biochemistry
- Biology
- Chemistry
- Computer Science
- Earth Science
- Environmental Science
- Geographical Information Systems (GIS)
- Mathematics and Statistics
- Physics
- Psychology

Bachelor of Science Programs

Three-level B.Sc. programs offered by the Faculty of Science include: Geoscience, Life Science, Mathematical Science and Physical Science. Students interested in the Geoscience program are encouraged to see *School of Geography and Earth Sciences* in this section of the Calendar. Students interested in the Life Science program are encouraged to see *B.Sc. in Life Science in Interdisciplinary Programs* in this section of the Calendar. Students interested in the Mathematical Science program are encouraged to see *Department of Mathematics and Statistics* in this section of the Calendar. Students interested in the Physical Sciences are encouraged to see *B.Sc. in Physical Science in Interdisciplinary Programs* in this section of the Calendar.

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

ACADEMIC REGULATIONS**STUDENT ACADEMIC RESPONSIBILITY**

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

ACCESS TO COURSES

All undergraduate courses at McMaster University have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that they are able to complete program admission requirements, course requisites, and courses required for their program of studies in a timely manner. Unless otherwise specified, registration is on a first-come basis and in some cases priority is given to students in particular programs or Faculties. When students are selecting from a list of required courses, access to a specific course is not guaranteed when there is another course available to meet a specific program requirement. All students are encouraged to register as soon as MUGSI/SOLAR is available to them. In addition, in the Faculty of Science, there are two types of courses for which permission must be obtained prior to registration. For these courses, students will be given seat authorizations rather than being admitted on a first-come basis. See *Limited Enrolment Courses* in this section of the Calendar for more information.

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

ADMISSION TO LEVEL II PROGRAMS

All Level I students who wish to be reviewed for admission to a Level II program in the Faculty of Science for the following Fall/Winter session must submit an *Application for Admission to Level II* through MUGSI/SOLAR (Student On-Line Academic Registration) by the University stated deadline (normally in early April). Students may rank up to four program choices and will be notified on their grade reports in June of their eligibility for the Level II programs.

Level I students must meet the admission criteria for a Level II program according to the Calendar in effect when they registered for Level I. Students must follow the program requirements of the Calendar in force when they enter Level II, except when a later Calendar explicitly modifies such requirements.

Students who have a *Result of Session of May Continue* but who do not achieve the admission requirements for any Level II program may continue in the Faculty of Science, or apply to transfer to another Faculty.

LIMITED ENROLMENT PROGRAMS

Admission at Level II (and above) is limited for the following programs:

- Honours Biochemistry (Effective 2008-2009)
- Honours Biochemistry (Biotechnology and Genetic Engineering Specialization)
- Honours Biochemistry (Molecular Biology Specialization)
- Honours Biology (Effective 2008-2009)
- Honours Biology (Biodiversity Specialization) (Effective 2008-2009)
- Honours Biology (Genetics Specialization) (Effective 2008-2009)
- Honours Biology and Mathematics (Effective 2008-2009)
- Honours Biology (Microbiology and Biotechnology Specialization)
- Honours Biology (Physiology Specialization)
- Honours Biology and Psychology
- Honours Computational Biology (Effective 2008-2009)
- Honours Molecular Biology
- Honours Psychology
- Honours Psychology (Behavioural Neuroscience Specialization)
- Honours Psychology (Cognition and Perception Specialization)
- Honours Psychology (Developmental Specialization)
- Honours Psychology (Evolution and Social Behaviour Specialization)
- All programs combined with the Origins Research Specialization
- All Co-op programs, beginning at Level III, are limited enrolment.

REINSTATEMENT

A student who *may not continue* at the University may apply for reinstatement. Application for reinstatement must be made to the Office of the Registrar using the Reinstatement Request Form by the deadline for the session. See the *Sessional Dates* section of this Calendar. Reinstatement forms will be carefully reviewed and

the evidence considered will include the student's academic performance before and after admission to McMaster, a letter of explanation supported by two letters of reference and other appropriate documentation. **Reinstatement is not automatic or guaranteed.** Decisions are normally made after June 30 for September entry. Effective September 1997, the Cumulative Average for students who are reinstated is reset to 0.0 on zero units. Credit is retained for courses in which passing grades have been achieved. **Note: If at a review after reinstatement the Cumulative Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.** Former Medical Radiation Sciences students will be considered for reinstatement to their program upon completion of a minimum of 24 units of university work taken on a full-time basis in a non-Medical Radiation Sciences program with a minimum average of 7.0 (B-). Application forms are available from the Office of the Associate Dean of Science (Studies) or the Department of Medical Physics and Applied Radiation Sciences. The application deadline is April 30 for September entry. Reinstatement is not guaranteed.

DEADLINES

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

LIMITED ENROLMENT COURSES

The Faculty of Science has two types of courses with enrolment limits and students must be aware of the following:

1. Courses requiring permission:

These courses have a prerequisite of: *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.

2. Courses requiring pre-registration preferential ballot:

The Psychology, Neuroscience and Behaviour Department pre-registration ballot will be done in two phases. The first phase will include the thesis courses (PSYCH 4D06, 4D09) and the Individual Study courses (PSYCH 2QQ3, 3Q03, 3QQ3, 4Q03, 4QQ3). Students wishing to take these courses must complete and submit a ballot by **mid February**. Students will be informed of the outcome of the first phase by **mid March**. The second phase will include lab courses (PSYCH 3BL3, 3EE3, 3L03, 3LL3, 3S03, 3V03) and limited enrolment courses (PSYCH 3BN3, 4F03, 4J03, 4R03, 4Y03). Students wishing to take these courses must complete and submit a ballot by **mid April**. Specific dates will be announced during the Fall term. Ballots can be obtained from the Department of Psychology, Neuroscience and Behaviour's web site at <http://www.mcmaster.ca/psychology>. Priority will be given to students registered in Honours Psychology and the Combined Honours Psychology programs.

WORKLOAD

All programs in the Faculty of Science may be taken by full-time and part-time students, with the exception of the Honours Co-op programs. Students enrolled in Co-op programs must maintain a full academic load during the study terms of their program.

Students must maintain a full academic load during the Fall/Winter session to be eligible for scholarships available to full-time students.

Students are expected to avoid timetable conflicts among their courses, and students on a full academic load should ensure the number of courses is balanced in each term.

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

FIELD COURSES

Field courses are offered through the Departments of Biology, the Medical Physics and Applied Radiation Sciences Unit and the School of Geography and Earth Sciences. Some of these courses are taken outside of 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.

LETTER OF PERMISSION

All students in good academic standing with the exception of students registered in second degree programs, may apply to the Office of the Associate Dean of Science (Studies) to take courses at another university on Letter of Permission. Students must achieve a grade of at least C- for transfer of credit. The transcript designation reads COM, indicating *complete*, when a grade of C- or better is attained, or NC, indicating *not complete*, when a grade of less than C- is attained.

Required courses given by the department offering the program may not be taken elsewhere unless departmental approval is given. 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.

STUDENT EXCHANGES

McMaster University has agreements with institutions in Canada and abroad including Australia, France and the United Kingdom to provide students with the opportunity to participate in an exchange program for one year or term. Exchanges allow students to gain a varied perspective on their course of study and enhance their professional and personal goals. In addition, exchange programs offer students the most inexpensive means of studying abroad as students participating in these exchanges avoid the foreign fees by paying fees to McMaster.

All students must have completed at least one year of continuous study and be in good standing to be eligible to participate in an exchange. In most cases, students who participate in exchange programs go abroad for the third level of an Honours program.

Students interested in these opportunities should begin discussions with the Office of the Associate Dean of Science (Studies) about one year before they plan to enroll elsewhere. Students must propose and submit an academic program to their Department for approval. Academic approval must be completed by the end of February for registration in the following Fall/Winter session. In certain cases, students may be recommended for the Deans' Honour List on the basis of work undertaken while on exchange.

For further information please see *International Study* in the *General Academic Regulations* section in this Calendar. Information concerning exchanges can also be found in the *Academic Facilities, Student Services and Organizations* section of this Calendar under the heading *Centre for Student Development, International Student Services*.

Acceptance to the Ontario and University-wide Exchange Programs is by recommendation. Application forms can be obtained from:

Centre for Student Development

Student Exchanges

Gilmour Hall, Room 104

Telephone: (905) 525-9140, extension 24748

TRANSFERS

Science students may be permitted to transfer between programs or students in other Faculties may apply to transfer to a program in the Faculty of Science provided they have obtained a 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 (Studies).

TRANSFER PROCEDURES

Students in Levels II or III who wish to transfer to another program in the Faculty of Science must speak with an Academic Advisor in the Office of the Associate Dean (Studies).

GRADUATION**From Honours B.Sc. and B.Sc. Programs**

To graduate from a program, students must meet all course requirements for their degree program.

The requirements for graduation from these programs are described under the heading *Graduation* in the *General Academic Regulations* section in this Calendar.

Transferring to Graduate with a Three-Level**B.Sc. Degree from an Honours B.Sc. Program**

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

DEPARTMENT OF BIOCHEMISTRY AND BIOMEDICAL SCIENCES

WEB ADDRESS: <http://www.fhs.mcmaster.ca/biochem/>

Honours Arts & Science and Biochemistry

(B.Arts.Sc; See Arts & Science Program)

Honours Life Science

(See Interdisciplinary Programs)

**NOTES APPLICABLE TO ALL HONOURS
BIOCHEMISTRY PROGRAMS**

1. In addition to the Honours Biochemistry program, the Department offers two specializations. The Honours program has a specified set of basic requirements and a wide choice of electives (including those from outside the Faculty of Science), allowing for interdisciplinary studies or the opportunity to complete a Minor in another subject. Alternatively, students may wish to select one of the following specializations which are strongly recommended for students intending to pursue graduate studies.

- Biotechnology and Genetic Engineering Specialization
- Molecular Biology Specialization

Honours Biochemistry may also be combined with the Origins Research Specialization.

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

2. Transfer between programs is possible at any time, subject to satisfying the admission requirements and availability of space.

Honours Biochemistry

{2040802}

NOTES

1. Students who have not completed PHYSICS 1B03 will be considered for admission, however, completion of the course is required by the end of Level II.
2. While STATS 1CC3 is strongly recommended, students will also be considered for admission if they have completed MATH 1A03 instead of STATS 1CC3.

ADMISSION

2007-2008 ONLY: Completion of any Level I program with a Cumulative Average of at least 6.0 including:

6 units	BIOLOGY 1A03, 1AA3
6 units	CHEM 1A03, 1AA3
3 units	MATH 1A03
3 units	PHYSICS 1B03 (See Note 1 above.)
3 units	STATS 1CC3 (See Note 2 above.)
3 units	from Science I Course List

A grade of at least C+ in four of BIOLOGY 1A03, 1AA3, CHEM 1A03, 1AA3 and MATH 1A03 is required.

EFFECTIVE 2008-2009: Enrolment in this program will be limited. Admission is by selection but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including completion of all courses with minimum grades listed above.

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. BIOLOGY 2B03 may be deferred until Level III, however, students planning to apply for admission to a Biochemistry Co-op program must take BIOLOGY 2B03 in Level II.
3. A Minor in Biology or Chemistry is not permitted in the Honours Biochemistry program.
4. Students are reminded that biochemical laboratory experience is highly valuable in many careers. The laboratory course BIOCHEM 2L06 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 3A03.

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

18 units BIOCHEM 2B03, 2BB3, 2L06, BIOLOGY 2B03 (See Note 2 above.), CHEM 2R03
 6 units from either CHEM 2OA3 and 2OB3; or CHEM 2BA3 and 2BB3
 6 units Electives

LEVEL III: 30 UNITS

9 units BIOCHEM 3D03, BIOLOGY 2C03, CHEM 2N03
 21 units Electives

LEVEL IV: 30 UNITS

6 units BIOCHEM 4E03, 4N03
 3 units from BIOCHEM 3A03, 4C03
 3 units from BIOCHEM 3A03, 3H03, 3N03, 4H03, 4Q03
 6 units Levels III, IV Biochemistry, BIOLOGY 3O03, 4V03, HTH SCI 3I03, MOL BIOL 4H03
 12 units Electives

Honours Biochemistry {2040806} (Biotechnology and Genetic Engineering Specialization)

1. Students who have not completed PHYSICS 1B03 will be considered for admission, however, completion of the course is required by the end of Level II.
2. While STATS 1CC3 is strongly recommended, students will also be considered for admission if they have completed MATH 1AA3 instead of STATS 1CC3.

ADMISSION

Enrolment is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:

6 units BIOLOGY 1A03, 1AA3
 6 units CHEM 1A03, 1AA3
 3 units MATH 1A03
 3 units PHYSICS 1B03 (See Note 1 above.)
 3 units STATS 1CC3 (See Note 2 above.)
 3 units from Science I Course List

A grade of at least C+ in four of BIOLOGY 1A03, 1AA3, CHEM 1A03, 1AA3 and MATH 1A03 is required.

NOTES

1. Completion of one of BIOCHEM 4B06, 4F09, 4P03 is required in Level IV. Students who do not obtain the minimum Cumulative Average as stated in the prerequisites, may request a requisite waiver from the Undergraduate Associate Chair. Students denied permission may not continue in the program and may apply to transfer to the Honours Biochemistry program.
2. Students who have obtained appropriate research experience may request permission from the Department to take three units of Levels III, IV Biochemistry instead of BIOCHEM 3P03.
3. Students who have already completed BIOCHEM 4K03 are not required to complete BIOCHEM 4N03.

REQUIREMENTS

120-121 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

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

LEVEL III: 30-31 UNITS

21 units BIOCHEM 3D03, 3P03, 4LL3, BIOLOGY 2C03, 2EE3, CHEM 2N03, 3FF3 (See Note 2 above.)
 3-4 units Levels III, IV Biochemistry, Biology, Chemistry, CHEM ENG 3K04, 3BK3, MOL BIOL 4H03
 6 units Electives

LEVEL IV: 30 UNITS (2007-2008 ONLY)

15 units BIOCHEM 4E03, 4H03, 4LL3, 4N03, BIOLOGY 3O03 (See Note 3 above.)
 9 units Levels III, IV Biochemistry, Biology, Chemical Engineering, Chemistry, MOL BIOL 4H03, which must include one of BIOCHEM 4B06, 4F09, 4P03 (See Note 1 above.)
 6 units Electives

LEVEL IV: 30 UNITS (EFFECTIVE 2008-2009)

12 units BIOCHEM 4E03, 4H03, 4N03, BIOLOGY 3O03
 12 units Levels III, IV Biochemistry, Biology, Chemical Engineering, Chemistry, MOL BIOL 4H03, which must include one of BIOCHEM 4B06, 4F09, 4P03 (See Note 1 above.)
 6 units Electives

Honours Biochemistry {2040884} (Computational and Physical Biochemistry Specialization)

The Honours Biochemistry (Computational and Physical Biochemistry Specialization) is no longer available. Level I students who intended to register in this program should contact the Office of the Associate Dean of Science (Studies) to discuss an alternate choice.

Honours Biochemistry {2040804} (Molecular Biology Specialization)

NOTES

1. Students who have not completed PHYSICS 1B03 will be considered for admission, however, completion of the course is required by the end of Level II.
2. While STATS 1CC3 is strongly recommended, students will also be considered for admission if they have completed MATH 1AA3 instead of STATS 1CC3.

ADMISSION

Enrolment is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:

6 units BIOLOGY 1A03, 1AA3
 6 units CHEM 1A03, 1AA3
 3 units MATH 1A03
 3 units PHYSICS 1B03 (See Note 1 above.)
 3 units STATS 1CC3 (See Note 2 above.)
 3 units from Science I Course List

A grade of at least C+ in four of BIOLOGY 1A03, 1AA3, CHEM 1A03, 1AA3 and MATH 1A03 is required.

NOTES

1. Completion of one of BIOCHEM 4B06, 4F09, 4P03 is required in Level IV. Students who do not obtain the minimum Cumulative Average as stated in the prerequisites, may request a requisite waiver from the Undergraduate Associate Chair. Students denied permission may not continue in the program and may apply to transfer to the Honours Biochemistry program.
2. Students who have obtained appropriate research experience may request permission from the Department to take three units of Level III, IV Biochemistry instead of BIOCHEM 3P03.

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

18 units BIOCHEM 2B03, 2BB3, 2L06, BIOLOGY 2B03, CHEM 2R03

6 units from CHEM 2OA3 and 2OB3; or CHEM 2BA3 and 2BB3

6 units Electives

LEVEL III: 30 UNITS

18 units BIOCHEM 3C03, 3D03, 3P03, BIOLOGY 2C03, CHEM 2N03, 3FF3 (See Note 2 above.)

3 units Levels III, IV Biochemistry, Biology, Chemistry, MOL BIOL 4H03

9 units Electives

LEVEL IV: 30 UNITS

12 units BIOCHEM 4E03, 4EE3, 4N03, BIOLOGY 3O03

12 units Levels III, IV Biochemistry, Biology, Chemistry, MOL BIOL 4H03, which must include one of BIOCHEM 4B06, 4F09, 4P03 (BIOCHEM 4S03, 4Y03 are recommended.) (See Note 1 above.)

6 units Electives

Honours Biochemistry {2040412} (Origins Research Specialization)

ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including completion of all courses with minimum grades.

6 units BIOLOGY 1A03, 1AA3

6 units CHEM 1A03, 1AA3

3 units MATH 1A03

3 units PHYSICS 1B03

3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3

3 units from ASTRON 1F03, PHYSICS 1BA3, 1BB3

A grade of at least C+ in four of BIOLOGY 1A03, 1AA3, CHEM 1A03, 1AA3 and MATH 1A03 is required.

NOTE

Completion of ORIGINS 2B03, 2FF3 and 2S03 is required by the end of Level III.

ORIGINS COURSE LIST

ORIGINS 3A03, 3B03, 3C03, 3D03, 3E03, 3F03

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

18 units BIOCHEM 2B03, 2BB3, 2L06, BIOLOGY 2B03, CHEM 2R03

6 units from CHEM 2OA3 and 2OB3; or CHEM 2BA3 and 2BB3

3 units from ORIGINS 2B03, 2FF3 (See Note above.)

3 units ORIGINS 2S03

LEVEL III: 30 UNITS

9 units BIOCHEM 3D03, BIOLOGY 2C03, CHEM 2N03

3 units from ORIGINS 2B03, 2FF3

6 units from the Origins Course List

3 units ORIGINS 3S03

9 units Electives

LEVEL IV: 30 UNITS

6 units BIOCHEM 4E03, 4N03

3 units from BIOCHEM 3A03, 4C03

3 units from BIOCHEM 3H03, 3N03, 4H03, 4Q03

6 units Levels III, IV Biochemistry, BIOLOGY 3O03, HTH SCI 3I03, MOL BIOL 4H03

9 units ORIGINS 4A09

3 units Electives

Honours Biochemistry Co-op Programs

Students who are entering Level III Honours Biochemistry Co-op have a choice between two specializations:

- Molecular Biology Specialization;
- Biotechnology and Genetic Engineering Specialization

Enrolment in these programs is limited. Selection is based on academic achievement and an interview but requires, as a minimum, a Cumulative Average of at least 7.0 and completion of either Level II Honours Biochemistry or Honours Molecular Biology.

Information about the program and the selection procedure may be obtained from Science Career and Cooperative Education.

Honours Biochemistry {2046} (Biotechnology and Genetic Engineering Specialization Co-op)

ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement and an interview but requires, as a minimum, a Cumulative Average of at least 7.0 and completion of either Level II Honours Biochemistry or Honours Molecular Biology.

NOTES

1. This is a five-level (year) co-op program which includes two eight-month work terms which must be spent in Biochemistry related placements.
2. Students must be registered full-time and take a full academic workload, as prescribed by Level and Term.
3. Students are required to complete SCIENCE 2C00, a Work Orientation course, before the first work placement.
4. There are Level II and III prerequisites for many Level III and IV courses. The prerequisites should be considered when choosing Level II and III courses.
5. Students who have obtained appropriate research experience may request permission from the Department to take three units of Levels III, IV Biochemistry instead of BIOCHEM 3P03.
6. Students who have received exemption from BIOCHEM 3P03 have the option of registering in BIOCHEM 4B06 in Level IV instead of registering in BIOCHEM 4P03 in Term 2 of Level V.

REQUIREMENTS

120 units total (Levels I to V), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units Completion of any Level II Honours Biochemistry or the Honours Molecular Biology program, including completion of BIOLOGY 2B03

LEVEL III

Consists of Academic Term 1 (Fall) and completion of the first eight-month work term, Term 2 (Winter) and Summer Term

TERM 1 (FALL): 15 UNITS

9 units BIOCHEM 3D03, BIOLOGY 2C03, 2EE3

6 units Electives, which must include CHEM ENG 2B03 if not completed

1 course SCIENCE 2C00

TERM 2 (WINTER) AND SUMMER

Work Term (eight-month)

LEVEL IV

Consists of Academic Term 1 (Fall) and Term 2 (Winter), and the first half of the second eight-month work term, Summer Term

TERMS 1 AND 2 (FALL AND WINTER): 30-31 UNITS

18 units BIOCHEM 3P03, 4E03, 4H03, BIOLOGY 3O03, CHEM 2N03, 3FF3 (See Note 5 above.)

0-6 units BIOCHEM 4B06 (See Notes 5 and 6 above.)

3-10 units Levels III, IV Biochemistry, Biology, Chemistry, CHEM ENG 3BK3, 3K04, MOL BIOL 4H03

3 units Electives

SUMMER

Work Term

LEVEL V

Consists of completion of the second half of the second eight-month work term, Term 1 (Fall) and 15 units Academic, Term 2 (Winter)

TERM 1 (FALL)

Work Term

TERM 2 (WINTER): 15 UNITS

6 units BIOCHEM 4LL3, 4N03

0-3 units BIOCHEM 4P03 (required if BIOCHEM 4B06 not completed in Level IV)

6-9 units Electives

Honours Biochemistry {2045}
(Molecular Biology Specialization Co-op)**ADMISSION**

Enrolment in this program is limited. Selection is based on academic achievement and an interview but requires, as a minimum, a Cumulative Average of at least 7.0 and completion of either Level II Honours Biochemistry or Honours Molecular Biology.

NOTES

1. This is a five-level (year) co-op program which includes two eight-month work terms which must be spent in Biochemistry related placements.
2. Students must be registered full-time and take a full academic workload, as prescribed by Level and Term.
3. Students are required to complete SCIENCE 2C00, a Work Orientation course, before the first work placement.
4. There are Level II and III prerequisites for many Level III and IV courses. The prerequisites should be considered when choosing Level II and III courses.
5. Students who have obtained appropriate research experience may request permission from the Department to take three units of Levels III, IV Biochemistry instead of BIOCHEM 3P03.
6. Students who have received exemption from BIOCHEM 3P03 have the option of registering in BIOCHEM 4B06 in Level IV instead of registering in BIOCHEM 4P03 in Term 2 of Level V.

REQUIREMENTS

120 units total (Levels I to V), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units Completion of any Level II Honours Biochemistry or the Honours Molecular Biology program, including completion of BIOLOGY 2B03

LEVEL III

Consists of Academic Term 1 (Fall) and completion of the first eight-month work term, Term 2 (Winter) and Summer Term

TERM 1 (FALL): 15 UNITS

6 units BIOCHEM 3D03, BIOLOGY 2C03

3 units Levels III, IV Biochemistry, Biology, Chemistry, MOL BIOL 4H03

6 units Electives

1 course SCIENCE 2C00

TERM 2 (WINTER) AND SUMMER

Work Term (eight-month)

LEVEL IV

Consists of Academic Term 1 (Fall) and Term 2 (Winter), and the first half of the second eight-month work term, Summer Term

TERMS 1 AND 2 (FALL AND WINTER): 30 UNITS

18 units BIOCHEM 3C03, 3P03, 4E03, BIOLOGY 3O03, CHEM 2N03, 3FF3 (See Note 5 above.)

0-6 units BIOCHEM 4B06 (See Notes 5 and 6 above.)

3-9 units Levels III, IV Biochemistry, Biology, Chemistry (BIOCHEM 4EE3, 4S03 are recommended.)

3 units Electives

SUMMER

Work Term

LEVEL V

Consists of completion of the second-half of the second eight-month work term, Term 1 (Fall) and 15 units Academic Term 2 (Winter)

TERM 1 (FALL)

Work Term

TERM 2 (WINTER): 15 UNITS

6 units BIOCHEM 4EE3, 4N03

0-3 units BIOCHEM 4P03 (required if BIOCHEM 4B06 not completed in Level IV)

6-9 units Electives (BIOCHEM 4Y03 is recommended.)

	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
	Term 1				Term 2				Summer Term			
LEVEL 3	15 units from Academic Level III + SCIENCE 2C00				Work Term							
	Term 1				Term 2				Summer Term			
LEVEL 4	30-31 units from Academic Levels III and IV								Work Term			
	Term 1				Term 2				Summer Term			
LEVEL 5	Work Term				15 units form Academic Level IV							

Minor in Biochemistry**REQUIREMENTS**

24 units total

6 units from CHEM 1A03, 1AA3

6 units from CHEM 20A3 and 20B3; or CHEM 2BA3 and 2BB3

6 units from BIOCHEM 2B03, 2BB3, 2EE3, 3B03, 3BB3, 3D03, 3G03

6 units Levels III, IV Biochemistry

DEPARTMENT OF BIOLOGYWEB ADDRESS: <http://www.science.mcmaster.ca/biology/>**Honours Arts & Science and Biology**

(B.Arts Sc.; See Arts & Science Program)

Honours Life Science

(See Interdisciplinary Programs)

Honours Molecular Biology

(See Interdisciplinary Programs)

Honours Philosophy and Biology

(B.A.; See Faculty of Humanities, Department of Philosophy)

Honours Biology**NOTES APPLICABLE TO ALL HONOURS BIOLOGY PROGRAMS**

1. In addition to the Honours Biology program, the Department offers four specializations. All options are suitable for students wishing to pursue graduate studies in Biology. While the Honours program has a specified set of basic requirements and a wide choice of electives (including those from outside the Faculty of Science), allowing for interdisciplinary studies or the opportunity to complete a Minor in another subject, the specializations reflect the Department's research strengths. The specializations currently available are:
 - Biodiversity Specialization
 - Genetics Specialization
 - Microbiology and Biotechnology Specialization
 - Physiology Specialization
 Honours Biology may also be combined with the Origins Research Specialization.
2. Transfer between programs is possible at any time, subject to satisfying the admission requirements and availability of space.
3. There are Level II and III prerequisites for many Level III and IV courses. The prerequisites should be considered when choosing Level II and III courses.
4. Students interested in registering in more statistics courses are encouraged to complete STATS 2MA3 in addition to STATS 1CC3. Those students wishing to include more mathematical statistics may replace STATS 1CC3, 2MA3 with STATS 2D03, 2MB3. In this case, students are advised to register in MATH 1B03 or 1D03 in Level I.

5. Admission to Honours Biology and Pharmacology (Co-op) requires completion of CHEM 2OA3 and 2OB3. Students are strongly recommended to register in BIOLOGY 2A03 while registered in Level II.
6. Students considering graduate studies in Biology are recommended to complete BIOLOGY 4C09 or 4F06.

Honours Biology {2050808}

ADMISSION

2007-2008 ONLY: Completion of any Level I program with a Cumulative Average of at least 6.0, including:

- 6 units BIOLOGY 1A03, 1AA3 with an average of at least 6.0
- 3 units MATH 1A03
- 6 units CHEM 1A03, 1AA3
- 3 units PHYSICS 1B03
- 3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3
- 3 units from Science I Course List

EFFECTIVE 2008-2009: Enrolment in this program is limited and admission is by selection but requires as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0, including completion of all courses with minimum grades listed above.

NOTES

1. The Honours Biology program allows students to choose Biology courses which reflect their own interests. Students are encouraged to discuss their course selections with a Biology undergraduate counsellor.
2. Students who wish to take the following courses should take both CHEM 2OA3 and 2OB3: BIOCHEM 3G03, BIOLOGY 3CC3, 3P03, 4B03, 4T03, more advanced Biochemistry and Chemistry courses. Students are advised to check prerequisites carefully.
3. Students who entered the program prior to 2007 are not required to complete BIOLOGY 2EE3; instead, it may be used to satisfy three units of Course List.
4. Students are encouraged to complete BIOLOGY 2A03, 2B03, 2C03, 2D03, 2EE3, 2F03 by the end of 60 units. If necessary, three of these units may be completed by the end of 90 units. Careful review of prerequisites is recommended.

BIOLOGY COURSE LIST

BIOLOGY 2G03, 2I03, all Biology Level III and IV courses (except BIOLOGY 3Q03, 3Q03); BIOCHEM 2B03, 2BB3, 3G03, 3H03, 3N03, 4E03, 4EE3, 4J03, 4K03, 4Q03; CHEM ENG 2B03; GEO 2A03, 2B03, 2C03, 2E03, 2I03, 2Q03, 2W03, 3A03, 3I03, 3J03, 3S03, 4A03, 4B03, 4C03, 4FF3, 4I03, 4S03; HTH SCI 3I03, 3K03, 4I13; MED PHYS 3T03, 4B03; MOL BIOL 4H03, 4J03; PSYCH 2F03, 2TT3, 3A03, 3F03, 3FA3, 3S03, 3T03, 3Y03, 4R03, 4Y03

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units (See Admission above.)

LEVELS II-IV: 90 UNITS

- 3 units from CHEM 2E03, 2OA3
- 3 units BIOCHEM 2EE3
- 18 units from BIOLOGY 2A03, 2B03, 2C03, 2D03, 2EE3, 2F03 (See Notes 3 and 4 above.)
- 12 units from Biology Course List
- 12 units Levels III, IV Biology
- 9 units BIOLOGY 4C09 or BIOLOGY 4F06 and three units from Biology Course List
- 33 units Electives (See Note 2 above.)

Honours Biology {2050812} (Biodiversity Specialization)

ADMISSION

2007-2008 ONLY: Completion of any Level I program with a Cumulative Average of at least 6.0, including:

- 6 units BIOLOGY 1A03, 1AA3 with an average of at least 6.0
- 3 units MATH 1A03
- 6 units CHEM 1A03, 1AA3
- 3 units PHYSICS 1B03
- 3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3
- 3 units from Science I Course List

EFFECTIVE 2008-2009: Enrolment in this program is limited and admission is by selection but requires as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0, including completion of all courses with minimum averages listed above.

NOTES

1. Students interested in the Biodiversity Specialization are recommended to register in at least one of ENVIR SC 1A03, 1B03 or 1G03 in Level I or II.
2. Students are encouraged to complete more Statistics. (See Note 4 under Notes Applicable to all Honours Biology Programs in this section of the Calendar.)
3. BIOLOGY 4E03 may be completed in Level III or IV. If it is completed in Level III, students must take 12 units from the Biodiversity Course List in Level III. If it is completed in Level IV, students must take nine units from the Biodiversity Course List in Level IV.
4. Students must complete 24 units from the Biodiversity Course List by the end of Level IV.
5. Students who wish to take the following courses should take both CHEM 2OA3 and 2OB3: BIOCHEM 3G03, BIOLOGY 3CC3, 3P03, 4B03, 4T03, more advanced Biochemistry and Chemistry courses. Students are advised to check prerequisites carefully.
6. Completion of one of BIOLOGY 4C09, 4F06 is required in Level IV. Students who do not obtain the minimum Cumulative Average as stated in the prerequisite, may request a requisite waiver from the Undergraduate Associate Chair. Students denied permission may not continue in the program and may apply to transfer to the Honours Biology program.

BIODIVERSITY COURSE LIST

BIOLOGY 2A03, 2B03, 2EE3, 3B03, 3BB3, 3E03, 3MM3, 3R03, 3S03, 3SS3, 3TT3, 3U03, 3UU3, 3Y03, 4A03, 4DD3, 4EE3, 4J03, 4JJ3, 4PP3, 4X03, 4Y03; GEO 2A03, 2B03, 2C03, 2E03, 2G03, 2I03, 2Q03, 2W03, 3A03, 3J03, 3L03, 3NN3, 3S03, 4B03, 4C03, 4FF3, 4I03, 4S03; PSYCH 2F03, 2RA3, 2RB3, 2TT3, 3A03, 3F03, 3FA3, 3S03, 3T03, 3Y03, 4R03, 4Y03

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units (See Admission above.)

LEVEL II: 30 UNITS

- 3 units from CHEM 2E03, 2OA3
- 18 units BIOCHEM 2EE3, BIOLOGY 2C03, 2D03, 2F03, 2G03, GEO 2I03
- 9 units Electives (See Note 5 above.)

LEVEL III: 30 UNITS

- 6 units BIOLOGY 3FF3, 3G03
- 15 units from Biodiversity Course List, including at least six units from Biology courses (See Note 4 above.)
- 3 units from Biology Course List
- 6 units Electives

LEVEL IV: 30 UNITS

- 3 units BIOLOGY 4AA3
- 3 units BIOLOGY 4E03 (See Note 3 above.)
- 9-12 units from Biodiversity Course List, including at least six units from Biology courses (See Note 4 above.)
- 9 units BIOLOGY 4C09; or BIOLOGY 4F06 and three units from Biology Course List (See Note 6 above.)
- 6 units Electives

Honours Biology {2050814} (Genetics Specialization)

ADMISSION

2007-2008 ONLY: Completion of any Level I program with a Cumulative Average of at least 6.0, including:

- 6 units BIOLOGY 1A03, 1AA3 with an average of at least 6.0
- 3 units MATH 1A03
- 6 units CHEM 1A03, 1AA3
- 3 units PHYSICS 1B03
- 3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3
- 3 units from Science I Course List

EFFECTIVE 2008-2009: Enrolment in this program is limited and admission is by selection but requires as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0, including completion of all courses with minimum averages listed above.

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 4 under Notes Applicable to all Honours Biology Programs in this section of the Calendar.)
3. Students in the Genetics Specialization must complete BIOLOGY 2B03, 2C03 and BIOCHEM 2EE3 in Level II.
4. BIOLOGY 2A03 and 2F03 are strongly recommended.
5. Completion of BIOLOGY 4C09 is required in Level IV. Students who do not obtain the minimum Cumulative Average as stated in the prerequisite, may request a requisite waiver from the Undergraduate Associate Chair. Students denied permission may not continue in the program and may apply to transfer to the Honours Biology program.
6. Students who registered in the program prior to September 2007 may use BIOLOGY 2EE3 toward the Genetics Course List.

GENETICS COURSE LIST

BIOCHEM 3G03, 4E03, 4EE3; BIOLOGY 3CC3, 3E03, 3HH3, 3J03, 3M03, 3S03, 3V03, 3Y03, 4B03, 4DD3, 4E03, 4EE3, 4P03, 4PP3, 4V03, 4XX3; MOL BIOL 4H03

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units (See Admission above.)

LEVEL II: 30 UNITS

6 units CHEM 2OA3, 2OB3

15 units BIOCHEM 2EE3, BIOLOGY 2B03, 2C03, 2D03, 2EE3 (See Note 6 above.)

9 units Electives (See Note 4 above.)

LEVEL III: 30 UNITS

12 units from BIOLOGY 3FF3, 3H03, 3I03, 3O03, 3S03

9 units from Genetics Course List

9 units Electives

LEVEL IV: 30 UNITS

12 units BIOLOGY 4C09, 4R03 (See Note 5 above.)

3 units from BIOLOGY 3FF3, 3H03, 3I03, 3O03, 3S03 (which-ever is not completed)

9 units from Genetics Course List

6 units Electives

Honours Biology

{2050817}

(Microbiology and

Biotechnology Specialization)

ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0, including:

6 units BIOLOGY 1A03, 1AA3 with an average of at least 6.0

3 units MATH 1A03

6 units CHEM 1A03, 1AA3

3 units PHYSICS 1B03

3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3

3 units from Science I Course List

NOTES

1. The Microbiology and Biotechnology Specialization option allows students to focus on applied aspects of biology and to choose courses with significant laboratory and self-directed learning components. Students intending to specialize in Microbiology and Biotechnology are encouraged to consult with a Biology undergraduate advisor.
2. Students in the Microbiology and Biotechnology Specialization are recommended to take BIOLOGY 3FF3, CHEM ENG 2B03, HTH SCI 3I03 and 3K03.

3. Completion of BIOLOGY 4C09 or 4F06 is required in Level IV. Students who do not obtain the minimum Cumulative Average as stated in the prerequisite, may request a requisite waiver from the Undergraduate Associate Chair. Students denied permission may not continue in the program and may apply to transfer to the Honours Biology program.

MICROBIOLOGY AND BIOTECHNOLOGY COURSE LIST

BIOLOGY 3FF3, 3H03, 3HH3, 3I03, 3Y03, 4E03, 4DD3; CHEM ENG 2B03, 3BK3, 3BM3; HTH SCI 3I03, 3K03

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

18 units BIOCHEM 2EE3, BIOLOGY 2B03, 2C03, 2EE3, CHEM 2OA3, 2OB3

6 units from BIOLOGY 2A03, 2D03, 2F03

6 units Electives

LEVEL III: 30 UNITS

21 units BIOCHEM 3G03, BIOLOGY 3CC3, 3O03, 3S03, 3V03, 3WW3, 4XX3

3 units from Microbiology and Biotechnology Course List

6 units Electives

LEVEL IV: 30 UNITS

6-9 units from BIOLOGY 4C09, 4F06 (See Note 3 above.)

6 units BIOLOGY 4P03, 4PP3

6 units from Microbiology and Biotechnology Course List

12 units Electives

Honours Biology

{2050412}

(Origins Research Specialization)

ADMISSION

Enrolment in this program is limited and admission is by selection but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0, including:

6 units BIOLOGY 1A03, 1AA3 with an average of at least 6.0

3 units MATH 1A03

6 units CHEM 1A03, 1AA3

3 units PHYSICS 1B03

3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3

3 units from ASTRON 1F03, PHYSICS 1BA3, 1BB3

NOTES

1. Completion of ORIGINS 2B03, 2FF3 and 2S03 is required by the end of Level III.
2. Students who wish to take BIOCHEM 3G03, BIOLOGY 3CC3, 3P03, 4B03, 4T03 must complete both CHEM 2OA3 and 2OB3. Students are advised to check prerequisites carefully.
3. Students who entered the program prior to 2007 are not required to complete BIOLOGY 2EE3; instead it may be used to satisfy three units of Biology Course List.
4. Students are encouraged to complete BIOLOGY 2A03, 2B03, 2C03, 2D03, 2EE3, 2F03 by the end of 60 units. If necessary, three of these units may be completed by the end of 90 units. Careful review of prerequisites is recommended.

BIOLOGY COURSE LIST

BIOLOGY 2G03, all Biology Level III and IV courses (except BIOLOGY 3Q03, 3QQ3); BIOCHEM 2B03, 2BB3, 3G03, 3H03, 3N03, 4E03, 4EE3, 4J03, 4Q03; CHEM ENG 2B03; GEO 2A03, 2B03, 2C03, 2E03, 2I03, 2Q03, 2W03, 3A03, 3I03, 3J03, 3S03, 4A03, 4B03, 4C03, 4FF3, 4I03, 4S03; HTH SCI 3I03, 3K03, 4I03; MED PHYS 3T03, 4B03; MOL BIOL 4H03, 4J03; PSYCH 2F03, 2TT3, 3A03, 3F03, 3FA3, 3S03, 3T03, 3Y03, 4R03, 4Y03

ORIGINS COURSE LIST

ORIGINS 3A03, 3B03, 3C03, 3D03, 3E03, 3F03

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

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LEVELS II-IV: 90 UNITS

- 3 units from CHEM 2E03, 2OA3
- 3 units BIOCHEM 2EE3
- 18 units BIOLOGY 2A03, 2B03, 2C03, 2D03, 2EE3, 2F03 (See Notes 3 and 4 above.)
- 21 units ORIGINS 2B03, 2FF3, 2S03, 3S03, 4A09 (See Note 1 above.)
- 12 units Levels III, IV Biology
- 12 units from Biology Course List
- 6 units from Origins Course List
- 15 units Electives

Honours Biology {2050444} (Physiology Specialization)

ADMISSION

Enrolment in this program is limited. Admission is by selection but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:

- 6 units BIOLOGY 1A03, 1AA3 with an average of at least 6.0
- 3 units MATH 1A03
- 6 units CHEM 1A03, 1AA3
- 3 units PHYSICS 1B03
- 3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3
- 3 units from Science I Course List

NOTES

1. It is recommended that students take both PSYCH 1A03 and 1AA3 if they are interested in upper level Psychology courses.
2. All students must take BIOLOGY 2A03 in Level II.
3. Completion of BIOLOGY 4C09 is required in Level IV. Students who do not obtain the minimum Cumulative Average as stated in the prerequisite, may request a requisite waiver from the Undergraduate Associate Chair. Students denied permission may not continue in the program and may apply to transfer to the Honours Biology program.

PHYSIOLOGY COURSE LIST

BIOLOGY 3AA3, 3B03, 3F03, 3FF3, 3K03, 3M03, 3MM3, 3R03, 3S03, 3SS3, 3TT3; KINESIOLOGY 2C06, 3Y03, 4C03, 4CC3; MED PHYS 4B03; PSYCH 2D03, 2E03, 2F03, 2TT3, 3A03, 3F03, 3FA3, 3J03, 3S03, 3T03, 4Y03

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

- 6 units CHEM 2OA3, 2OB3
- 12 units BIOLOGY 2A03, 2B03, 2C03, 2F03 (See Note 2 above.)
- 12 units Electives

LEVEL III: 30 UNITS

- 15 units BIOCHEM 3G03, BIOLOGY 3P03, 3U03, 3UU3, 3ZZ3
- 9 units from Physiology Course List
- 6 units Electives

LEVEL IV: 30 UNITS

- 9 units from BIOLOGY 4C09 (See Note 3 above.)
- 3 units from BIOLOGY 4T03, 4X03
- 12 units from Physiology Course List
- 6 units Electives

Honours Biology and Mathematics {2050320}

ADMISSION

2007-2008 ONLY: Completion of any Level I program with a Cumulative Average of at least 6.0, including:

- 6 units BIOLOGY 1A03, 1AA3 with an average of at least 6.0
- 9 units MATH 1A03, 1AA3, 1B03* with an average of at least 6.0
- 6 units CHEM 1A03, 1AA3
- 3 units from Science I Course List

*Students who have not completed Grade 12 Discrete Mathematics U must take MATH 1D03 as a prerequisite for MATH 1B03.

EFFECTIVE 2008-2009: Enrolment in this program is limited and admission is by selection but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0, including completion of all courses and averages listed above.

*Students who have not completed Grade 12 Discrete Mathematics U or Grade 12 Calculus and Vectors U must take MATH 1F03 as a prerequisite for MATH 1B03.

NOTES

1. Students may seek counselling for this program in either the Department of Mathematics and Statistics or the Department of Biology.
2. Students are advised to carefully note graduate program requirements.
3. Students considering graduate studies in Biology are recommended to complete BIOLOGY 4C09 or 4F06.
4. Students considering graduate studies in Mathematics, are recommended to complete MATH 2S03 or 2T03 in Level II, MATH 3A03 and 3X03 in Level III, and MATH 3AA3 and 4X03 in Level IV. MATH 3E03 is recommended.
5. Students must complete at least nine units from Level IV Biology courses.
6. A Minor in Statistics is not permitted in the Honours Biology and Mathematics program.

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

- 6 units BIOLOGY 2C03, 2F03
- 6 units from BIOCHEM 2EE3, BIOLOGY 2A03, 2B03, 2D03, 2EE3
- 12 units MATH 2C03, 2R03, 2X03, 2XX3
- 6 units Electives

LEVEL III: 30 UNITS

- 12 units Levels III, IV Biology (See Note 5 above.)
- 6 units MATH 3A03, 3X03
- 6 units from Levels II, III, IV Mathematics or Statistics
- 6 units Electives

LEVEL IV: 30 UNITS

- 9 units Levels III, IV Biology (See Note 5 above.)
- 12 units Levels III, IV Mathematics or Statistics which must include at least three units of Level IV
- 9 units Electives

Honours Biology and Psychology {2050460}

ADMISSION

2007-2008 ONLY: Enrolment in this program is limited and admission is by selection but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0, including:

- 6 units BIOLOGY 1A03, 1AA3 with an average of at least 6.0
- 3 units PSYCH 1A03 with a grade of at least C+
- 6 units CHEM 1A03, 1AA3 with an average of at least 6.0
- 3 units MATH 1A03
- 3 units PHYSICS 1B03
- 3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3 (See Notes 7 and 8 below.)

PSYCH 1AA3 must be completed by the end of Level II and is strongly recommended in Level I.

EFFECTIVE 2008-2009: Enrolment in this program is limited and admission is by selection but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 7.0, including:

- 6 units BIOLOGY 1A03, 1AA3 with an average of at least 7.0
- 6 units a grade of at least B- in both PSYCH 1A03 and 1AA3
- 6 units CHEM 1A03, 1AA3 with an average of at least 7.0
- 3 units MATH 1A03
- 3 units PHYSICS 1B03
- 3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3 (See Note 8 below.)

NOTES

1. Counselling for this program is shared by the Departments of Biology and Psychology, Neuroscience and Behaviour and alternates each year.
2. MATH 1B03 or 1D03 and PHYSICS 1BB3 are strongly recommended for students intending to pursue graduate work in Experimental Psychology or Neuroscience.

3. In Level III or IV students must complete at least one laboratory course in Psychology (see *Psychology Lab Course List*). Enrolment is limited for the Psychology laboratory courses. (See Notes 9, 10 and 11 below.)
4. Students who hope to obtain scholarships should complete all 30 units of Levels II and III in the fall and winter terms.
5. A Minor in Biochemistry is not permitted in the Honours Biology and Psychology program.
6. Students who have completed KINESIOL 3E03 may use it as a substitute for three units of Level III Psychology. Students who have completed KINESIOL 4P03 may use it as a substitute for three units of Level IV Psychology.
7. Students who are registered in this program prior to September 2006 and who have completed PSYCH 2RR3 and STATS 1CC3 do not need to complete PSYCH 2RA3 and 2RB3. Beginning September 2006, students with credit in STATS 1CC3 but not PSYCH 2RR3 must complete both PSYCH 2RA3 and 2RB3.
8. Students wishing to have more mathematical statistics may replace PSYCH 2RA3 and 2RB3 with STATS 2D03 and 2MB3. In this case, students are advised to take MATH 1B03 or 1D03 in Level I and consult with a departmental advisor.
9. Students who completed PSYCH 3QQ3 or 4QQ3 prior to September 2007 may use this credit towards fulfilling the Level III lab requirement. Effective September 2007, PSYCH 3QQ3 or 4QQ3 will only fulfill this requirement if taken under the supervision or co-supervision of a faculty member in the Department of Psychology, Neuroscience and Behaviour.
10. Students intending to do a Psychology thesis (PSYCH 4DD6, 4D09) are advised to complete the lab requirement prior to doing a thesis. Effective September 2008, completing a psychology lab prior to doing a psychology thesis will become a requirement.
11. Students who registered in the program prior to September 2007 may use PSYCH 2D03 or 2F03 as a substitution for three units of Psychology Course List.
12. For Psychology Courses with limited enrolment which require permission by pre-registration ballot, the Psychology, Neuroscience and Behaviour Department pre-registration ballot will be done in two phases. The first phase will include the thesis courses (PSYCH 4D09, 4DD6), and the Individual Study courses (PSYCH 2QQ3, 3Q03, 3QQ3, 4Q03, 4QQ3). Students wishing to take these courses must complete and submit a ballot by **mid February**. Students will be informed of the outcome of the first phase by **mid March**. The second phase will include lab courses (PSYCH 3EE3, 3L03, 3LL3, 3MM3, 3S03, 3V03) and limited enrolment courses (PSYCH 3BN3, 4B03, 4BN3, 4C03, 4F03, 4J03, 4R03). Students wishing to take these courses must complete and submit a ballot by **mid April**. Specific dates will be announced during the Fall term. Ballots can be obtained from the Department of Psychology, Neuroscience and Behaviour web site at <http://www.mcmaster.ca/psychology>. Priority will be given to students registered in Honours Psychology and Combined Honours Psychology programs.
13. Students who entered the program prior to September 2007 may complete PSYCH 4D06 to satisfy the thesis requirement. For students entering the program effective September 2007, students who do not obtain the minimum Cumulative Average as stated in the prerequisite of one of BIOLOGY 4C09, 4F06 or PSYCH 4D09, 4DD6 may request a requisite waiver from the Undergraduate Associate Chair of the Department. Students denied permission may not continue in the program and may apply to transfer to Honours Biology or Honours Psychology and apply to graduate with a Minor in the alternate subject area.
14. Students who entered the program prior to September 2007 should refer to the 2006-2007 Undergraduate Calendar or their personal degree audit for program requirements.

BIOLOGY COURSE LIST

BIOCHEM 3H03, 3N03, 4E03, 4EE3, 4K03, 4Q03; BIOLOGY 2A03, 2D03, 2EE3, 2F03, 2G03, 2I03, all Level III and IV Biology courses (except BIOLOGY 3Q03, 3QQ3); HTH SCI 2J03, 3I03, 4BB3, 4I13; MED PHYS 3T03, 4B03; MOL BIOL 4H03

PSYCHOLOGY COURSE LIST

KINESIOL 3E03, 4P03; PSYCH 2E03, 2H03, 2TT3, all Level III and IV Psychology courses (PSYCH 2AA3, 2B03, 2C03, 2I03, 2S03, 3PP3, 3SS3 may only be used as elective credit.)

PSYCHOLOGY LAB COURSE LIST

PSYCH 3BL3, 3EE3, 3L03, 3LL3, 3MM3, 3QQ3, 3S03, 3V03, 4QQ3 (All Psychology lab courses have limited enrolment. See Notes 9, 10 and 12 above.)

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS (SEE NOTE 14 ABOVE.)

15 units BIOCHEM 2EE3, BIOLOGY 2B03, 2C03, CHEM 2OA3, 2OB3
 3 units PSYCH 2F03
 3 units from PSYCH 2E03, 2TT3
 6 units PSYCH 2RA3, 2RB3 (See Notes 7 and 8 above.)
 3 units Electives, which must include PSYCH 1AA3 if not completed

LEVEL III: 30 UNITS

3 units BIOCHEM 3G03
 9 units from Biology Course List, which must include at least three units of Level III
 6 units from Psychology Course List, which must include at least three units of Level III or IV (See Note 11 above.)
 3 units Level III or IV courses from Biology Course List or Psychology Course List
 3 units from Psychology Lab Course List (See Note 3 above.)
 6 units Electives

LEVEL IV: 30 UNITS

24 units Level III or IV courses from Biology Course List or Psychology Course List, including at least nine units from Biology Course List and nine units from Psychology Course List. One of BIOLOGY 4C09, 4F06, PSYCH 4D09 or 4DD6 must be included. (See Notes 12 and 13 above.)

6 units Electives

Honours Biology

[2053]

(Genetics Specialization Co-op)

ADMISSION

Enrolment in this program is limited. Selection is based on academic and other achievement (see below) but requires, as a minimum, completion of Level II of the Honours Biology Genetics Specialization program with a Cumulative Average of at least 7.0.

Information about this program and the selection procedure can be obtained from Science Career and Cooperative Education.

NOTES

1. This is a five-level (year) co-op program, which includes one eight-month industry work term, and one four-month academic research work term that must be spent in Genetics related placements.
2. Students must be registered full-time and take a full academic workload.
3. Students are required to complete SCIENCE 2C00, a Work Orientation course, before the first work placement.
4. Students should seek academic counselling for this program in the Department of Biology.
5. Students in the Genetics Specialization are encouraged to take PHILOS 2D03 or 2G03 as an elective.
6. Students in the Genetics Specialization must take BIOLOGY 2B03, 2C03 and BIOCHEM 2EE3 in Level II.
7. Students are strongly recommended to take BIOLOGY 2A03, 2F03.
8. Alternate arrangements for the BIOLOGY 4GG9 thesis will be considered by the Program Coordinator.
9. Students may complete the program in December of the year prior to Spring convocation.

GENETICS COURSE LIST

BIOCHEM 3G03, 4E03; BIOLOGY 3CC3, 3HH3, 3J03, 3M03, 3S03, 3Y03, 4B03, 4DD3, 4E03, 4EE3, 4K03, 4P03, 4PP3, 4V03; MOL BIOL 4H03

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REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units Completion of Level II Honours Biology (Genetics Specialization)

LEVEL III

Consists of Academic Terms 1 and 2 (Fall/Winter) and completion of BIOLOGY 4XX3 and the first half of the first eight-month work term, Summer Term

TERMS 1 AND 2 (FALL AND WINTER): 33 UNITS

3 units from BIOLOGY 2EE3, 3E03
15 units BIOLOGY 3FF3, 3H03, 3I03, 3O03, 3V03
3 units from Genetics Course List
9 units Electives
1 course SCIENCE 2C00

SUMMER

3 units BIOLOGY 4XX3 (first two weeks of May)
Work Term

LEVEL IV

Consists of completion of the second half of the first eight-month work term, Term 1 (Fall), Academic Term 2 (Winter) and Academic work term, Summer Term

TERM 1 (FALL):

Work term

TERM 2 (WINTER): 15 UNITS

3 units BIOLOGY 4R03
6 units from Genetics Course List
6 units Electives

SUMMER

Work Term (in an Academic Lab) and preparation for BIOLOGY 4GG9

LEVEL V

Consists of Academic Term 1 (Fall)

TERM 1 (FALL): 12 UNITS

9 units Completion of BIOLOGY 4GG9
3 units from Genetics Course List

	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
	Term 1				Term 2				Summer Term			
LEVEL 3	15 units from Academic Level III + SCIENCE 2C00				15 units from Academic Level III				BIOLOGY 4XX3 + Work Term			
	Term 1				Term 2				Summer Term			
LEVEL 4	Work Term				15 units from Academic Level IV				Work Term (in a lab) + prep for BIOLOGY 4GG9			
	Term 1				Term 2				Summer Term			
LEVEL 5	BIOLOGY 4GG9 + 3 units from Academic Level IV											

Honours Biology and Pharmacology (Co-op)

{2050419}

ADMISSION

Enrolment in this program is limited. Selection is based on academic and other achievement (see below) but requires, as a minimum, completion of any Level II program with a Cumulative Average of at least 6.0 and completion of the following courses:

6 units BIOLOGY 2A03, 2C03
6 units CHEM 20A3, 20B3
3-6 units BIOCHEM 2EE3 or both BIOCHEM 2B03 and 2BB3 (See Note 8 below.)
6 units from BIOLOGY 2B03, 2D03, 2EE3, 2F03, CHEM 2N03, 2R03

Information about this program and the selection procedure can be obtained from Science Career and Cooperative Education and the Program Director.

NOTES

1. This is a five-level (year) co-op program, three terms of which must be spent in work related to pharmacology, toxicology or pharmaceuticals.
2. A senior thesis, PHARMAC 4F09, will be completed in Level IV, Summer Term. Work terms must be completed in Level IV, Term 2 and Level V, Term 1.
3. PHARMAC 3A06, 3B06, 4A03, 4AA3, 4C03, 4D03 and 4E03 will use a self-directed problem-based learning approach.
4. Students must be registered full-time and take a full academic workload as prescribed by Level and Term.
5. Students are required to complete SCIENCE 2C00, a Work Orientation course, before the first work placement.
6. Students should seek academic counselling for this program in the Department of Biology.
7. BIOLOGY 1K03 should not be taken.
8. If BIOCHEM 2EE3 was taken, BIOCHEM 3G03 must be taken in Level III.

COURSE LIST

BIOCHEM 2B03, 2BB3, 3D03, 3G03, 3H03, 3N03; all Level III and IV Biology and Pharmacology courses except BIOLOGY 3Q03, 3QQ3; CHEM 3F03, 3FF3, 4DD3; GEO 3J03, 4A03, 4B03; HTH SCI 3I03, 3K03, 4I13; MOL BIOL 4H03, 4J03; PSYCH 2RB3

REQUIREMENTS

129 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units Completion of any Level II program including courses as outlined in Admission statement. (See Admission above.)

LEVEL III

Consists of Academic Terms 1 and 2 (Fall/Winter) and completion of the first four-month work term, Summer Term

TERMS 1 AND 2 (FALL AND WINTER): 30 UNITS

6 units BIOCHEM 3G03, 3 units from Course List (See Note 8 above.)
or

6 units from Course List
9 units BIOLOGY 3P03, 3U03, 3UU3
12 units PHARMAC 3A06, 3B06
3 units Electives
1 course SCIENCE 2C00

SUMMER

Work Term

LEVEL IV

Consists of Academic Term 1 (Fall), completion of the second four-month work term, Term 2 (Winter) and completion of senior thesis, Summer Term

TERM 1 (FALL): 15 UNITS

6 units PHARMAC 4A03, 4C03
3 units PSYCH 2RA3
6 units from Course List

TERM 2 (WINTER):

Work Term

SUMMER: 9 UNITS

9 units PHARMAC 4F09 (See Note 2 above.)

LEVEL V

Consists of completion of third four-month work term, Term 1 (Fall) and Academic Term 2 (Winter)

TERM 1 (FALL):

Work Term

TERM 2 (WINTER): 15 UNITS

6 units from PHARMAC 4AA3, 4D03, 4E03
3 units from Course List
6 units Electives

	SEP OCT NOV DEC	JAN FEB MAR APR	MAY JUN JUL AUG
	Term 1	Term 2	Summer Term
LEVEL 3	15 units from Academic Level III + SCIENCE 2C00	15 units from Academic Level III	Work Term
	Term 1	Term 2	Summer Term
LEVEL 4	15 units from Academic Level IV	Work Term	Senior Thesis
	Term 1	Term 2	Summer Term
LEVEL 5	Work Term	15 units from Academic Level IV	

B.Sc. Three-Level Degree

A three-level program with a general Life Science orientation is available through the **B.Sc. in Life Science**. See Interdisciplinary Programs in this section of the calendar.

Minor in Biology

REQUIREMENTS

24 units total

6 units BIOLOGY 1A03, 1AA3

18 units Levels II, III, IV Biology, including at least six units from Levels III, IV Biology

DEPARTMENT OF CHEMISTRY

WEB ADDRESS: <http://www.chemistry.mcmaster.ca>

Honours Arts & Science and Chemistry

(B.Arts.Sc.; See Arts & Science Program)

Honours Physical Science

(See Interdisciplinary Programs)

NOTES APPLICABLE TO ALL HONOURS CHEMISTRY PROGRAMS

- In addition to the Honours Chemistry program, the Department offers three specializations. The Honours program consists of a specified set of basic requirements and a wide choice of electives (including those from outside the Faculty of Science), allowing for interdisciplinary studies or the opportunity to complete a Minor in another subject. Alternatively, students may wish to complete one of the following specializations which are more appropriate for graduate studies in Chemistry or Biochemistry:
 - Biological Specialization
 - Physical and Analytical Specialization
 - Synthesis and Structure Specialization
 Honours Chemistry may also be combined with the Origins Research Specialization.
- All options in Honours Chemistry fulfill the academic requirements of the Canadian Society for Chemistry.
- For those considering postgraduate studies in Chemistry, it should be noted that 18 units of Level IV Chemistry or related subjects are required for consideration for admission at McMaster and most graduate schools in Canada. CHEM 4G09 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.
- Students may transfer to a specialization at any time, subject to satisfying its requirements.
- Students in all Chemistry programs are expected to have basic skills in the use of personal computers, word processing software and spreadsheet software. COMP SCI 1SA3 is recommended for students without those skills.
- Students are encouraged to seek academic counselling from the Undergraduate Advisor for Chemistry programs (email advisor@chemistry.mcmaster.ca).

- Students who wish to transfer from Level II or III to an Honours Chemistry program must have a Cumulative Average of at least 6.0 and have successfully completed all courses required for admission to an Honours Chemistry program.
- MATH 1B03 (or 1D03) and PHYSICS 1BA3 (or 1BB3) must be completed by the end of Level II and are strongly recommended in Level I.

Honours Chemistry

{2070816}

NOTES

- MATH 1B03 (or 1D03) must be completed by the end of Level II and is strongly recommended in Level I.
- PHYSICS 1BA3 (or 1BB3) must be completed by the end of Level II and is very strongly recommended in Level I, as Physics laboratories are very difficult to schedule in the Level II program.

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0, including:

- 6 units CHEM 1A03, 1AA3 with an average of at least 6.0
- 6 units MATH 1A03, 1AA3
- 3 units PHYSICS 1B03
- 9 units from Science I Course List

NOTES

- MATH 2C03, PHYSICS 2A03 or 2B06 are recommended electives.
- 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.
- 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.
- CHEM 3LI3 and 4G09 are considered inquiry courses. If both courses are taken, it is recommended that CHEM 3LI3 be taken prior to CHEM 4G09.

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I and at least 36 units must be Level III, IV courses

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

- 18 units CHEM 2A03, 2BA3, 2BB3, 2I03, 2PA3, 2PB3
- 12 units Electives, which must include MATH 1B03 (or 1D03) or PHYSICS 1BA3 (or 1BB3) if not completed in Level I

LEVEL III: 30 UNITS

- 18 units CHEM 3A03, 3BA3, 3D03, 3LI3, 3P03, 3Q03
- 3 units from BIOCHEM 2EE3, 3G03 (See Note 3 above.)
- 9 units Electives

LEVEL IV: 30 UNITS

- 9 units Level IV Chemistry
- 9 units Levels III, IV courses from the Faculty of Science
- 12 units Electives

Honours Chemistry

{2070818}

(Biological Specialization)

NOTES

- MATH 1B03 (or 1D03) must be completed by the end of Level II and is strongly recommended in Level I.
- PHYSICS 1BA3 (or 1BB3) must be completed by the end of Level II and is very strongly recommended in Level I, as Physics laboratories are very difficult to schedule in the Level II program.

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0, including:

- 6 units CHEM 1A03, 1AA3 with an average of at least 6.0
- 6 units BIOLOGY 1A03, 1AA3
- 6 units MATH 1A03, 1AA3
- 3 units PHYSICS 1B03
- 6 units from Science I Course List

NOTES

- This specialization is recommended for students interested in pursuing the joint Biochemistry Chemistry graduate program at McMaster University.

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- A Minor in Biochemistry is not permitted in the Biological Chemistry Specialization.
- Recommended electives for Levels III and IV include BIOCHEM 2B03 and CHEM 3FF3.
- Students with credit in BIOCHEM 4K03 may substitute it for BIOCHEM 4N03.

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I and at least 36 units must be Level III, IV courses

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

18 units CHEM 2A03, 2BA3, 2BB3, 2I03, 2PA3, 2PB3
 3 units BIOLOGY 2B03
 9 units Electives, which must include MATH 1B03 (or 1D03) or PHYSICS 1BA3 (or 1BB3) if not completed in Level I

LEVEL III: 30 UNITS

18 units CHEM 3A03, 3BA3, 3D03, 3LI3, 3P03, 3Q03
 3 units from BIOCHEM 2BB3, 3G03
 3 units from BIOCHEM 2EE3, 3D03
 3 units BIOLOGY 2C03
 3 units Electives

LEVEL IV: 30 UNITS

15 units CHEM 4D03, 4DD3, 4G09
 3 units from BIOCHEM 4N03 (See Note 4 above.)
 6 units Levels III, IV Biochemistry or Biology
 6 units Electives

Honours Chemistry {2070822} (Physical and Analytical Specialization)

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0, including:

6 units CHEM 1A03, 1AA3 with an average of at least 6.0
 6 units MATH 1A03, 1AA3
 3 units PHYSICS 1B03
 9 units from Science I Course List

NOTES

- CHEM 3BB3 and 3ZZ3 require completion of Level II Mathematics and Physics courses. Therefore, students are strongly recommended to take MATH 1B03 (or 1D03) and PHYSICS 1BA3 (or 1BB3) in Level I and MATH 2A03 and PHYSICS 2A03 in Level II.
- Recommended electives include MATH 2C03, STATS 2D03, 2MB3.

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I and at least 36 units must be Level III, IV courses

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

18 units CHEM 2A03, 2BA3, 2BB3, 2I03, 2PA3, 2PB3
 6 units MATH 2A03, PHYSICS 2A03 (See Note 1 above.)
 6 units Electives, which must include MATH 1B03 (or 1D03) or PHYSICS 1BA3 (or 1BB3) if not completed in Level I. (See Note 2 above.)

LEVEL III: 30 UNITS

24 units CHEM 3A03, 3BA3, 3BB3, 3D03, 3LI3, 3P03, 3Q03, 3ZZ3
 3 units from BIOCHEM 2EE3, 3G03
 3 units Electives

LEVEL IV: 30 UNITS

9 units CHEM 4G09
 6 units Levels III, IV Chemistry
 15 units Electives

Honours Chemistry {2070824} (Synthesis and Structure Specialization)

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0, including:

6 units CHEM 1A03, 1AA3 with an average of at least 6.0
 6 units MATH 1A03, 1AA3
 3 units PHYSICS 1B03
 9 units from Science I Course List

NOTE

Additional Biochemistry is recommended from either BIOCHEM 2EE3, 3G03 or from BIOCHEM 2B03, 2BB3 and 3D03. Note that the latter three courses have Biology prerequisites.

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I and at least 36 units must be Level III, IV courses

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

18 units CHEM 2A03, 2BA3, 2BB3, 2I03, 2PA3, 2PB3
 12 units Electives, which must include MATH 1B03 (or 1D03) or PHYSICS 1BA3 (or 1BB3) if not completed in Level I (See Note above.)

LEVEL III: 30 UNITS

18 units CHEM 3A03, 3BA3, 3D03, 3LI3, 3P03, 3Q03
 6 units from CHEM 3I03, 4A03, 4C03, 4D03, 4DD3, 4PP3, 4R03, 4S03
 3 units from BIOCHEM 2EE3, 3G03
 3 units Electives

LEVEL IV: 30 UNITS

9 units CHEM 4G09
 6 units Levels III, IV Chemistry
 15 units Electives

Honours Chemistry {2070412} (Origins Research Specialization)

NOTES

- MATH 1B03 (or 1D03) must be completed by the end of Level II and is strongly recommended in Level I.
- PHYSICS 1BA3 (or 1BB3) must be completed by the end of Level II and is very strongly recommended in Level I, as Physics laboratories are very difficult to schedule in the Level II program.

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0, including:

6 units CHEM 1A03, 1AA3 with an average of at least 6.0
 6 units BIOLOGY 1A03, 1AA3
 6 units MATH 1A03, 1AA3
 3 units PHYSICS 1B03
 3 units from ASTRON 1F03, PHYSICS 1BA3, 1BB3

NOTES

- Completion of ORIGINS 2B03, 2FF3 and 2S03 is required by the end of Level III.
- In some cases there are Level II and III prerequisites for Level III and IV courses. The prerequisites should be considered when choosing your Level II and III courses.
- Students must take BIOCHEM 2EE3 or 3G03. BIOCHEM 3G03 is recommended. Other Biochemistry courses that have Biology prerequisites are permitted, see the *Biological Specialization*.
- CHEM 3LI3 and 4G09 are considered inquiry courses. If both courses are taken, it is recommended that CHEM 3LI3 be taken prior to CHEM 4G09.

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I and at least 36 units must be Level III, IV courses

ORIGINS COURSE LIST

ORIGINS 3A03, 3B03, 3C03, 3D03, 3E03, 3F03

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

18 units CHEM 2A03, 2BA3, 2BB3, 2I03, 2PA3, 2PB3
 3 units from ORIGINS 2B03, 2FF3 (See Note 1 above.)
 3 units ORIGINS 2S03
 6 units Electives, which must include MATH 1B03 (or 1D03) or PHYSICS 1BA3 (or 1BB3) if not completed in Level I

LEVEL III: 30 UNITS

18 units CHEM 3A03, 3BA3, 3FF3, 3LI3, 3P03, 3Q03
 3 units from BIOCHEM 2EE3, 3G03 (See Note 3 above.)
 3 units from ORIGINS 2B03, 2FF3
 3 units from Origins Course List
 3 units ORIGINS 3S03

LEVEL IV: 30 UNITS

- 9 units Level IV Chemistry
 9 units Levels III, IV courses from the Faculty of Science
 3 units from Origins Course List
 9 units ORIGINS 4A09

Honours Chemistry Co-op {2073}**ADMISSION**

Enrolment in this program is limited. Selection is based on academic achievement and an interview but requires, as a minimum, completion of Level II Honours Chemistry with a Cumulative Average of at least 6.0.

Information about the program and the selection procedure may be obtained from Science Career and Cooperative Education.

NOTES

1. This is a five-level (year) co-op program which includes two eight-month work terms that must be spent in Chemistry-related placements.
2. Students must be registered full-time and take a full academic workload as prescribed by Level and by Term.
3. Students are required to complete SCIENCE 2C00, a Work Orientation course, before the first work placement.
4. There are Level II (and III) prerequisites for many Level III (and IV) courses. The prerequisites should be considered when choosing your Level II and III courses. Students should, in particular, note the Mathematics and Physics prerequisites for CHEM 3BB3 and 3ZZ3.
5. Students considering postgraduate studies in Chemistry should note that 18 units of Level IV Chemistry or related subjects are required for consideration for admission at McMaster and most graduate schools in Canada.
6. Students must take BIOCHEM 2EE3 or 3G03. BIOCHEM 3G03 is recommended. Other Biochemistry courses which have Biology prerequisites are permitted; see the Biological Specialization above.

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I and at least 36 units must be Level III, IV courses

LEVEL I: 30 UNITS

Completed prior to admission to the program

LEVEL II: 30 UNITS

Completion of any Level II Honours Chemistry program

LEVEL III

Consists of Academic Term 1 (Fall) and completion of the first eight-month work term, Term 2 (Winter) and Summer Term

TERM 1 (FALL): 15 UNITS

- 6 units CHEM 3BA3, 3Q03
 9 units Electives
 1 course SCIENCE 2C00

TERM 2 (WINTER) AND SUMMER

Work Term

LEVEL IV

Consists of Academic Term 1 (Fall), and Term 2 (Winter), and the first half of the second eight-month work term, Summer Term

TERMS 1 AND 2 (FALL AND WINTER): 30 UNITS

- 12 units CHEM 3A03, 3D03, 3I03, 3P03
 6-9 units from CHEM 3BB3, 3LI3, 3ZZ3, 4C03, 4D03, 4DD3, 4G09, 4PP3, 4R03, 4S03
 9-12 units Electives

SUMMER

Work Term

LEVEL V

Consists of completion of the second half of the second eight-month work term, Term 1 (Fall) plus Academic Term 2 (Winter)

TERM 1 (FALL)

Work Term

TERM 2 (WINTER): 15 UNITS

- 3 units Levels III, IV Chemistry
 3 units Level IV Chemistry
 3 units from BIOCHEM 2EE3, 3G03 (See Note 6 above.)
 9 units Electives

	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
	Term 1				Term 2				Summer Term			
LEVEL 3	15 units from Academic Level III + SCIENCE 2C00				Work Term							
	Term 1				Term 2				Summer Term			
LEVEL 4	15 units from Academic Level III				15 units from Academic Level IV				Work Term			
	Term 1				Term 2				Summer Term			
LEVEL 5	Work Term				15 units from Academic Level IV							

B.Sc. Three-Level Degree

A three-level program with a Chemistry orientation is available through the **B.Sc. in Physical Science**. See Interdisciplinary Programs in this section of the Calendar.

Minor in Chemistry**NOTE**

Students who wish to pursue a Minor in Chemistry are encouraged to select courses in consultation with the Undergraduate Advisor in the Department of Chemistry.

REQUIREMENTS

24 units total

6 units from CHEM 1A03, 1AA3

18 units Level II, III, IV Chemistry courses, including at least six units from Levels III, IV Chemistry courses

**DEPARTMENT OF
COMPUTING AND SOFTWARE**

WEB ADDRESS: <http://www.cas.mcmaster.ca>

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

(B.A.Sc.; See Faculty of Engineering, Honours Computer Science (B.A.Sc.))

Honours Economics and Computer Science

(B.A.; See Faculty of Social Sciences, Department of Economics)

Honours Mathematics and Computer Science

(See Department of Mathematics and Statistics)

Honours Mathematical Science

(See Interdisciplinary Programs)

Honours Computer Science (B.Sc.) {2153}**NOTES**

1. The Honours Bachelor of Science degree in Computer Science within the Faculty of Science is being phased out and replaced by a Bachelor of Applied Science degree. Registration in Level II of the current Honours Computer Science (B.Sc.) program will be last available in September 2007. Those students wishing to pursue the Honours Computer Science (B.A.Sc.) program should see *Honours Computer Science (B.A.Sc.)* in the *Faculty of Engineering* section of this calendar. Students who registered in a *Computer Science* program prior to September 2007 may see an Academic Advisor in the Office of the Associate Dean Science (Studies) for program requirements.
2. COMP SCI 4ZP6 is the Capstone course of the program.

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0 including:

- 6 units a grade of at least C+ in each of COMP SCI 1MD3, 1FC3
- 6 units MATH 1A03, 1AA3
- 3 units from MATH 1B03, 1D03
- 9 units from Science I Course List

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

- 30 units (See Admission above.)

LEVEL II: 30 UNITS

- 21 units COMP SCI 2CA3, 2CS3, 2ME3, 2MF3, 2MJ3, 2O03, 2SC3
- 3 units STATS 2MA3
- 6 units Electives

LEVEL III: 30 UNITS

- 24 units COMP SCI 3CN3, 3DA3, 3DB3, 3EA3, 3IS3, 3MH3, 3MI3, 3SR3
- 6 units Electives

LEVEL IV: 30 UNITS

- 21 units COMP SCI 4CD3, 4HC3, 4MN3, 4TB3, 4WW3, 4ZP6
- 3 units from COMP SCI 4AR3, 4TC3, 4TE3
- 6 units Electives

Honours Computer Science and Mathematics {2145320}

Students interested in pursuing a program in Computer Science and Mathematics should see Honours Mathematics and Computer Science in the Department of Mathematics and Statistics section of this Calendar.

B.Sc. Three-Level Degree

A three-level program with a Computer Science orientation is available through the B.Sc. in Mathematical Science in Department of Mathematics and Statistics in this section of the Calendar.

Minor in Computer Science**NOTE**

Students who are currently completing a Minor in Computer Science are advised to contact the Department of Computing and Software to discuss completion of the requirements for the Minor.

REQUIREMENTS

24 units total

- 6 units COMP SCI 1MD3, 1FC3
- 12 units from COMP SCI 2CA3, 2ME3, 2MF3, 2MJ3, 2O03, 2SC3
- 6 units from COMP SCI 3CN3, 3DA3, 3EA3, 3MH3

SCHOOL OF GEOGRAPHY AND EARTH SCIENCES

WEB ADDRESS: <http://www.science.mcmaster.ca/geo/>

Honours Arts & Science and Geography and Honours Arts & Science and Environmental Sciences

(B.Arts.Sc.; See Arts & Science Program)

Honours Geography (B.A.),**B.A. in Geography and****Honours Geography and****Environmental Studies (B.A.)**

(See B.A. programs, Faculty of Social Sciences, School of Geography and Earth Sciences)

NOTES APPLICABLE TO ALL HONOURS EARTH AND ENVIRONMENTAL SCIENCES PROGRAMS

Upon completion of Level II Honours Earth and Environmental Sciences, students may choose to register in one of three specializations:

- Geochemistry Specialization
- Geosciences Specialization
- Hydrosciences Specialization

These specializations aim to fulfill the academic requirements for professional registration of Geoscientists in Ontario. Students are encouraged to consult with the academic advisor in the School of Geography and Earth Sciences during the March counselling period to ensure proper selection of courses for professional registration. The Honours Earth and Environmental Sciences program does not aim to fulfill professional registration requirements.

Honours Earth and Environmental Sciences (B.Sc.) {2211820}

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0, including:

- 6 units a grade of at least C+ in two of ENVIR SC 1A03, 1B03, 1G03
- 3 units CHEM 1A03
- 3 units MATH 1A03
- 3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3
- 9 units from BIOLOGY 1A03, 1AA3, CHEM 1AA3, PHYSICS 1B03, 1BA3

NOTES

- Students may elect one of the three specializations at the completion of Level II. Students who choose not to specialize will follow the requirements for Honours Earth and Environmental Sciences. If students choose to specialize, they follow the Level III and IV requirements listed under their appropriate specialization listing (see below). Students who choose not to specialize may not fulfill the academic requirements required for professional registration.
- All students are strongly encouraged to meet with the academic advisor in the School of Geography and Earth Sciences to discuss program requirements and course selections.
- There are Level III prerequisites for many Level IV courses. The prerequisites should be considered when selecting your courses.
- The field components of GEO 3FE3 and 4FE3 are normally taken outside of term time. Details are announced in March.
- A Minor in Geography, Earth Science or Environmental Science is not permitted in the Honours Earth and Environmental Sciences program. However, a Minor in Geographic Information Systems is permitted.
- Both ENVIR SC 1A03 and 1G03 must be completed by the end of Level II and are recommended in Level I.

COURSE LIST 1

BIOLOGY 2D03, 2F03; CHEM 2A03, 2E03; GEO 2C03, 2G03, 2K03, 2KK3; one of ENVIR SC 1B03 or GEO 2A03

COURSE LIST 2

ASTRON 2E03; BIOLOGY 2F03, 3SS3, 3TT3; CHEM 2A03, 2E03; GEO 2B03, 2C03, 2K03, 2KK3, 3B03, 3C03, 3E03, 3I03, 3J03, 3L03, 3O03, 3P03, 3Q03, 3U03, 3V03, 3W03, 3Z03, 4B03, 4C03, 4E03, 4FE3, 4FF3, 4G03, 4HH3, 4J03, 4K03, 4O03, 4Q03, 4T03, 4W03, 4WW3, 4Z03, 4ZZ3

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

- 30 units (See Admission above.)

LEVEL II: 30 UNITS

- 3 units CHEM 2R03 or GEO 2Q03
- 12 units GEO 2E03, 2G03, 2I03, 2W03
- 6 units from Course List 1
- 9 units Electives (See Note 6 above.)

LEVEL III: 30 UNITS

(See below for the Level III requirements for Specializations)

- 3 units GEO 3FE3
- 6 units GEO 3R03, 3Y03
- 6 units from Course List 2
- 15 units Electives

LEVEL IV: 30 UNITS

(See below for the Level IV requirements for Specializations)

- 3 units GEO 4A03
- 3-6 units from GEO 4CC3, 4R06
- 9 units from Course List 2
- 12-15 units Electives

Honours Earth and Environmental Sciences {2211825}

(Geochemistry Specialization)

ADMISSION

Completion of Level II Honours Earth and Environmental Sciences.

Geochemistry Course List 1: BIOLOGY 2F03; GEO 2B03, 2C03, 3B03, 3J03, 3L03, 3O03, 3Q03**Geochemistry Course List 2:** ASTRON 2E03, BIOLOGY 2F03, 3SS3, 3TT3; CHEM 2A03 OR 2E03; ONE LEVEL III CHEMISTRY COURSE; GEO 2B03, 2C03, 2K03, 3B03, 3I03, 3J03, 3L03, 3O03, 3Q03, 3U03, 4B03, 4FE3, 4FF3, 4G03, 4HH3, 4J03, 4O03, 4Q03**LEVEL III: 30 UNITS**

- 3 units GEO 3FE3
- 6 units GEO 3R03, 3Y03
- 6 units from Geochemistry Course List 1
- 9 units from Geochemistry Course List 2
- 6 units Electives

LEVEL IV: 30 UNITS

- 3 units GEO 4A03
- 3-6 units from GEO 4CC3, 4R06
- 9 units from Geochemistry Course List 1
- 6-9 units from Geochemistry Course List 2
- 6 units Electives

Honours Earth and Environmental Sciences {2211830}

(Geosciences Specialization)

ADMISSION

Completion of Level II Honours Earth and Environmental Sciences.

Geosciences Course List 1: GEO 2B03, 2K03, 2KK3, 3E03, 3Q03, 3V03, 3Z03, 4G03**Geosciences Course List 2:** ASTRON 2E03, GEO 2B03, 2K03, 2KK3, 3E03, 3I03, 3K03, 3P03, 3Q03, 3U03, 3V03, 3Z03, 4E03, 4FE3, 4FF3, 4G03, 4J03, 4K03, 4Q03, 4T03, 4Z03, 4ZZ3**LEVEL III: 30 UNITS**

- 3 units GEO 3FE3
- 6 units GEO 3R03, 3Y03
- 6 units from Geosciences Course List 1
- 9 units from Geosciences Course List 2
- 6 units Electives

LEVEL IV: 30 UNITS

- 3 units GEO 4A03
- 3-6 units from GEO 4CC3, 4R06
- 9 units from Geosciences Course List 1
- 6-9 units from Geosciences Course List 2
- 6 units Electives

Honours Earth and Environmental Sciences {2211835}

(Hydrosciences Specialization)

ADMISSION

Completion of Level II Honours Earth and Environmental Sciences.

Hydrosciences Course List 1: GEO 2B03, 2C03, 3C03, 3J03, 3W03, 3Z03**Hydrosciences Course List 2:** GEO 2B03, 2C03, 2K03, 3B03, 3C03, 3I03, 3J03, 3L03, 3Q03, 3U03, 3V03, 3W03, 3Z03, 4B03, 4C03, 4FE3, 4FF3, 4G03, 4Q03, 4W03, 4WW3**LEVEL III: 30 UNITS**

- 3 units GEO 3FE3
- 6 units GEO 3R03, 3Y03
- 6 units from Hydrosciences Course List 1
- 9 units from Hydrosciences Course List 2
- 6 units Electives

LEVEL IV: 30 UNITS

- 3 units GEO 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 Geoscience {2513}

FORMERLY HONOURS SCIENCE (GEOSCIENCE)*(Includes Environmental Science, Geography and Earth Sciences)***ADMISSION****2007-2008 ONLY:** Completion of any Level I program with a Cumulative Average of at least 5.0 including:

- 6 units from ENVIR SC 1A03, 1B03, 1G03 with an average of at least 6.0
- 3 units from MATH 1A03, 1B03, 1D03, STATS 1CC3
- 12 units from Science I Course List (See Note below.)

EFFECTIVE 2008-2009: Completion of any Level I program with a Cumulative Average of at least 6.0 including completion of all courses with minimum averages as listed above.**NOTES**

1. ENVIR SC 1A03, 1B03, 1G03 must be completed by the end of Level II.
2. For students who entered the program in September 2007 or prior, at each academic review after completion of Level I, a Cumulative Average of at least 6.0 is required to continue in the Honours Geoscience program.

GEOSCIENCE COURSE LISTAll Level II, III and IV Geo courses **except** GEO 2GG3, 2MM3, 2WW3, 3AA3, 3CC3, 3DD3, 3NN3, 3RR3 and non-science Geo courses. Non-science Geo courses contain the letter *H* in the course code.**REQUIREMENTS**

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

- 12 units from from Level II courses from Geoscience Course List
- 6 units from Faculty of Science courses excluding the Geoscience Course List
- 12 units Electives (See Note 1 above.)

LEVEL III: 30 UNITS

- 12 units Levels III, IV courses from Geoscience Course List
- 3 units from Faculty of Science courses excluding the Geoscience Course List
- 15 units Electives

LEVEL IV: 30 UNITS

- 18 units Levels II, III, IV courses from Geoscience Course List of which at least 12 units must be Levels III, IV
- 6 units from Faculty of Science courses excluding the Geoscience Course List
- 6 units Electives

Honours Earth and Environmental Sciences Co-op (B.Sc.) Program

The Honours Earth and Environmental Sciences Co-op program is being phased out. Registration in Level III will be last available in September 2007.

ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement and an interview but requires, as a minimum, completion of Level II Honours Earth and Environmental Sciences with a Cumulative Average of at least 6.0.

Information about the program and the selection procedure may be obtained from Science Career and Cooperative Education.

NOTES

1. This is a five-level (year) co-op program which includes two eight-month work terms which must be spent in placements related to Earth and Environmental Sciences.
2. Students must be registered full-time and take a full academic program.
3. Students are required to complete SCIENCE 2C00, a Work Orientation course, before the first work placement.
4. Students in this program must choose to follow one of the three specializations:
 - Geochemistry Specialization
 - Geosciences Specialization
 - Hydrosiences Specialization
 The specializations aim to fulfill the academic requirements for professional registration of Geoscientists in Ontario. Please consult with the academic advisor in the School of Geography and Earth Sciences during the March counselling period to ensure proper selection of courses for professional registration.
5. There are Level II and III prerequisites for many Level III and IV courses. The prerequisites should be considered when selecting courses.
6. The field component of GEO 3FE3 and 4FE3 is normally taken outside of term time. Details are announced in March.
7. A Minor in Geography, Earth Science or Environmental Science is not permitted in the Honours Earth and Environmental Sciences Co-op program. However, a Minor in Geographic Information Systems is permitted.

REQUIREMENTS

120 units total (Levels I to IV) of which no more than 48 units may be Level I

LEVEL I

30 units Completed prior to admission to the program

LEVEL II

30 units from Level II Honours Earth and Environmental Sciences (B.Sc.)

LEVEL III

Consists of Academic Term 1 (Fall) and completion of the first eight-month work term, Term 2 (Winter) and Summer Term

TERM 1 (FALL): 15 UNITS

3 units GEO 3FE3
 3 units GEO 3R03
 6 units from Specialization Course Lists (see below)
 3 units Electives
 1 course SCIENCE 2C00

TERM 2 (WINTER) AND SUMMER

Work Term

LEVEL IV

Consists of Academic Term 1 (Fall) and Term 2 (Winter), and the first half of the second eight-month work term, Summer Term

TERMS 1 AND 2 (FALL AND WINTER): 30 UNITS

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

LEVEL V

Consists of completion of the second half of the second eight-month work term, Term 1 (Fall) and Academic Term 2 (Winter)

TERM 1

Work Term

TERM 2 (WINTER): 15 UNITS

12 units from Specialization Course Lists (see below)
 3 units Electives

Honours Earth and Environmental Sciences (Geochemistry Specialization Co-op)

{2212840}

The Honours Earth and Environmental Sciences (Geochemistry Specialization Co-op) program is being phased out. Registration in Level III will be last available in September 2007.

Geochemistry Course List 1: BIOLOGY 2F03; GEO 2B03, 2C03, 3B03, 3J03, 3L03, 3O03, 3Q03

Geochemistry Course List 2: ASTRON 2E03, BIOLOGY 2F03, 3SS3, 3TT3; CHEM 2A03 or 2E03, one Level III Chemistry course; GEO 2B03, 2C03, 2K03, 3B03, 3I03, 3J03, 3L03, 3O03, 3Q03, 3U03, 4B03, 4FE3, 4FF3, 4G03, 4HH3, 4O03, 4Q03

LEVEL III

6 units from Geochemistry Course List 1

LEVEL IV

6 units from Geochemistry Course List 1
 6-9 units from Geochemistry Course List 2

LEVEL V

3 units from Geochemistry Course List 1
 9 units from Geochemistry Course List 2

Honours Earth and Environmental Sciences (Geosciences Specialization Co-op)

{2212845}

The Honours Earth and Environmental Sciences (Geosciences Specialization Co-op) program is being phased out. Registration in Level III will be last available in September 2007.

Geosciences Course List 1: GEO 2B03, 2K03, 2KK3, 3E03, 3Q03, 3V03, 3Z03

Geosciences Course List 2: ASTRON 2E03, GEO 2B03, 2K03, 2KK3, 3E03, 3I03, 3K03, 3P03, 3Q03, 3U03, 3V03, 3Z03, 4E03, 4FE3, 4FF3, 4G03, 4J03, 4K03, 4Q03, 4T03, 4Z03, 4ZZ3

LEVEL III

6 units from Geosciences Course List 1

LEVEL IV

6 units from Geosciences Course List 1
 6-9 units from Geosciences Course List 2

LEVEL V

3 units from Geosciences Course List 1
 9 units from Geosciences Course List 2

Honours Earth and Environmental Sciences (Hydrosiences Specialization Co-op)

{2212850}

The Honours Earth and Environmental Sciences (Hydrosiences Specialization Co-op) program is being phased out. Registration in Level III will be last available in September 2007.

Hydrosiences Course List 1: GEO 2B03, 2C03, 3C03, 3J03, 3W03, 3Z03

Hydrosiences Course List 2: GEO 2B03, 2C03, 2K03, 3B03, 3C03, 3I03, 3J03, 3L03, 3Q03, 3U03, 3V03, 3W03, 3Z03, 4B03, 4C03, 4FE3, 4FF3, 4G03, 4Q03, 4W03, 4WW3

LEVEL III

6 units from Hydrosiences Course List 1

LEVEL IV

6 units from Hydrosiences Course List 1
 6-9 units from Hydrosiences Course List 2

LEVEL V

3 units from Hydrosiences Course List 1
 9 units from Hydrosiences Course List 2

	SEP OCT NOV DEC	JAN FEB MAR APR	MAY JUN JUL AUG
	Term 1	Term 2	Summer Term
LEVEL 3	15 units from Academic Level III + SCIENCE 2C00	Work Term	
	Term 1	Term 2	Summer Term
LEVEL 4	15 units from Academic Level III	15 units from Academic Level IV	Work Term
	Term 1	Term 2	Summer Term
LEVEL 5	Work Term	15 units from Academic Level IV	

B.Sc. in Geoscience {1149}

(Includes Environmental Science, Geography and Earth Sciences)

ADMISSION

2007-2008 ONLY: Completion of any Level I program with a Cumulative Average of at least 3.5 including:

- 6 units from ENVIR SC 1A03, 1B03, 1G03
- 3 units MATH 1A03
- 3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3
- 12 units from Science I Course List with an average of at least 4.0 in two courses

EFFECTIVE 2008-2009: Completion of any Level I program with a Cumulative Average of at least 3.5 including:

- 6 units from ENVIR SC 1A03, 1B03, 1G03 with an average of at least 4.0
- 3 units MATH 1A03
- 3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3
- 12 units from Science I Course List

NOTES

- There are Level II prerequisites for many Level III courses; these should be considered when choosing Level II courses. As an aid to choosing a coherent set of courses in a single discipline, students should consult the required specialist option courses in the Honours Earth and Environmental Sciences program.
- Students should seek academic counselling from the School of Geography and Earth Sciences to ensure that their choices are appropriate.

GEOSCIENCE COURSE LIST

All Level II and III Geo courses (except GEO 2GG3, 2MM3, 2WW3, 3AA3, 3CC3, 3DD3, 3NN3, 3RR3 and non-science Geo courses (Non-science Geo courses contain the letter H in the course code.)

REQUIREMENTS

90 units total (Levels I to III), of which no more than 42 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

- 12 units from Level II courses from Geoscience Course List
- 6 units from Faculty of Science courses
- 12 units Electives

LEVEL III: 30 UNITS

- 12 units from Levels III, IV courses from Geoscience Course List
- 3 units from Faculty of Science courses
- 15 units Electives

Minor in Geography

Please see *Minor in Geography* in the *School of Geography and Earth Sciences* in the *Faculty of Social Sciences* section of this Calendar.

Minor in Earth Science

REQUIREMENTS

24 units total

- 3 units from ENVIR SC 1G03
- 3 units from ENVIR SC 1A03, 1B03
- 18 units from GEO 2E03, 2K03, 2KK3, 2P03, 3DD3, 3E03, 3FG3, 3K03, 3P03, 3Q03, 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, 2Q03, 2W03, 3A03, 3B03, 3C03, 3J03, 3O03, 3Q03, 3U03, 3V03, 3W03, 4A03, 4B03, 4C03, 4G03, 4J03, 4Q03, 4W03, 4WW3, including at least six units from Levels III, IV GEO courses and at least three units from Levels II, III, IV Biology or Chemistry courses

Minor in Geographic 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

Certificate in G.I.S.

(Geographic Information Systems)

For further information see the *Certificate and Diploma Programs* section of this Calendar.

DEPARTMENT OF KINESIOLOGY

WEB ADDRESS: www.mcmaster.ca/kinesiology

Honours Bachelor of Kinesiology (B.Kin.)

(See Faculty of Social Sciences, Department of Kinesiology)

NOTE

Currently all students admitted to Kinesiology I register in the Faculty of Social Sciences. (See *Department of Kinesiology* in *Faculty of Social Sciences* section of this Calendar.) Beginning September 2008, the Faculty of Science will offer an Honours Bachelor of Science Kinesiology degree. As a result, students admitted to Honours Kinesiology I will register in the Faculty of Science. This program will replace the existing Honours Bachelor of Science (Hons. B.Sc.) degree option currently obtained by Kinesiology students registered in the Faculty of Science.

The Department of Kinesiology will continue to offer an Honours Bachelor of Kinesiology as a program option beyond Level I. For further information and program requirements, see *Department of Kinesiology* in the *Faculty of Social Sciences* section of this Calendar.

The Honours Bachelor of Kinesiology, the Honours Bachelor of Science and the proposed Honours Bachelor of Science Kinesiology programs provide students the opportunity to complete courses required for various professional degree programs. Students are strongly encouraged to seek advice in determining which program option is best suited for them.

Only those students who have completed Kinesiology I may be eligible for the Honours Kinesiology (B.Sc.) program.

Honours Kinesiology (B.Sc.) {2671}

This program is being phased out and admission to Level II will be last available in 2007. The program will be replaced by the Honours Kinesiology (B.Sc.Kin.) degree program as outlined above.

ADMISSION

2007-2008 ONLY: 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 and successful completion of one of MATH 1A03, 1B03, 1D03; and STATS 1CC3 (See Note 2 below).

NOTES

1. B.Sc. Kinesiology students must complete at least 12 units of electives selected from the Faculty of Science. These units may be completed in any Level but may not include Geo courses which contain the letter *H* in the course code or PSYCH 2AA3, 2B03, 2C03, 2I03, 2S03, 3PP3, 3SS3
2. KINESIOL 3C03 may substitute for STATS 1CC3, however, three additional units from the Faculty of Science must be completed.

COURSE LIST

KINESIOL 3AA3, 3B03, 3C03, 3D03, 3E03, 3K03, 3N03, 3Y03, 4A06, 4B03, 4BB3, 4C03, 4CC3, 4EE3, 4F03, 4FF3, 4GG3, 4I03, 4J03, 4K03, 4KK3, 4M03, 4P03, 4Q03, 4R03, 4RR6, 4S03, 4SS3, 4V03, 4X06

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS (2007-2008 ONLY)

15 units KINESIOL 2A03, 2C06, 2G03, 2H03

15 units Electives (See Note 1 above.)

LEVEL II: 30 UNITS (EFFECTIVE 2008-2009)

18 units KINESIOL 2A03, 2C03, 2CC3, 2E03, 2F03, 2G03

12 units Electives (See Note 1 above.)

LEVELS III AND IV: 60 UNITS

30 units Levels III, IV Kinesiology, including at least 18 units from Course List (See Note 2 above.)

30 units Electives (See Note 1 above.)

Honours Kinesiology (B.Sc.Kinesiology) {2672} (Effective 2008-2009)

ADMISSION

2008-2009 ONLY: Completion of Kinesiology I with a Cumulative Average of at least 6.0 including an average of at least 6.0 in KINESIOL 1A03, 1AA3, 1C03, 1E03, 1F03, 1G03 and successful completion of one of MATH 1A03, 1B03, 1D03; and STATS 1CC3 (See Note 2 below).

EFFECTIVE 2009-2010: Completion of Honours Kinesiology I with a Cumulative Average of at least 6.0 including an average of at least 6.0 in KINESIOL 1A03, 1AA3, 1C03, 1E03, 1F03, 1G03 and successful completion of one of MATH 1A03, 1B03 or 1LS3.

NOTES

1. Honours B.Sc.Kinesiology students must complete at least six units of electives chosen from the Faculty of Science. These units may be completed in any level of studies but may not include Geo courses which contain the letter *H* in the course code or PSYCH 2AA3, 2B03, 2C03, 2I03, 2S03, 3PP3, 3SS3.
2. KINESIOL 3C03 may be substituted for STATS 1CC3. However, three additional units from the Faculty of Science must be completed.

COURSE LIST

KINESIOL 3AA3, 3B03, 3D03, 3E03, 3K03, 3N03, 3Y03, 4A06, 4B03, 4BB3, 4C03, 4CC3, 4EE3, 4F03, 4FF3, 4GG3, 4I03, 4J03, 4K03, 4KK3, 4M03, 4P03, 4Q03, 4R03, 4RR6, 4S03, 4SS3, 4V03, 4X06

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

18 units KINESIOL 2A03, 2C03, 2CC3, 2E03, 2F03, 2G03

12 units Electives (See Note above.)

LEVELS III AND IV: 60 UNITS

33 units Levels III, IV Kinesiology, including at least nine units of Level IV and at least 27 units from Course List

3 units KINESIOL 3C03

24 units Electives, which must include six units from the Faculty of Science if not completed in Level I or II

MATERIALS SCIENCE AND ENGINEERING

WEB ADDRESS: <http://mse.eng.mcmaster.ca>

Honours Physical Science

(See Interdisciplinary Programs)

Honours Materials Science

NOTES

1. The Honours Materials Science program consists of two specializations as follows:
 - Materials Properties and Processing
 - Nanomaterials
2. Students who completed Grade 12 Geometry and Discrete Mathematics U must register in MATH 1B03, otherwise MATH 1D03 must be completed. Students in the Nanomaterials specialization must complete MATH 1B03 (which is a prerequisite for MATH 2R03) before entering Level II. Therefore those students in this specialization who did not complete Grade 12 Geometry and Discrete Mathematics U must use three units of electives to complete MATH 1D03 followed by MATH 1B03.

Honours Materials Science

{2518}

(Computational Materials Science Specialization)

The Honours Materials Science (Computational Materials Science Specialization) has been cancelled. Students who had intended to register in this program should contact the Office of the Associate Dean Science (Studies) to discuss an alternate choice.

Honours Materials Science

{2517}

(Materials Properties and Processing Specialization)

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0 including:

- 3 units MATH 1A03
- 3 units MATH 1AA3 with a grade of at least C+
- 3 units from MATH 1B03, 1D03 with a grade of at least C+ (See Note 2 above.)
- 6 units a grade of at least C+ in both CHEM 1A03, 1AA3
- 3 units PHYSICS 1B03
- 3 units PHYSICS 1BA3 or 1BB3
- 3 units MATLS 1M03
- 6 units from Science I Course List

MATERIALS PROPERTIES AND PROCESSING COURSE LIST

CHEM ENG 3O04; CHEM 3Q03; ENGINEER 4J03; ENG PHYS 3E03, 3F03, 4F03; all Level III and IV Materials courses; MECH ENG 3O04; PHYSICS 3MM3, 4K03

REQUIREMENTS

120 -121 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

- 5 units CHEM 2E03, 2WW2
- 6 units MATH 2A03, 2C03
- 13 units MATLS 2B03, 2D03, 2H04, 2X03
- 6 units PHYSICS 2B06

LEVEL III: 31 UNITS

- 4 units CHEM ENG 2A04
- 15 units MATLS 3C04, 3E04, 3M03, 3T04
- 3 units MATH 3I03
- 3 units from STATS 3N03, 3Y03
- 6 units from Materials Properties and Processing Course List

LEVEL IV: 29-30 UNITS

- 8 units MATLS 4A02, 4K04, 4L02
- 15-16 units from Materials Properties and Processing Course List
- 6 units Electives

Honours Materials Science {2523} (Nanomaterials Specialization)

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0 including:

- 3 units MATH 1A03
- 3 units MATH 1AA3 with a grade of at least C+
- 3 units from MATH 1B03, 1D03 with a grade of at least C+ (See Note 2 above.)
- 6 units a grade of at least C+ in both CHEM 1A03, 1AA3
- 3 units PHYSICS 1B03
- 3 units PHYSICS 1BA3 or 1BB3
- 3 units MATLS 1M03
- 6 units from Science I Course List (See Note 2 above.)

NANOMATERIALS COURSE LIST

CHEM ENG 4Z03; CHEM 3ZZ3, 4F03; ENG PHYS 3F03, 3G03, 4E03, 4F03, 4S04; all Level III and IV Materials courses; PHYSICS 3MM3, 3N03, 3S03

REQUIREMENTS

119-121 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Note 2 and Admission above.)

LEVEL II: 30 UNITS

- 5 units CHEM 2E03, 2WW2
- 6 units MATH 2A03, 2C03
- 13 units MATLS 2B03, 2D03, 2H04, 2X03
- 6 units PHYSICS 2B06

LEVEL III: 29-30 UNITS

- 11 units MATLS 3E04, 3Q03, 3T04
- 3 units CHEM ENG 3Q03
- 6 units MATH 2R03, 3I03
- 3 units ENG PHYS 2QM3
- 6-7 units from Nanomaterials Course List. MATLS 3C04 is recommended.

LEVEL IV: 30-31 UNITS

- 7 units MATLS 4F03, 4K04
- 3 units from MATLS 4G03, 4H03
- 4 units STATS 3J04
- 16-17 units from Nanomaterials Course List (MATLS 4R03 is recommended if offered.)

B.Sc. Three-Level Degree

A three-level program with a Materials Science orientation is available through the **B.Sc. in Physical Science**. See Interdisciplinary Programs in this section of the Calendar.

Minor in Materials Processing

NOTES

1. In order to meet prerequisite requirements, at least six units of appropriate Level II Mathematics must be taken.
2. Students currently working towards a Minor in Materials Processing may follow the requirements as outlined in the 2003-2004 Undergraduate Calendar.

REQUIREMENTS

- 24 units total
- 3 units from ENGINEER 2O03, MATLS 1M03
- 4 units CHEM ENG 2A04
- 17 units from MATLS 2B03, 2D03, 3B03, 3E04, 3F03, 4C03, 4H03

Minor in Materials Properties

NOTES

1. In order to meet prerequisite requirements, at least six units of appropriate Level II Mathematics must be taken.
2. Students currently working towards a Minor in Materials Properties may follow the requirements as outlined in the 2003-2004 Undergraduate Calendar.

REQUIREMENTS

- 24 units total
- 3 units from ENGINEER 2O03, MATLS 1M03
- 4 units CHEM ENG 2A04
- 17 units MATLS 2B03, 2D03, 2X03, 3C04, 3T04

DEPARTMENT OF MATHEMATICS AND STATISTICS

WEB ADDRESS: <http://www.math.mcmaster.ca>

Honours Arts & Science and Mathematics

(B.Arts.Sc.; See Arts & Science Program)

Honours Biology and Mathematics

(See Department of Biology)

Honours 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)

NOTES APPLICABLE TO ALL HONOURS

MATHEMATICS AND STATISTICS PROGRAMS

1. In addition to the Honours Mathematics and Statistics programs, the Department offers three specializations. The Honours program consists of a specified set of basic requirements and allows a wide choice of electives (including those from outside the Faculty of Science) allowing for interdisciplinary studies or the opportunity to complete a Minor in another subject. Alternatively, students may choose one of the following specializations which are more appropriate for graduate studies in Mathematics or Statistics:
 - Applied Mathematics Specialization
 - Mathematics Specialization
 - Statistics Specialization
 Honours Mathematics and Statistics may also be combined with the Origins Research Specialization.
2. 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.
3. Students who successfully complete the first three Levels of any Honours B.Sc. degree may request permission from the Office of the Associate Dean of Science (Studies) for transfer to graduate with a three-level B.Sc. Science degree.
4. MATH 1D03 is a prerequisite for MATH 1B03 for students who have not completed Grade 12 Geometry and Discrete Mathematics U.
5. A Cooperative Education program is available; see the requirements for Honours Mathematics and Statistics Co-op programs in this section of the Calendar. Admission to the co-op program is in Level III.
6. Joint Honours programs are available with Arts & Science, Biology, Computer Science, Economics, Philosophy and Physics.

Honours Mathematics and Statistics {2320832}

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0 including:

- 3 units from MATH 1A03, 1X03
- 3 units from MATH 1AA3, 1XX3 with a grade of at least C+
- 3 units MATH 1B03

NOTE

MATH 1C03, although not required, is strongly recommended, if not completed in Level I.

COURSE LIST

MATH 2E03, 2S03, 2T03, 3B03, 3E03, 3F03, 3FF3, 3T03; STATS 2MB3, 3D03, 3DD3, 3S03, 3U03

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

- 12 units MATH 2C03, 2R03, 2X03, 2XX3
- 3 units STATS 2D03
- 15 units Electives. (See Note above.)

LEVEL III: 30 UNITS

- 6 units MATH 3A03, 3X03
- 3 units Levels III, IV Mathematics or Statistics
- 6 units from Course List
- 15 units Electives

LEVEL IV: 30 UNITS

- 15 units Levels III, IV Mathematics or Statistics
- 3 units from MATH 3GP3, 3TP3, 3Z03
- 12 units Electives

Honours Mathematics and Statistics {2320838} (Applied Mathematics Specialization)

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0 including:

- 3 units from MATH 1A03, 1X03
- 3 units from MATH 1AA3, 1XX3 with a grade of at least C+
- 3 units MATH 1B03

NOTES

1. 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.
2. MATH 1C03, although not required, is strongly recommended, if not completed in Level I.

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

- 30 units (See Admission above.)

LEVEL II: 30 UNITS

- 12 units MATH 2C03, 2R03, 2X03, 2XX3
- 3 units STATS 2D03
- 3 units from MATH 2S03, 2T03
- 12 units Electives (MATH 2E03 is recommended.) (See Note 2 above.)

LEVEL III: 30 UNITS

- 6 units MATH 3A03, 3X03
- 6 units from MATH 3F03, 3FF3, 3Q03
- 9 units Levels II, III, IV Mathematics or Statistics, of which at least three units must be Level III or IV
- 9 units Electives

LEVEL IV: 30 UNITS

- 3 units MATH 4A03
- 3 units from MATH 4G03, 4Q03, 4V03, 4X03
- 15 units Levels II, III, IV Mathematics or Statistics
- 9 units Electives

Honours Mathematics and Statistics {2320834} (Mathematics Specialization)

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0 including:

- 3 units from MATH 1A03, 1X03
- 3 units from MATH 1AA3, 1XX3 with a grade of at least C+
- 3 units MATH 1B03

NOTE

MATH 1C03, although not required, is strongly recommended, if not completed in Level I.

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

- 30 units (See Admission above.)

LEVEL II: 30 UNITS

- 15 units MATH 2C03, 2R03, 2S03, 2X03, 2XX3
- 3 units STATS 2D03
- 12 units Electives (See Note above.)

LEVEL III: 30 UNITS

- 6 units MATH 3A03, 3X03
- 6 units MATH 3E03, 3EE3
- 9 units Levels II, III, IV Mathematics or Statistics, of which at least three units must be Level III or IV
- 9 units Electives

LEVEL IV: 30 UNITS

- 3 units MATH 4A03
- 3 units from MATH 4B03, 4E03, 4G03, 4X03
- 15 units Levels III, IV Mathematics or Statistics
- 9 units Electives

Honours Mathematics and Statistics {2320412} (Origins Research Specialization)

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0 including:

- 3 units from MATH 1A03, 1X03
- 3 units from MATH 1AA3, 1XX3 with a grade of at least C+
- 3 units MATH 1B03 with a grade of at least C+
- 6 units BIOLOGY 1A03, 1AA3
- 3 units PHYSICS 1B03
- 3 units from ASTRON 1F03, PHYSICS 1BA3, 1BB3
- 6 units CHEM 1A03, ENVIR SC 1G03

NOTE

MATH 1C03, although not required, is strongly recommended, if not completed in Level I.

MATHEMATICS AND STATISTICS COURSE LIST

MATH 2E03, 2S03, 2T03, 3B03, 3E03, 3F03, 3FF3, 3T03; STATS 2MB3, 3D03, 3DD3, 3S03, 3U03

ORIGINS COURSE LIST

ORIGINS 3A03, 3B03, 3C03, 3D03, 3E03, 3F03

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

- 30 units (See Admission above.)

LEVEL II: 30 UNITS

- 12 units MATH 2C03, 2R03, 2X03, 2XX3
- 3 units STATS 2D03
- 3 units from ORIGINS 2B03, 2FF3
- 3 units ORIGINS 2S03
- 9 units Electives (See Note above.)

LEVEL III: 30 UNITS

- 6 units MATH 3A03, 3X03
- 3 units Levels III, IV Mathematics or Statistics
- 6 units from Mathematics and Statistics Course List
- 3 units from ORIGINS 2B03, 2FF3 (whichever not completed)
- 3 units ORIGINS 3S03
- 6 units from Origins Course List
- 3 units Electives

LEVEL IV: 30 UNITS

- 12 units Levels III, IV Mathematics or Statistics
- 3 units from MATH 3GP3, 3TP3, 3Z03
- 9 units ORIGINS 4A09
- 6 units Electives

Honours Mathematics and Statistics {2320836} (Statistics Specialization)

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0 including:

- 3 units from MATH 1A03, 1X03
- 3 units from MATH 1AA3, 1XX3 with a grade of at least C+
- 3 units MATH 1B03

NOTE

MATH 1C03, although not required, is strongly recommended, if not completed in Level I.

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

- 30 units (See Admission above.)

LEVEL II: 30 UNITS

- 3 units STATS 2MB3
- 12 units MATH 2C03, 2R03, 2X03, 2XX3
- 3 units STATS 2D03
- 12 units Electives (See Note above.)

LEVEL III: 30 UNITS

- 6 units MATH 3A03, 3X03
- 9 units STATS 3A03, 3D03, 3DD3
- 9 units Levels II, III, IV Mathematics or Statistics, of which at least three units must be Level III or IV
- 6 units Electives

LEVEL IV: 30 UNITS

- 6 units Level IV Statistics
- 15 units Levels III, IV Mathematics or Statistics
- 9 units Electives

Honours Mathematics and Computer Science {2320145}

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0 including:

- 3 units from MATH 1A03, 1X03
- 3 units from MATH 1AA3, 1XX3 with a grade of at least C+
- 3 units MATH 1B03 with a grade of at least C+
- 3 units COMP SCI 1MD3 with a grade of at least C+

NOTE

MATH 1C03, although not required, is strongly recommended, if not completed in Level I.

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

- 30 units (See Admission above.)

LEVEL II: 30 UNITS

- 9 units MATH 2R03, 2X03, 2XX3
- 3 units from MATH 2C03, STATS 2D03
- 6 units COMP SCI 2MJ3, 2SC3
- 6 units COMP SCI 2CA3 and 2MF3; or COMP SCI 2ME3 and 2O03
- 6 units Electives (See Note above.)

LEVEL III: 30 UNITS

- 6 units MATH 3A03, 3X03
- 6 units Levels II, III, IV Mathematics or Statistics
- 6 units COMP SCI 3DA3, 3MI3; or COMP SCI 3DB3, 3MH3; or COMP SCI 3EA3, 3SR3
- 6 units Levels II, III Computer Science
- 6 units Electives

LEVEL IV: 30 UNITS

- 12 units Levels III, IV Mathematics or Statistics, of which at least three units must be Level IV
- 3 units from COMP SCI 4AR3, 4CD3, 4TB3
- 9 units Levels III, IV Computer Science
- 6 units Electives

Honours Mathematics and Physics {2320440}

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0 including:

- 3 units from MATH 1A03, 1X03
- 3 units from MATH 1AA3, 1XX3 with a grade of at least C+
- 3 units MATH 1B03 with a grade of at least C+
- 3 units PHYSICS 1B03 with a grade of at least C+
- 3 units from PHYSICS 1BA3, 1BB3 with a grade of at least C+
- 3 units from Science I Course List

NOTES

1. PHYSICS 3A03 and 3C03 are listed in Level III but are offered in alternate years and may be taken in Level IV.
2. A Minor in Astronomy or Statistics is not permitted in the Honours Mathematics and Physics program.
3. MATH 1C03, although not required, is strongly recommended, if not completed in Level I.

COURSE LIST

All Level III and IV Astronomy courses; COMP SCI 2SC3; MATH 2E03; STATS 2D03, 2MB3; all Level III and IV Mathematics and Statistics courses; all Level III and IV Physics courses except PHYSICS 3T03, 4R06

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

- 30 units (See Admission above.)

LEVEL II: 30 UNITS

- 12 units MATH 2C03, 2R03, 2X03, 2XX3
- 12 units PHYSICS 2B06, 2C03, 2E03
- 6 units Electives See Note 3 above.

LEVEL III: 30 UNITS

- 6 units MATH 3A03, 3X03
- 6 units Level II, III, IV Mathematics or Statistics
- 3 units from PHYSICS 3A03, 3C03
- 6 units PHYSICS 3K03, 3MM3
- 3 units Levels III, IV Physics or Astronomy
- 6 units Electives

LEVEL IV: 30 UNITS (2007-2008 ONLY)

- 6 units MATH 4A03, 4X03
- 3 units PHYSICS 4B03
- 15 units from Course List
- 6 units Electives

LEVEL IV: 30 UNITS (EFFECTIVE 2008-2009)

- 12 units Levels III, IV Mathematics or Statistics, with at least three units from Level IV
- 3 units PHYSICS 4B03
- 9 units Levels III, IV Physics or Astronomy, including PHYSICS 4L03 or 4P06
- 6 units Electives

Honours Mathematical Science {2515}

FORMERLY HONOURS SCIENCE (MATHEMATICAL SCIENCE)

(Includes Mathematics and Statistics and Computer Science)

ADMISSION

2007-2008 ONLY: Completion of any Level I program with a Cumulative Average of at least 5.0 including:

- 3 units from MATH 1A03, 1X03
- 3 units from MATH 1AA3, 1XX3
- 3 units from COMP SCI 1FC3, 1MD3, MATH 1B03 or 1D03
- 6 units from MATH 1C03 or the Science I Course List

A grade of at least C+ is required in one of COMP SCI 1FC3, 1MD3, MATH 1AA3, 1B03, 1XX3, or three units from the Science I Course List.

EFFECTIVE 2008-2009: Completion of any Level I program with a Cumulative Average of at least 6.0 including:

- 3 units from MATH 1A03, 1X03
- 3 units from MATH 1AA3, 1XX3 with a grade of at least C+
- 3 units one of COMP SCI 1FC3, 1MD3, MATH 1B03 with a grade of at least C+
- 3 units from MATH 1C03 or the Science I Course List

A grade of at least C+ is required in one of COMP SCI 1FC3, 1MD3, MATH 1AA3, 1B03, 1XX3, or three units from the Science I Course List.

NOTES

1. Students should be aware that MATH 1B03, in addition to MATH 1D03, may be a prerequisite for upper level Computer Science and Mathematics courses.
2. Admission to Honours Mathematical Science does not guarantee registration in all courses. Students should read course descriptions and prerequisites carefully.
3. For students who entered the program in September 2007 or prior, at each academic review after completion of Level I, a Cumulative Average of at least 6.0 is required to continue in the Honours Mathematical Science program.

MATHEMATICAL SCIENCE COURSE LIST

All Levels II, III, IV Computer Science, Mathematics or Statistics courses

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

12 units Level II courses from Mathematical Science Course List

6 units from Faculty of Science courses excluding the Mathematical Science Course List

12 units Electives

LEVEL III: 30 UNITS

12 units Levels III, IV courses from Mathematical Science Course List

3 units from Faculty of Science courses excluding the Mathematical Science Course List

15 units Electives

LEVEL IV: 30 UNITS

18 units Levels II, III, IV courses from Mathematical Science Course List of which at least 12 units must be Levels III, IV

6 units from Faculty of Science courses excluding the Mathematical Science Course List

6 units Electives

Honours Mathematics and Statistics Co-op Programs

Co-op opportunities in Mathematics and Statistics are available in combination with the specializations. **Enrolment in these programs is limited.** Selection is based on academic achievement and an interview but requires, as a minimum, completion of a Level II Honours Mathematics and Statistics program with a Cumulative Average of at least 6.0. Information about the program and the selection procedure may be obtained from the Science Career and Cooperative Education Office.

NOTES

1. These are five-level (year) co-op programs which include two eight-month work terms which must be spent in mathematics or statistics related placements.
2. Students must be registered in a full-load and take a full academic program as prescribed, by Level and Term.
3. Students are required to complete SCIENCE 2C00, a Work Orientation course, before the first work placement.

Honours Mathematics and Statistics {2325846} (Applied Mathematics Specialization Co-op)

ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement and an interview but requires, as a minimum, completion of Level II Honours Mathematics and Statistics (Applied Mathematics Specialization) with a Cumulative Average of at least 6.0.

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.

COURSE LIST

MATH 2E03, 2S03, 2T03, 3B03, 3E03, 3F03, 3FF3, 3T03; STATS 2MB3, 3D03, 3DD3, 3S03, 3U03

LEVEL I: 30 UNITS

Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units Completion of Level II Honours Mathematics and Statistics (Applied Mathematics Specialization)

LEVEL III

Consists of Academic Term 1 (Fall) and completion of the first eight-month work term, Term 2 (Winter) and Summer Term

TERM 1 (FALL): 15 UNITS

6 units MATH 3A03, 3F03

3 units from Course List

3 units Levels III, IV Mathematics or Statistics

3 units Electives

1 course SCIENCE 2C00

TERM 2 (WINTER) AND SUMMER

Work Term

LEVEL IV

Consists of Academic Term 1 (Fall) and Term 2 (Winter), and the first half of the second eight-month work term, Summer Term

TERMS 1 AND 2 (FALL AND WINTER): 30 UNITS

9 units MATH 3FF3, 3X03, 4A03

3 units from Course List

9 units Levels III, IV Mathematics or Statistics

9 units Electives

SUMMER

Work Term

LEVEL V

Consists of completion of the second half of the second eight-month work term, Term 1 (Fall) and Academic Term 2 (Winter)

TERM 1 (FALL)

Work term

TERM 2 (WINTER): 15 UNITS

3 units from MATH 4G03, 4Q03, 4V03

6 units Levels III, IV Mathematics or Statistics

6 units Electives

Honours Mathematics and Statistics {2325842} (Mathematics Specialization Co-op)

ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement and an interview but requires, as a minimum, completion of Level II Honours Mathematics and Statistics (Mathematics Specialization) with a Cumulative Average of at least 6.0.

COURSE LIST

MATH 2E03, 2S03, 2T03, 3B03, 3E03, 3F03, 3FF3, 3T03; STATS 2MB3, 3D03, 3DD3, 3S03, 3U03

LEVEL I: 30 UNITS

Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units Completion of Level II Honours Mathematics and Statistics (Mathematics Specialization)

LEVEL III

Consists of Academic Term 1 (Fall) and completion of the first eight-month work term, Term 2 (Winter) and Summer Term

TERM 1 (FALL): 15 UNITS

6 units MATH 3A03, 3E03

3 units from Course List

3 units Levels III, IV Mathematics or Statistics

3 units Electives

1 course SCIENCE 2C00

TERM 2 (WINTER) AND SUMMER

Work Term

LEVEL IV

Consists of Academic Term 1 (Fall) and Academic Term 2 (Winter) and the first half of the second eight-month work term, Summer Term

TERMS 1 AND 2 (FALL AND WINTER): 30 UNITS

9 units MATH 3EE3, 3X03, 4A03

3 units from Course List

9 units Levels III, IV Mathematics or Statistics

9 units Electives

SUMMER

Work Term

LEVEL V

Consists of completion of the second half of the second eight-month work term, Term 1 and Academic Term 2 (Winter)

TERM 1 (FALL)

Work term

TERM 2 (WINTER): 15 UNITS

6 units Levels III, IV Mathematics or Statistics

3 units from MATH 4B03, 4E03, 4G03, 4X03

6 units Electives

Honours Mathematics and Statistics{2325844} (Statistics Specialization Co-op)

ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement and an interview but requires, as a minimum, completion of Level II Honours Mathematics and Statistics (Statistics Specialization) with a Cumulative Average of at least 6.0.

COURSE LIST

MATH 2E03, 2S03, 2T03, 3B03, 3E03, 3F03, 3FF3, 3T03; STATS 2MB3, 3D03, 3DD3, 3S03, 3U03

LEVEL I: 30 UNITS

Completed prior to admission to the program

LEVEL II

30 units Completion of Level II Honours Mathematics and Statistics (Statistics Specialization)

LEVEL III

Consists of Academic Term 1 (Fall) and completion of the first eight-month work term, Term 2 (Winter) and Summer Term

TERM 1 (FALL): 15 UNITS

3 units STATS 3D03
3 units MATH 3A03
3 units from Course List
3 units STATS 3A03
3 units Electives
1 course SCIENCE 2C00

TERM 2 (WINTER) AND SUMMER

Work Term

LEVEL IV

Consists of Academic Term 1 (Fall) and Academic Term 2 (Winter) and the second half of the second eight-month work term, Summer Term

TERMS 1 AND 2 (FALL AND WINTER): 30 UNITS

3 units MATH 3X03
3 units STATS 3DD3
6 units from Course List
9 units Levels III, IV Mathematics or Statistics
9 units Electives

SUMMER

Work Term

LEVEL V

Consists of completion of the second half of the second eight-month work term, Term 1 and Academic Term 2 (Winter)

TERM 1 (FALL)

Work term

TERM 2 (WINTER): 15 UNITS

3 units Levels III, IV Mathematics or Statistics
6 units Levels IV Statistics
6 units Electives

	SEP OCT NOV DEC	JAN FEB MAR APR	MAY JUN JUL AUG
	Term 1	Term 2	Summer Term
LEVEL 3	15 units from Academic Level III + SCIENCE 2C00	Work Term	
	Term 1	Term 2	Summer Term
LEVEL 4	15 units from Academic Levels III, IV	15 units from Academic Levels III, IV	Work Term
	Term 1	Term 2	Summer Term
LEVEL 5	Work Term	15 units from Academic Level IV	

B.Sc. in Mathematical Science {1325}

(Includes Computer Science and Mathematics and Statistics)

ADMISSION

2007-2008 ONLY: Completion of any Level I program with a Cumulative Average of at least 3.5 including:

3 units from MATH 1A03, 1X03
3 units from MATH 1AA3, 1XX3
3 units from COMP SCI 1FC3, 1MD3, MATH 1B03, 1D03
6 units from Science I Course List, with a grade of at least C+

EFFECTIVE 2008-2009: Completion of any Level I program with a Cumulative Average of at least 3.5 including:

3 units from MATH 1A03, 1X03
3 units from MATH 1AA3, 1XX3
3 units from COMP SCI 1FC3, 1MD3, MATH 1B03, 1D03
6 units from Science I Course List

An average of at least 4.0 in six units from MATH 1A03, 1AA3, 1X03, 1XX3 is required.

NOTES

- Students should be aware that MATH 1B03, in addition to MATH 1D03, may be a prerequisite for upper level Computer Science and Mathematics courses.
- Students are responsible for ensuring that prerequisites for anticipated courses for Level III are completed in Level II.

MATHEMATICAL SCIENCE COURSE LIST

All Level II, III, IV Computer Science courses; MATH 2A03, 2C03, 2E03, 2K03, 2R03, 2S03, 2T03; STATS 2D03, 2MB3, all Level III and IV Mathematics or Statistics courses

REQUIREMENTS

90 units total (Levels I to III), of which no more than 42 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

12 units from Level II courses from Mathematical Science Course List
6 units from Faculty of Science courses
12 units Electives

LEVEL III: 30 UNITS

12 units from Level III courses from Mathematical Science Course List
3 units from Faculty of Science courses
15 units Electives

Minor in Mathematics and Statistics

NOTE

MATH 2L03 cannot be used for credit towards this Minor.

REQUIREMENTS

27 units total

3 units from MATH 1A03, 1X03
3 units from MATH 1AA3, 1XX3
3 units MATH 1B03
18 units Levels II, III, IV Mathematics or Statistics, including at least six units from Levels III, IV Mathematics or Statistics (See Note above.)

MEDICAL PHYSICS AND

APPLIED RADIATION SCIENCES

WEB ADDRESS: <http://www.science.mcmaster.ca/medphys/index.php>

NOTE

Students in Medical and Health Physics programs are expected to have basic skills in the use of personal computers, word processing and spreadsheet software and some familiarity with a programming language.

Honours Medical and Health Physics {2443}**ADMISSION**

Completion of any Level I program with a Cumulative Average of at least a 6.0, including:

- 9 units MATH 1A03, 1AA3, 1B03 (or 1D03)
- 3 units BIOLOGY 1A03
- 6 units CHEM 1A03, 1AA3
- 3 units PHYSICS 1B03
- 3 units from BIOLOGY 1AA3, PHYSICS 1BA3 (or 1BB3) (See Note 1 below.)
- 6 units Level I electives
- 1 course SCIENCE 1B00

An average of at least 7.0 in MATH 1A03, 1AA3, 1B03 (or 1D03), PHYSICS 1B03 is required.

NOTES

- 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.
- A Minor in Astronomy or Mathematics or Mathematics and Statistics is not permitted in the Honours Medical and Health Physics program.
- Psychology courses require permission of the Departmental Academic Advisor or instructor.
- MED PHYS 4I03 will become a Level IV requirement for students entering in 2007. It is strongly recommended for students who entered prior to 2007.

REQUIREMENTS

121 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units (See Admission above.)

LEVEL II: 31 UNITS

- 3 units MED PHYS 2A03
- 3-6 units CHEM 2E03; or both CHEM 2OA3 and 2OB3
- 9 units MATH 2A03, 2C03, 2E03
- 13 units PHYSICS 2B06, 2E03, 2H04
- 0-3 units Electives

LEVEL III: 30 UNITS

- 9 units BIOLOGY 2B03, MATH 3C03, 3D03
- 6 units MED PHYS 3R03, 4B03
- 12 units PHYSICS 2C03, 3H03, 3MM3, 3N03
- 3 units from BIOCHEM 3G03, BIOLOGY 2C03, PSYCH 3A03, 3AA3, 3FA3, 3J03, 3N03. (See Note 3 above.)

LEVEL IV: 30 UNITS

- 3 units BIOLOGY 4U03
- 15 units MED PHYS 4A03, 4R06, 4T03, 4XX3
- 9 units PHYSICS 4D06, 4E03
- 3 units Electives (See Note 4 above.)

Honours Medical and Health Physics Co-op {2330}**ADMISSION**

Enrolment in this program is limited. Selection is based on academic achievement and an interview but requires, as a minimum, completion of Level II Honours Medical and Health Physics with a Cumulative Average of at least 6.0.

Information about the program and the selection procedure may be obtained from the Science Career and Cooperative Education Office.

NOTES

- This is a five-level (year) co-op program which includes two eight-month work terms which must be spent in Medical or Health Physics related placements.
- Students must be registered in a full-load and take a full academic program as prescribed, by Level and Term.
- Students are required to complete SCIENCE 2C00, a Work Orientation course, before the first work placement.
- MED PHYS 4I03 will become a Level V requirement for students entering in 2007. It is strongly recommended for students who entered prior to 2007.

REQUIREMENTS

121 units total (Levels I to IV) of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units Completed prior to admission to the program

LEVEL II: 31 UNITS

31 units Completion of Level II Honours Medical and Health Physics

LEVEL III

Consists of Academic Term 1 (Fall) and completion of the first eight-month work term, Term 2 (Winter) and Summer Term

TERM 1 (FALL): 16 UNITS

- 3 units MATH 3C03
- 3 units MED PHYS 4B03
- 7 units PHYSICS 2C03, 3HC1, 3N03
- 3 units from BIOCHEM 3G03, BIOLOGY 2C03, PSYCH 3A03, 3AA3, 3FA3, 3J03, 3N03 (Psychology courses require permission of the Departmental Academic Advisor or instructor.)
- 1 course SCIENCE 2C00

TERM 2 (WINTER) AND SUMMER

Work Term

LEVEL IV

Consists of Academic Term 1 (Fall) and Academic Term 2 (Winter), and the first half of the second eight-month work term, Summer Term

TERMS 1 AND 2 (FALL AND WINTER): 31 UNITS

- 6 units BIOLOGY 2B03, 4U03
- 3 units MATH 3D03
- 13 units MED PHYS 4AA1, 4R06, 4T03, 4XX3
- 9 units PHYSICS 3MM3, 4D06

SUMMER

Work Term

LEVEL V

Consists of completion of the second half of the second eight-month work term, Term 1 (Fall), plus Academic Term 2 (Winter)

TERM 1

Work Term

TERM 2 (WINTER): 13 UNITS

- 5 units MED PHYS 3R03, 4AB2
- 5 units PHYSICS 3HD2, 4E03
- 3 units Electives (See Note 4 above.)

	SEP OCT NOV DEC	JAN FEB MAR APR	MAY JUN JUL AUG
	Term 1	Term 2	Summer Term
LEVEL 3	16 units from Academic Level III + SCIENCE 2C00	Work Term	
	Term 1	Term 2	Summer Term
LEVEL 4	13 units from Academic Levels III, IV	18 units from Academic Levels III, IV	Work Term
	Term 1	Term 2	Summer Term
LEVEL 5	Work Term	13 units from Academic Level IV	

MEDICAL RADIATION SCIENCES

WEB ADDRESS: <http://www.science.mcmaster.ca/MedRadSci>

NOTES

- This program is offered jointly in partnership by Mohawk College of Applied Arts and Technology and McMaster University. Students pursue two qualifications simultaneously, and graduates receive the Ontario College Advanced Diploma in Medical Radiation Sciences from Mohawk and the McMaster Bachelor of Medical Radiation Sciences degree.

2. The overall program comprises ten semesters within four calendar years. Three full semesters are spent in clinical placement. Students are required to be registered in a full load of courses as prescribed by Level and Term for their program.
3. At the end of Level I, each student will be streamed into one of three available specializations, Radiography, Ultrasonography or Radiation Therapy. Students may indicate their option preference; however, since enrolment is limited by number of available clinical placements, students may be streamed into a specialization that is not of their choosing.
4. Placements will be with agencies that have contracted in advance with Mohawk College to provide specific experiences and resources during the normal clinical semester schedule; therefore, placements are not available at any other agencies or during other times. The College, in accordance with established policy, will determine allocation of students to these clinical facilities. The final assignment of learning settings is constrained by the availability of site resources. Students may be required to attend clinical practica in a setting that is not of their choosing. The College cannot accommodate any student requests for special consideration. Students must prepare financially and personally to relocate and/or commute to their assigned clinical placements. Students are responsible for arranging their own travel to and from assigned placements and are responsible for covering any costs incurred.
5. All students may be required to attend full-time clinical practica at a minimum of two different clinical agencies that may be located across Ontario.
6. **Basic Cardiac Life Support Training:** All Level II students are required to have obtained a current certificate in Basic Cardiac Life Support - Level C and First Aid Training prior to commencing term 2 of Level II.
7. All students will be required to act as simulated patients for their peers in skills course labs and during skills practice sessions.
8. **Immunization and Health Screening:** The Ontario Public Hospitals Act requires that all persons working or on educational placement in a hospital setting meet criteria regarding surveillance for infectious diseases. All Level II students will be required to provide evidence of compliance with completion of mandatory immunization requirements as well as completing pre clinical disease screening.
9. A satisfactory Police Records Check may be required for clinical placements. All costs associated with this procedure are the responsibility of the student.
10. The University reserves the right to require the withdrawal of a student should his or her conduct so warrant. The Medical Radiation Sciences program reserves the right, at any point during the term, to remove a student from a clinical placement or laboratory setting if the student exhibits unsafe clinical practice or behaviour that places clients or others at risk.
11. The Medical Radiation Sciences program monitors and documents students' clinical experience in order that students meet the requirements of the program as well as meet the minimum practice requirements to be eligible for registration to practice.
12. Graduation from the Medical Radiation Sciences program does not guarantee registration with the regulatory bodies of the respective professions or employment within Canada. All graduates who wish to engage in clinical practice in ultrasonography, radiography or radiation therapy are subject to any qualifying examinations and other requirements by the certifying and/or regulatory bodies for each of these professions. Regulatory requirements are subject to change.
13. Levels II through IV run consecutively from September of Level II to completion of the program at the end of April in Level IV. The pattern of semesters of clinical practicum and academic courses is shown in the chart below.
14. For progression to Levels III and IV, students are required to have completed the previous Level successfully with a Cumulative Average of at least 5.0 or have permission of the Review Committee.
15. A student with incomplete units at any Level may not progress within their specialization except with the permission of the Review Committee.

Medical Radiation Sciences {1415} (Radiation Therapy Specialization)

ADMISSION

Enrolment in this program is limited and admission is by selection but requires, as a minimum, completion of Medical Radiation Sciences I with a Cumulative Average of at least 5.0, including:

9 units	MEDRADSC 1A03, 1B03, 1C03
3 units	BIOLOGY 1A03
3 units	CHEM 1A03
6 units	KINESIOL 1Y03, 1YY3
3 units	MATH 1A03
3 units	STATS 1CC3

REQUIREMENTS

153 units total (Levels I to IV), 45 units of clinical practicum are interspersed with 108 units of academic courses in Levels II to IV

COURSE LIST

ANTHROP 3Z03, 3ZZ3; HEALTHST 2C03, 2D03, 2E03, 2H03, 3D03, 3E03, 3H03; KINESIOL 3SS3; RELIG ST 2M03, 2N03, 2VW3

LEVEL I

30 units (See Admission above.)

LEVEL II (FALL AND WINTER): 30 UNITS

18 units	MEDRADSC 2A03, 2B03, 2C03, 2D03, 2E03, 2F03
9 units	MEDRADSC 2S03, 2T03, 2U03
3 units	PSYCH 1AA3

LEVEL II (SPRING AND SUMMER): 15 UNITS

15 units MEDRADSC 2V15 (Clinical Practicum I)

LEVEL III (FALL AND WINTER): 33 UNITS (2007-2008 ONLY)

3 units	MED PHYS 4B03
12 units	MEDRADSC 3F03, 3I03, 3K03, 3X03
9 units	MEDRADSC 3S03, 3T03, 3V03
3 units	from HEALTHST 3E03, PHILOS 2D03
3 units	from Course List
3 units	Electives

LEVEL III (FALL AND WINTER): 33 UNITS (EFFECTIVE 2008-2009)

3 units	MED PHYS 4B03
12 units	MEDRADSC 3F03, 3I03, 3K03, 3X03
9 units	MEDRADSC 3S03, 3T03, 3V03
3 units	HEALTHST 3E03
3 units	from Course List
3 units	Electives

LEVEL III (SPRING AND SUMMER): 15 UNITS

12 units	MEDRADSC 3B03, 3E03, 3U03, 3W03
3 units	from MEDRADSC 3DA3, 3DD3, 3DE3

LEVEL IV (FALL AND WINTER): 30 UNITS

15 units	MEDRADSC 4E15 (Clinical Practicum II)
15 units	MEDRADSC 4F15 (Clinical Practicum III)

	SEP OCT NOV DEC	JAN FEB MAR APR	MAY JUN JUL AUG
	Term 1		Summer Term
LEVEL II	30 units from Academic Level II		Clinical Practicum I
	Term 1		Summer Term
LEVEL III	48 units from Academic Level III		
	Term 1		Summer Term
LEVEL IV	Clinical Practicum II	Clinical Practicum III	

Medical Radiation Sciences {1405} (Radiography Specialization)

ADMISSION

Enrolment in this program is limited and admission is by selection but requires, as a minimum, completion of Medical Radiation Sciences I with a Cumulative Average of at least 5.0, including:

128 FACULTY OF SCIENCE

9 units	MEDRADSC 1A03, 1B03, 1C03
3 units	BIOLOGY 1A03
3 units	CHEM 1A03
6 units	KINESIOL 1Y03, 1YY3
3 units	MATH 1A03
3 units	STATS 1CC3

REQUIREMENTS

153 units total (Levels I to IV), 45 units of clinical practicum are interspersed with 108 units of academic courses in Levels II to IV

COURSE LIST

ANTHROP 3Z03, 3ZZ3; HEALTHST 2C03, 2D03, 2E03, 2H03, 3D03, 3E03, 3H03; KINESIOL 3SS3; RELIG ST 2M03, 2N03, 2WW3

LEVEL I

30 units (See Admission above.)

LEVEL II (FALL AND WINTER): 30 UNITS

18 units MEDRADSC 2A03, 2B03, 2C03, 2D03, 2E03, 2F03
9 units MEDRADSC 2G03, 2H03, 2I03
3 units PSYCH 1AA3

LEVEL II (SPRING AND SUMMER): 15 UNITS

15 units MEDRADSC 2J15 (Clinical Practicum I)

LEVEL III (FALL AND WINTER): 33 UNITS (2007-2008 ONLY)

12 units MEDRADSC 3A03, 3F03, 3I03, 3X03
12 units MEDRADSC 3G03, 3H03, 3J03, 3K03
3 units from HEALTHST 3E03, PHILOS 2D03
3 units from Course List
3 units Electives

LEVEL III (FALL AND WINTER): 33 UNITS (EFFECTIVE 2008-2009)

12 units MEDRADSC 3A03, 3F03, 3I03, 3X03
15 units MEDRADSC 3G03, 3H03, 3J03, 3K03
3 units HEALTHST 3E03
3 units from Course List
3 units Electives

LEVEL III (SPRING AND SUMMER): 15 UNITS

12 units MEDRADSC 3B03, 3C03, 3E03, 3L03
3 units from MEDRADSC 3DA3, 3DB3, 3DD3, 3DE3

LEVEL IV (FALL AND WINTER): 30 UNITS

15 units MEDRADSC 4A15 (Clinical Practicum II)
15 units MEDRADSC 4B15 (Clinical Practicum III)

	SEP OCT NOV DEC	JAN FEB MAR APR	MAY JUN JUL AUG
	Term 1	Term 2	Summer Term
LEVEL II	30 units from Academic Level II		Clinical Practicum I
	Term 1	Term 2	Summer Term
LEVEL III	48 units from Academic Level III		
	Term 1	Term 2	Summer Term
LEVEL IV	Clinical Practicum II	Clinical Practicum III	

Medical Radiation Sciences (Ultrasonography Specialization)

{1410}

ADMISSION

Enrolment in this program is limited and admission is by selection but requires, as a minimum, completion of Medical Radiation Sciences I with a Cumulative Average of at least 5.0, including:

9 units	MEDRADSC 1A03, 1B03, 1C03
3 units	BIOLOGY 1A03
3 units	CHEM 1A03
6 units	KINESIOL 1Y03, 1YY3
3 units	MATH 1A03
3 units	STATS 1CC3

REQUIREMENTS

153 units total (Levels I to IV), 45 units of clinical practicum are interspersed with 108 units of academic courses in Levels II to IV

COURSE LIST

ANTHROP 3Z03, 3ZZ3; HEALTHST 2C03, 2D03, 2E03, 2H03, 3D03, 3E03, 3H03; KINESIOL 3SS3; RELIG ST 2M03, 2N03, 2WW3

LEVEL I: 30 UNITS

30 units (See Admission above.)

LEVEL II (FALL AND WINTER): 30 UNITS

9 units MEDRADSC 2A03, 2B03, 2C03
18 units MEDRADSC 2K03, 2L03, 2M03, 2N03, 2O03, 2Q03
3 units PSYCH 1AA3

LEVEL II (SPRING AND SUMMER): 15 UNITS

15 units MEDRADSC 2R15 (Clinical Practicum I)

LEVEL III (FALL AND WINTER): 33 UNITS (2007-2008 ONLY)

6 units MEDRADSC 3A03, 3X03
18 units MEDRADSC 3M03, 3N03, 3O03, 3P03, 3PA3, 3Q03
3 units from HEALTHST 3E03, PHILOS 2D03
3 units from Course List
3 units Electives

LEVEL III (FALL AND WINTER): 33 UNITS (EFFECTIVE 2008-2009)

15 units MEDRADSC 3A03, 3X03
18 units MEDRADSC 3M03, 3N03, 3O03, 3P03, 3PA3, 3Q03
3 units HEALTHST 3E03
3 units from Course List
3 units Electives

LEVEL III (SPRING AND SUMMER): 15 UNITS

12 units MEDRADSC 3B03, 3C03, 3E03, 3R03
3 units from MEDRADSC 3DC3, 3DF3, 3DG3

LEVEL IV (FALL AND WINTER): 30 UNITS

15 units MEDRADSC 4C15 (Clinical Practicum II)
15 units MEDRADSC 4D15 (Clinical Practicum III)

	SEP OCT NOV DEC	JAN FEB MAR APR	MAY JUN JUL AUG
	Term 1	Term 2	Summer Term
LEVEL II	30 units from Academic Level II		Clinical Practicum I
	Term 1	Term 2	Summer Term
LEVEL III	48 units from Academic Level III		
	Term 1	Term 2	Summer Term
LEVEL IV	Clinical Practicum II	Clinical Practicum III	

MOLECULAR BIOLOGY

(See Interdisciplinary Programs)

ORIGINS RESEARCH SPECIALIZATION

(See Interdisciplinary Programs)

DEPARTMENT OF PHYSICS AND ASTRONOMY

WEB ADDRESS: <http://www.physics.mcmaster.ca/>

Honours Arts & Science and Physics

(B.Arts.Sc.; See Arts & Science Program)

Honours Mathematics and Physics

(See Department of Mathematics and Statistics)

Honours Medical and Health Physics

(See Medical Physics and Applied Radiation Sciences)

Honours Medical and Health Physics Co-op

(See Medical Physics and Applied Radiation Sciences)

Honours Physical Science

(See Interdisciplinary Programs)

NOTES APPLICABLE TO ALL HONOURS PHYSICS PROGRAMS

- In addition to the Honours Physics program, the Department offers four specializations. The Honours program consists of a specified set of basic requirements and a wide choice of electives (including those from outside the Faculty of Science), allowing for interdisciplinary studies or the opportunity to complete a Minor in another subject. Alternatively students may wish to complete one of the following specializations which are more appropriate for graduate studies in Physics or Astronomy.
 - Astrophysics Specialization
 - Biophysics Specialization
 - Computation and Theory Specialization
 - Experimental Specialization
 Honours Physics may also be combined with the Origins Research Specialization.
- Transfer between options is possible at any time, subject to satisfying the requirements for that option.
- Admission to Honours Physics Co-op is in Level III and is possible from any of these options.
- The Physics Department considers the Astrophysics, Biophysics, Computation and Theory or Experimental specializations to be more appropriate for graduate studies in Physics or Astronomy.
- A minor in Astronomy or Mathematics or Mathematics and Statistics is not permitted in the Honours Physics program.
- Students in all Physics programs are expected to have basic skills in the use of personal computers, word processing and spreadsheet software, and some familiarity with a programming language such as Basic, C, Fortran or Pascal. PHYSICS 2G03 is recommended for students without those skills.

Honours Physics {2440800}

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0, including:

- 6 units MATH 1A03, 1AA3, with an average of at least 6.0
- 3 units PHYSICS 1B03 with a grade of at least C+
- 3 units from PHYSICS 1BA3, 1BB3 with a grade of at least C+
- 6 units CHEM 1A03, 1AA3
- 6 units from Science I Course List

REQUIREMENTS

121 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 31 UNITS

- 16 units PHYSICS 2B06, 2C03, 2E03, 2H04
- 6 units MATH 2A03, 2C03
- 9 units Electives, which must include MATH 1B03 or 1D03 if not completed in Level I

LEVEL III: 30 UNITS

- 6 units PHYSICS 3H03, 3MM3
- 6 units MATH 3C03, 3D03
- 18 units Electives

LEVEL IV: 30 UNITS (2007-2008 ONLY)

- 3 units PHYSICS 4A03
- 9 units from Levels III, IV Astronomy, Mathematics, Physics, GEO 3V03
- 18 units Electives

LEVEL IV: 30 UNITS (EFFECTIVE 2008-2009)

- 3 units PHYSICS 4A03
- 3-6 units from PHYSICS 4L03, 4P06
- 6 units from Levels III, IV Astronomy, Mathematics, Physics, GEO 3V03
- 15-18 units Electives

Honours Physics

{2440805}

(Astrophysics Specialization)

NOTE

The Astrophysics Specialization requires completion of ASTRON 1F03 by the end of Level II and is strongly recommended in Level I.

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0, including:

- 6 units MATH 1A03, 1AA3, with an average of at least 6.0
- 3 units PHYSICS 1B03 with a grade of at least C+
- 3 units from PHYSICS 1BA3, 1BB3 with a grade of at least C+
- 6 units CHEM 1A03, 1AA3
- 6 units from Science I Course List

REQUIREMENTS

121 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 31 UNITS

- 16 units PHYSICS 2B06, 2C03, 2E03, 2H04
- 6 units MATH 2A03, 2C03
- 3 units ASTRON 2E03
- 6 units Electives, which must include ASTRON 1F03 and MATH 1B03 or 1D03 if not completed in Level I

LEVEL III: 30 UNITS

- 15 units ASTRON 3X03, PHYSICS 2G03, 3H03, 3MM3, 3N03
- 6 units MATH 3C03, 3D03
- 9 units Electives (One of ORIGINS 3A03, 3B03, 3C03 or 3D03 is recommended.)

LEVEL IV: 30 UNITS (2007-2008 ONLY)

- 12 units ASTRON 3Y03, PHYSICS 4A03, 4B03, 4F03
- 9 units from Levels III, IV Astronomy, Mathematics, Physics, GEO 3V03
- 9 units Electives (PHYSICS 4G03 is recommended.)

LEVEL IV: 30 UNITS (EFFECTIVE 2008-2009)

- 12 units ASTRON 3Y03, PHYSICS 4A03, 4B03, 4F03
- 3-6 units PHYSICS 4L03, 4P06
- 6 units from Levels III, IV Astronomy, Mathematics, Physics, PHYSICS 4G03
- 6-9 units Electives (PHYSICS 4G03 is recommended.)

Honours Physics

{2440886}

(Biophysics Specialization)

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0, including:

- 6 units MATH 1A03, 1AA3 with an average of at least 6.0
- 3 units PHYSICS 1B03 with a grade of at least C+
- 3 units from PHYSICS 1BA3, 1BB3 with a grade of at least C+
- 6 units CHEM 1A03, 1AA3
- 6 units from Science I Course List

NOTES

- This Specialization requires completion of BIOLOGY 1A03 by the end of Level II and is strongly recommended in Level I. BIOLOGY 1AA3 is also strongly recommended for this specialization.
- Completion of both BIOCHEM 3Y03 and 4Y03 is recommended.

REQUIREMENTS

121 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 31 UNITS

- 16 units PHYSICS 2B06, 2C03, 2E03, 2H04
- 6 units MATH 2A03, 2C03
- 6 units BIOCHEM 2B03, 2BB3
- 3 units Electives, which must include BIOLOGY 1A03 and MATH 1B03 or 1D03 if not completed in Level I

LEVEL III: 30 UNITS

- 12 units PHYSICS 3H03, 3K03, 3MM3, 3S03
- 6 units MATH 3C03, 3D03
- 6 units BIOCHEM 2L06
- 6 units Electives (ORIGINS 3D03 is recommended.)

LEVEL IV: 30 UNITS

- 3 units from BIOCHEM 3Y03, 4Y03
- 6 units PHYSICS 4A03, 4S03
- 3-6 units from PHYSICS 4L03, 4P06
- 6 units from Levels III, IV Astronomy, Mathematics, Physics, GEO 3V03
- 9-12 units Electives (See Note 2 above.)

Honours Physics {2440888} (Computation and Theory Specialization)

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0, including:

- 6 units MATH 1A03, 1AA3 with an average of at least 6.0
- 3 units PHYSICS 1B03 with a grade of at least C+
- 3 units from PHYSICS 1BA3, 1BB3 with a grade of at least C+
- 6 units CHEM 1A03, 1AA3
- 6 units from Science I Course List (See Note below.)

NOTE

This Specialization requires completion of MATH 1B03 therefore, students without Grade 12 Geometry and Discrete Math U must complete MATH 1D03 in Level I.

REQUIREMENTS

121 units total (Levels I to IV), of which no more than 48 units may be Level I.

LEVEL I

30 units (See Admission above.)

LEVEL II: 31 UNITS

- 19 units PHYSICS 2B06, 2C03, 2E03, 2G03, 2H04
- 12 units MATH 2A03, 2C03, 2R03, 2T03

LEVEL III: 30 UNITS

- 15 units PHYSICS 3A03, 3H03, 3K03, 3MM3, 3N03
- 6 units MATH 3C03, 3D03
- 9 units Electives (MATH 3Q03 is recommended.)

LEVEL IV: 30 UNITS (2007-2008 ONLY)

- 15 units PHYSICS 3C03, 4A03, 4B03, 4F03, 4G03
- 9 units from Levels III, IV Astronomy, Mathematics, Physics, GEO 3V03
- 6 units Electives

LEVEL IV: 30 UNITS (EFFECTIVE 2008-2009)

- 15 units PHYSICS 3C03, 4A03, 4B03, 4F03, 4G03
- 6 units from Levels III, IV Astronomy, Mathematics, Physics, GEO 3V03
- 3-6 units from PHYSICS 4L03, 4P06
- 3-6 units Electives

Honours Physics {2440810} (Experimental Specialization)

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0, including:

- 6 units MATH 1A03, 1AA3 with an average of at least 6.0
- 3 units PHYSICS 1B03 with a grade of at least 6.0
- 3 units from PHYSICS 1BA3, 1BB3 with a grade of at least C+
- 6 units CHEM 1A03, 1AA3
- 6 units from Science I Course List

REQUIREMENTS

121 units total (Levels I to IV), of which no more than 48 units may be Level I.

LEVEL I

30 units (See Admission above.)

LEVEL II: 31 UNITS

- 16 units PHYSICS 2B06, 2C03, 2E03, 2H04
- 6 units MATH 2A03, 2C03
- 9 units Electives, which must include MATH 1B03 or 1D03 if not completed in Level I

LEVEL III: 30 UNITS

- 18 units PHYSICS 3BA3, 3BB3, 3H03, 3K03, 3MM3, 3N03
- 6 units MATH 3C03, 3D03
- 6 units Electives

LEVEL IV: 30 UNITS (2007-2008 ONLY)

- 15 units PHYSICS 4A03, 4B03, 4F03, 4P06
- 9 units from Levels III, IV Astronomy, Mathematics, Physics, GEO 3V03
- 6 units Electives

LEVEL IV: 30 UNITS (EFFECTIVE 2008-2009)

- 9 units PHYSICS 4A03, 4B03, 4F03
- 3-6 units from PHYSICS 4L03, 4P06
- 6 units from Levels III, IV Astronomy, Mathematics, Physics, GEO 3V03
- 9-12 units Electives

Honours Physics {2440412} (Origins Research Specialization)

NOTE

Completion of both BIOLOGY 1A03, 1AA3 and either MATH 1B03 or 1D03 is required by the end of Level II and is strongly recommended in Level I.

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0, including:

- 6 units MATH 1A03, 1AA3 with an average of at least 6.0
- 3 units PHYSICS 1B03 with a grade of at least 6.0
- 3 units from PHYSICS 1BA3, 1BB3 with a grade of at least C+
- 6 units CHEM 1A03, 1AA3
- 6 units from Science I Course List (See Note above.)

NOTES

1. Completion of ORIGINS 2B03, 2FF3 and 2S03 is required by the end of Level III.
2. ASTRON 1F03 is recommended in Level I.
3. Completion of both BIOLOGY 1A03, 1AA3 and either MATH 1B03 or 1D03 is required by the end of Level II and is strongly recommended in Level I.

ORIGINS COURSE LIST

ORIGINS 3A03, 3B03, 3C03, 3D03, 3E03, 3F03

REQUIREMENTS

121 units total (Levels I to IV), of which no more than 48 units may be Level I.

LEVEL I

30 units (See Admission above.)

LEVEL II: 31 UNITS

- 16 units PHYSICS 2B06, 2C03, 2E03, 2H04
- 6 units MATH 2A03, 2C03
- 3 units from ORIGINS 2B03, 2FF3 (See Note 1 above.)
- 3 units ORIGINS 2S03
- 3 units Electives (See Note 3 above.)

LEVEL III: 30 UNITS

- 6 units PHYSICS 3H03, 3MM3
- 6 units MATH 3C03, 3D03
- 3 units from ORIGINS 2B03, 2FF3
- 6 units from Origins Course List
- 3 units ORIGINS 3S03
- 6 units Electives

LEVEL IV: 30 UNITS

- 3 units PHYSICS 4A03
- 6 units from Levels III, IV Astronomy, Mathematics, Physics, GEO 3V03
- 9 units ORIGINS 4A09
- 12 units Electives

Honours Physics Co-op {2445}

ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement and an interview but requires, as a minimum, completion of Level II Honours Physics with a Cumulative Average of at least 6.0. Information about the program and the selection procedure may be obtained from Science Career and Cooperative Education Office and the Chair of the Committee of Instruction.

NOTES

1. This is a five-level (year) co-op program which includes two eight-month work terms which must be spent in Physics related placements.
2. Students must be registered full-time and take a full academic program as prescribed by Level and Term.
3. Students are required to complete SCIENCE 2C00, 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 Level V.

REQUIREMENTS

121 units total (Levels I to IV) of which no more than 48 units may be Level I.

LEVEL I: 30 UNITS

Completed prior to admission to the program

LEVEL II: 31 UNITS

Completion of any Level II Honours Physics program

LEVEL III

Consists of Academic Term 1 (Fall) and completion of the first eight-month work term, Term 2 (Winter) and Summer Term

TERM 1 (FALL): 16 UNITS

3 units MATH 3C03
3 units PHYSICS 3BA3
4 units PHYSICS 3HC1, 3N03
6 units Electives
1 course SCIENCE 2C00

TERM 2 (WINTER) AND SUMMER

Work Term

LEVEL IV (2007-2008 ONLY)

Consists of Academic Level IV Term 1 (Fall) and Academic Level III, Term 2 (Winter), and the first half of the second eight-month work term, Summer Term

TERMS 1 AND 2 (FALL AND WINTER): 31 UNITS

3 units MATH 3D03
6 units PHYSICS 3K03, 3MM3
10 units PHYSICS 4AA1, 4B03, 4P06
12 units Electives

LEVEL IV (EFFECTIVE 2008-2009)

Consists of Academic Level IV Term 1 (Fall) and Academic Level III, Term 2 (Winter), second eight-month work term, Summer Term

TERMS 1 AND 2 (FALL AND WINTER): 31 UNITS

3 units MATH 3D03
6 units PHYSICS 3K03, 3MM3
4 units PHYSICS 4AA1, 4B03
3-6 units PHYSICS 4L03, 4P06
12-15 units Electives

SUMMER

Work Term

LEVEL V

Consists of completion of the second half of the second eight-month work term, Term 1 (Fall) and Academic Level IV, Term 2 (Winter)

TERM 1 (FALL)

Work term

TERM 2 (WINTER): 13 UNITS

4 units PHYSICS 3HD2, 4AB2
3 units from PHYSICS 4E03, 4K03
6 units Electives (PHYSICS 4F03 is strongly recommended.)
(See Note 4 above.)

	SEP OCT NOV DEC	JAN FEB MAR APR	MAY JUN JUL AUG
	Term 1	Term 2	Summer Term
LEVEL 3	16 units from Academic Level III SCIENCE 2C00	Work Term	
	Term 1	Term 2	Summer Term
LEVEL 4	15 units from Academic Level III	15 units from Academic Level IV	Work Term
	Term 1	Term 2	Summer Term
LEVEL 5	Work Term	13 units from Academic Level IV	

B.Sc. Three-Level Degree

A three-level program with a Physics orientation is available through the **B.Sc. in Physical Science**. Please see Interdisciplinary Programs in this section of the Calendar.

Minor in Astronomy**REQUIREMENTS**

24-27 units total

3 units from ASTRON 1F03, 2E03
6 units MATH 2A03, 2C03
3 units PHYSICS 2A03

3-6 units from either CHEM 2R03 or PHYSICS 2H04, or both CHEM 2PA3 and 2PB3
3 units from PHYSICS 2D03, 2E03
6 units ASTRON 3X03, 3Y03

Minor in Physics**NOTE**

MATH 2A03 is the minimum mathematics required in order to complete a Minor in Physics. However, more flexibility is possible if MATH 2C03 is also completed.

REQUIREMENTS

24 units total

6 units from PHYSICS 1B03, 1BA3 (or 1BB3)
18 units from GEO 3V03, 3ZZ3, Levels II, III, IV Astronomy, Physics, including at least six units from Levels III, IV Astronomy, Physics

DEPARTMENT OF PSYCHOLOGY, NEUROSCIENCE AND BEHAVIOUR

WEB ADDRESS: <http://www.mcmaster.ca/psychology>

Honours Arts & Science and Psychology

(B.Arts.Sc.; See Arts & Science Program)

Honours Biology and Psychology

(B.Sc.; See Department of Biology)

Honours Life Science

(See Interdisciplinary Programs)

Honours Linguistic Cognitive Science

(B.A.; See Faculty of Humanities, Department of Linguistics and Languages)

Honours Psychology (B.A.) and B.A. in Psychology

(See Faculty of Social Sciences, Department of Psychology, Neuroscience and Behaviour)

Honours Psychology (B.Sc.)

{2463}

REQUIREMENTS FOR STUDENTS ENTERING LEVEL II IN 2007-2008**NOTES**

1. It is recommended that students complete both CHEM 1A03 and PHYSICS 1B03. Chemistry is particularly useful for neuroscience and biological aspects of psychology. Physics is particularly useful for perception, electrophysiology and mathematical modelling of psychological processes.
2. MATH 1B03 (Linear Algebra I) or MATH 1D03 (Algebra and Geometry) is strongly recommended for students intending to pursue graduate work in Psychology. COMP SCI 1MA3 (Computer Based Problem Solving) or COMP SCI 1SA3 (Computing Fundamentals) is highly recommended for students interested in Behavioural Neuroscience and Cognition and Perception, and for students intending to pursue graduate work in Psychology.
3. Students wishing to have more mathematical statistics may replace PSYCH 2RA3 and 2RB3 with STATS 2D03 and 2MB3. In this case, students are advised to take MATH 1B03 or MATH 1D03 in Level I and consult with a departmental advisor.

ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:

6 units PSYCH 1A03, 1AA3 with a grade of at least B- in each
3 units MATH 1A03
3 units from BIOLOGY 1A03, 1AA3
3 units from CHEM 1A03, PHYSICS 1B03 (See Note 1 above.)
3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3 (See Notes 2 and 3 above.)
6 units from Science I Course List

NOTES

1. Prior to registering in PSYCH 4D06 or 4D09, students must complete a lab course.
2. The Department of Psychology, Neuroscience and Behaviour pre-registration ballot will be done in two phases. The first phase will include the thesis courses (PSYCH 4D06, 4D09), and the Individual Study courses (PSYCH 2QQ3, 3Q03, 3QQ3, 4Q03, 4QQ3). Students wishing to take these courses must complete and submit a ballot by **mid February**. Students will be informed of the outcome of the first phase by **mid March**. The second phase will include lab courses (PSYCH 3EE3, 3L03, 3LL3, 3MM3, 3S03, 3V03) and limited enrolment courses (PSYCH 3BN3, 4B03, 4BN3, 4C03, 4F03, 4J03, 4R03). Students wishing to take these courses must complete and submit a ballot by **mid April**. Specific dates will be announced during the fall term. Ballots can be obtained from the Department of Psychology, Neuroscience and Behaviour web site at <http://www.mcmaster.ca/psychology>. Priority will be given to students registered in Honours Psychology and Combined Honours Psychology programs.

LAB COURSE LIST

PSYCH 3EE3, 3L03, 3LL3, 3MM3, 3S03, 3V03

CAPSTONE COURSE LIST

PSYCH 3I06, 4B03, 4BN3, 4C03, 4D06, 4D09, 4F03, 4J03, 4Q03, 4QQ3, 4R03, 4Y03

PSYCHOLOGY COURSE LIST

BIOLOGY 4T03; HTH SCI 4BB3; KINESIOL 3E03, 4P03; all Level III and IV Psychology courses except PSYCH 3PP3, 3SS3

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

6 units PSYCH 2RA3, 2RB3
 3 units from PSYCH 2D03, 2F03
 9 units PSYCH 2E03, 2H03, 2TT3
 3 units from Faculty of Science courses
 9 units Electives

LEVEL III: 30 UNITS

12 units from Psychology Course List
 3 units from Lab Course List
 15 units Electives

LEVEL IV: 30 UNITS

6 units from Psychology Course List
 9 units 6 units from Capstone Course List and 3 units from Psychology Course List
 or
 PSYCH 4D09
 15 units Electives

Honours Psychology (Core) {2461856}

The Honours Psychology (Core) program is being phased out and is being replaced by Honours Psychology. Students who intended to register in this program should see Honours Psychology above. Entry to Level III Honours Psychology (Core) will be last available in 2007-2008.

NOTES

1. Students who completed PSYCH 3QQ3 or 4QQ3 prior to September 2007, may use this credit towards fulfilling the Level III lab requirement. Effective September 2007, PSYCH 3QQ3 and 4QQ3 will no longer fulfill this requirement.
2. Students intending to do a thesis (PSYCH 4D06 or 4D09) are advised to complete the lab requirement prior to doing a thesis. Effective September 2008, completing a lab prior to doing a thesis will become a requirement.
3. The Department of Psychology, Neuroscience and Behaviour pre-registration ballot will be done in two phases. The first phase will include the thesis courses (PSYCH 4D06, 4D09), and the Individual Study courses (PSYCH 2QQ3, 3Q03, 3QQ3, 4Q03, 4QQ3). Students wishing to take these courses must complete and submit a ballot by **mid February**. Students will be informed of the outcome of the first phase by **mid March**. The second

phase will include lab courses (PSYCH 3EE3, 3L03, 3LL3, 3MM3, 3S03, 3V03) and limited enrolment courses (PSYCH 3BN3, 4B03, 4BN3, 4C03, 4F03, 4J03, 4R03). Students wishing to take these courses must complete and submit a ballot by **mid April**. Specific dates will be announced during the Fall term. Ballots can be obtained from the Department of Psychology, Neuroscience and Behaviour web site at <http://www.mcmaster.ca/psychology>. Priority will be given to students registered in Honours Psychology and Combined Honours Psychology programs.

LAB COURSE LIST

PSYCH 3BL3, 3EE3, 3L03, 3LL3, 3MM3, 3S03, 3V03

CAPSTONE COURSE LIST

PSYCH 3I06, 4B03, 4BN3, 4C03, 4D06, 4D09, 4F03, 4J03, 4Q03, 4QQ3, 4R03, 4Y03

PSYCHOLOGY COURSE LIST

BIOLOGY 4T03; HTH SCI 4BB3; KINESIOL 3E03, 4P03; all Level III and IV Psychology courses except PSYCH 3PP3, 3SS3

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL III: 30 UNITS

12 units from Psychology Course List, PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3
 3 units from Lab Course List (See Notes 1 and 2 above.)
 15 units Electives

LEVEL IV: 30 UNITS

6 units from Psychology Course List
 9 units 6 units from Capstone Course List and 3 units from Psychology Course List
 or
 PSYCH 4D09
 15 units Electives

Honours Psychology {2461858}
(Behavioural Neuroscience Specialization)

The Honours Psychology (Behavioural Neuroscience Specialization) is being phased out. Registration in Level II will be last available in September 2007.

ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:
 6 units PSYCH 1A03, 1AA3 with a grade of at least B- in each
 3 units MATH 1A03
 3 units from BIOLOGY 1A03, 1AA3
 3 units from CHEM 1A03, PHYSICS 1B03 (See Note 1 in Honours Psychology 2463)
 3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3 (See Notes 2 and 3 in Honours Psychology 2463.)
 6 units from Science I Course List

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

6 units PSYCH 2RA3, 2RB3
 12 units PSYCH 2E03, 2F03, 2H03, 2TT3
 12 units Electives, of which at least three units must be from the Faculty of Science

LEVEL III: 30 UNITS

9 units from PSYCH 2D03, 3A03, 3AA3, 3BN3, 3FA3, 3HH3, 3J03, 3M03, 3Y03
 6 units from Psychology Course List PSYCH 2D03, 2E03, 2H03, 2TT3
 3 units from Lab Course List. PSYCH 3EE3, 3L03, 3MM3 or 3V03 is recommended. (See Notes 2 and 3 above.)
 12 units Electives, of which at least six must be selected from the Faculty of Science

LEVEL IV: 30 UNITS

- 6 units from BIOLOGY 4T03, PSYCH 2D03, 3A03, 3AA3, 3BN3, 3FA3, 3HH3, 3J03, 3M03, 3Y03, 4BN3, 4F03, 4Y03
- 3 units from Psychology Course List
- 9 units 6 units from Capstone Course List and 3 units from Psychology Course List
or
PSYCH 4D09
- 12 units Electives

Honours Psychology {2461890} (Cognition and Perception Specialization)

The Honours Psychology (Cognition and Perception Specialization) is being phased out. Registration in Level II will be last available in September 2007.

ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:

- 6 units PSYCH 1A03, 1AA3 with a grade of at least B- in each
- 3 units MATH 1A03
- 3 units from BIOLOGY 1A03, 1AA3
- 3 units from CHEM 1A03, PHYSICS 1B03 (See Note 1 in Honours Psychology 2463.)
- 3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3 (See Notes 2 and 3 in Honours Psychology 2463.)
- 6 units from Science I Course List

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

- 30 units (See Admission above.)

LEVEL II: 30 UNITS

- 6 units PSYCH 2RA3, 2RB3
- 3 units from PSYCH 2D03, 2F03
- 9 units PSYCH 2E03, 2H03, 2TT3
- 12 units Electives, of which at least three units must be from the Faculty of Science

LEVEL III: 30 UNITS

- 12 units from PSYCH 3A03, 3AA3, 3BB3, 3BN3, 3FA3, 3HH3, 3II3, 3J03, 3U03, 3UU3, 3VV3
- 3 units from Psychology Course List, PSYCH 2D03, 2F03, 2TT3
- 3 units from Lab Course List, PSYCH 3EE3, 3LL3, 3MM3, or 3V03 is recommended. (See Notes 2 and 3 above.)
- 12 units Electives, of which at least six units must be from the Faculty of Science

LEVEL IV: 30 UNITS

- 6 units from PSYCH 3A03, 3AA3, 3BB3, 3BN3, 3FA3, 3HH3, 3II3, 3J03, 3U03, 3UU3, 3VV3, 4BN3, 4C03, 4Z03
- 3 units from Psychology Course List
- 9 units 6 units from Capstone Course List and 3 units from Psychology Course List
or
PSYCH 4D09
- 12 units Electives

Honours Psychology {2461862} (Developmental Specialization)

The Honours Psychology (Developmental Specialization) is being phased out. Registration in Level II will be last available in September 2007.

ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:

- 6 units PSYCH 1A03, 1AA3 with a grade of at least B- in each
- 3 units MATH 1A03
- 3 units from BIOLOGY 1A03, 1AA3
- 3 units from CHEM 1A03, PHYSICS 1B03 (See Note 1 in Honours Psychology 2463.)
- 3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3 (See Notes 2 and 3 in Honours Psychology 2463.)
- 6 units from Science I Course List

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

- 30 units (See Admission above.)

LEVEL II: 30 UNITS

- 6 units PSYCH 2RA3, 2RB3
- 3 units from PSYCH 2D03, 2F03
- 9 units PSYCH 2E03, 2H03, 2TT3
- 12 units Electives, of which at least three units must be from the Faculty of Science

LEVEL III: 30 UNITS

- 3 units PSYCH 3GG3
- 6 units from PSYCH 3HH3, 3II3, 3JJ3 (Three units may be taken in Level IV.)
- 6 units from Psychology Course List, PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3
- 3 units from Lab Course List, PSYCH 3EE3, 3LL3 or 3V03 is recommended. (See Notes 2 and 3 above.)
- 12 units Electives, of which at least six units must be from the Faculty of Science

LEVEL IV: 30 UNITS

- 6 units from PSYCH 3HH3, 3II3, 3JJ3, (if not completed in Level III), 3B03, 3C03, 3Z03, 3ZZ3, 4C03
- 3 units from Psychology Course List
- 9 units 6 units from Capstone Course List B and 3 units from Psychology Course List
or
PSYCH 4D09
- 12 units Electives

Honours Psychology {2461864} (Evolution and Social Behaviour Specialization)

The Honours Psychology (Evolution and Social Behaviour Specialization) is being phased out. Registration in Level II will be last available in September 2007.

ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:

- 6 units PSYCH 1A03, 1AA3 with a grade of at least B- in each
- 3 units MATH 1A03
- 3 units from BIOLOGY 1A03, 1AA3
- 3 units from CHEM 1A03, PHYSICS 1B03 (See Note 1 in Honours Psychology 2463.)
- 3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3 (See Notes 2 and 3 in Honours Psychology 2463.)
- 6 units from Science I Course List

NOTE**REQUIREMENTS**

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

- 30 units (See Admission above.)

LEVEL II: 30 UNITS

- 6 units PSYCH 2RA3, 2RB3
- 3 units from PSYCH 2D03, 2F03
- 9 units PSYCH 2E03, 2H03, 2TT3
- 12 units Electives, of which at least three units must be from the Faculty of Science

LEVEL III: 30 UNITS

- 9 units PSYCH 2C03, 3A03, 3F03, 3JJ3, 3M03, 3T03, 3Y03
- 6 units from Psychology Course List, PSYCH 2D03, 2E03, 2F03, 2H03
- 3 units from Lab Course List, PSYCH 3LL3 or 3S03 is recommended. (See Notes 2 and 3 above.)
- 12 units Electives, of which at least three units must be from the Faculty of Science

LEVEL IV: 30 UNITS

- 6 units PSYCH 2C03, 3A03, 3F03, 3JJ3, 3M03, 3T03, 3Y03, 4R03, 4Y03
 3 units from Psychology Course List
 9 units 6 units from Capstone Course List and 3 units from Psychology Course List
 or
 PSYCH 4D09
 12 units Electives

Honours Psychology (B.Sc.) {2463412}
(Origins Research Specialization)

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0, including:

- 6 units PSYCH 1A03, 1AA3 with a grade of at least B-
 MATH 1A03
 3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3
 3 units from BIOLOGY 1A03, 1AA3
 3 units from CHEM 1A03, PHYSICS 1B03
 3 units from ASTRON 1F03, PHYSICS 1BA3, 1BB3
 3 units from CHEM 1AA3, ENVIR SC 1G03

NOTE

Completion of BIOLOGY 1A03, 1AA3, CHEM 1A03, PHYSICS 1B03 is required by the end of Level II.

LAB COURSE LIST

PSYCH 3EE3, 3L03, 3LL3, 3MM3, 3S03, 3V03

PSYCHOLOGY COURSE LIST

BIOLOGY 4T03; HTH SCI 4BB3; KINESIOL 3E03 4P03; all Level III and IV Psychology courses except PSYCH 3PP3, 3SS3

ORIGINS COURSE LIST

ORIGINS 3A03, 3B03, 3C03, 3D03, 3E03, 3F03

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

- 3 units from PSYCH 2D03, 2F03
 6 units from PSYCH 2E03, 2H03, 2TT3
 6 units PSYCH 2RA3, 2RB3
 9 units ORIGINS 2B03, 2FF3, 2S03
 6 units Electives (See Note above.)

LEVEL III: 30 UNITS

- 3 units from PSYCH 2E03, 2H03, 2TT3
 6 units from Psychology Course List
 3 units from Lab Course List (See Notes 2 and 3 in Honours Psychology 2463.)
 6 units from Origins Course List
 3 units from ORIGINS 3S03
 9 units Electives

LEVEL IV: 30 UNITS

- 12 units from Psychology Course List
 9 units ORIGINS 4A09
 9 units Electives

B.Sc. Three-Level Degree

A three-level program with a general Life Science orientation is available through the **B.Sc. in Life Science**. See Interdisciplinary Programs in this section of the Calendar.)

Minor in Psychology**NOTES**

- As all courses have enrolment capacities, the Faculty cannot guarantee registration in courses, even when prerequisites have been met. Completion of the Minor in Psychology may not be possible.
- When choosing Level II courses students should consider the prerequisites for Level III courses.

REQUIREMENTS

24 units total

- 6 units from PSYCH 1A03, 1AA3
 18 units Level II, III Psychology courses, including at least six units from Level III Psychology courses

INTERDISCIPLINARY PROGRAMS

Honours Computational Biology {2054}
(Effective 2008-2009)

Honours Computational Biology is a research-intensive program that focuses on interdisciplinary studies between Biology, Mathematics and Computer Science, preparing students for graduate studies or careers in industry or academic research laboratories. The program enables students to develop knowledge and understanding of the power of mathematics and computer technology and to apply these to questions of biological and biomedical interest.

ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:

- 6 units BIOLOGY 1A03, 1AA3 with an average of at least 6.0
 3 units BIOLOGY 1X03 (See Note 3 below.)
 6 units CHEM 1A03, 1AA3
 6 units from MATH 1A03 (or 1X03), 1AA3 (or 1XX3)
 3 units from PHYSICS 1B03, 1L03

NOTES

- This program is administered through the Department of Biology.
- Information may be obtained through the Program Administrator in Life Sciences Building, Room 118 who can refer students to the appropriate faculty advisor.
- Students who have not completed BIOLOGY 1X03 may still be considered for admission; however, it must be completed by the end of Level II.
- Students who have not completed Grade 12 Chemistry U must complete CHEM 1R03 in Level I.
- Students without Grade 12 Geometry and Discrete U will require MATH 1D03. Students who have completed the Grade 12 course should register in MATH 1B03.
- With permission, students may complete another thesis course, supervised by faculty from the Departments of Mathematics and Statistics, or Computing and Software.
- Students with interests in computational genetics are encouraged to complete BIOLOGY 3I03, 3O03, 4EE3. Students with interests in other areas of computational biology can seek advice on their choices.

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

- 3 units BIOLOGY 2C03
 3 units from BIOLOGY 2A03, 2B03
 3 units from BIOLOGY 2D03, 2EE3, 2F03
 3 units from BIOLOGY 2YY3, 2Z03
 3 units MATH 1B03
 3 units from MATH 2A03, 2X03
 3 units MATH 2C03
 3 units COMP SCI 1MD3
 6 units Electives, which must include BIOLOGY 1X03 if not completed in Level I

LEVEL III: 30 UNITS

- 9 units BIOLOGY 3FF3, 3S03, 3YY3
 3 units from BIOLOGY 2A03, 2B03 (whichever is not completed)
 3 units from BIOLOGY 2YY3, 2Z03 (whichever is not completed)
 3 units COMP SCI 2SC3
 3 units from MATH 2E03, 3DC3, 3F03
 6 units STATS 2D03, 2MB3
 3 units Electives

LEVEL IV: 30 UNITS

- 6 units from BIOCHEM 3Y03, 4Y03, BIOLOGY 4AA3, 4DD3, 4E03
 6-9 units from BIOLOGY 4C09, 4F06 (See Note 6 above.)
 3 units COMP SCI 3DA3
 9 units Levels III, IV Biology (See Note 7 above.)
 3-6 units Electives

Honours Life Science**{2514}****FORMERLY HONOURS SCIENCE (LIFE SCIENCE)***(Includes Biochemistry, Biology and Psychology)***ADMISSION****2007-2008 ONLY:** Completion of any Level I program with a Cumulative Average of at least 5.0 including:

- 3 units MATH 1A03
- 3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3
- 6 units from BIOLOGY 1A03, 1AA3, PSYCH 1A03, 1AA3
- 12 units from Science I Course List

A grade of at least C+ in one of BIOLOGY 1A03, 1AA3, PSYCH 1A03, 1AA3 and one other course from the Science I Course List is required.

EFFECTIVE 2008-2009: Completion of any Level I program with a Cumulative Average of at least 6.0 including:

- 3 units MATH 1A03
- 3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3
- 9 units from BIOLOGY 1A03, 1AA3, PSYCH 1A03, 1AA3 with an average of at least 6.0
- 9 units from Science I Course List

NOTES

1. BIOLOGY 1A03, 1AA3, PSYCH 1A03, 1AA3 must be completed by the end of Level II.
2. For students who entered the program in September 2007 or prior, at each academic review after completion of Level I, a Cumulative Average of at least 6.0 is required to continue in the Honours Life Science program.
3. Students who intend to complete Biochemistry courses or who wish to be eligible for a wider selection of Biology and Psychology courses, must complete a total of 18 units as follows: BIOLOGY 1A03, 1AA3, CHEM 1A03, 1AA3, PSYCH 1A03, 1AA3.
4. Registration in the Honours Life Science program does not guarantee access to all courses. Some courses have program restrictions and students are responsible to read course prerequisites carefully.
5. Beginning in 2008-2009, BIOCHEM 2B03 and 2BB3 will no longer be available to Honours Life Science students.
6. Students who entered the program prior to September 2007, are restricted to a maximum of 36 units of Level II, III or IV Psychology (maximum 12 units per Level) toward their elective.

LIFE SCIENCE COURSE LIST

BIOCHEM 2B03, 2BB3, 2C03, 2EE3, 3D03, 3G03, 3H03, 3N03, 4C03, 4E03, 4K03, 4Q03; Levels II, III, IV Biology courses (except BIOLOGY 3Q03, 3QQ3), HTH SCI 3I03, 3K03, 4I13; MOL BIOL 4H03; all Levels II, III, IV Psychology courses (excluding PSYCH 2I03, 2S03, 3PP3, 3SS3); SCIENCE 4A03, 4B06, 4C09

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

- 12 units from Level II courses from Life Science Course List
- 6 units from Faculty of Science courses excluding the Life Science Course List
- 12 units Electives, excluding Biology and Psychology (See Notes 3 and 6 above.)

LEVEL III: 30 UNITS

- 12 units from Level III, IV courses from Life Science Course List
- 3 units from Faculty of Science courses excluding the Life Science Course List
- 15 units Electives, excluding Biology and Psychology (See Note 6 above.)

LEVEL IV: 30 UNITS

- 18 units from Levels II, III, IV courses from Life Science Course List of which at least 12 units must be Levels III, IV
- 6 units from Faculty of Science courses excluding the Life Science Course List
- 6 units Electives, excluding Biology and Psychology

B.Sc. in Life Science**{1312}***(Includes Biochemistry, Biology, and Psychology)***ADMISSION****2007-2008 ONLY:** Completion of any Level I program with a Cumulative Average of at least 3.5 including:

- 3 units MATH 1A03
- 3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3
- 6 units from BIOLOGY 1A03, 1AA3, PSYCH 1A03, 1AA3
- 12 units from Science I Course List with an average of at least 4.0 in six of these units (See Note 1 below.)

EFFECTIVE 2008-2009: Completion of any Level I program with a Cumulative Average of at least 3.5 including:

- 3 units MATH 1A03
- 3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3
- 9 units from BIOLOGY 1A03, 1AA3, PSYCH 1A03, 1AA3 with an average of at least 4.0
- 9 units from Science I Course List (See Note 1 below.)

NOTES

1. BIOLOGY 1A03, 1AA3, PSYCH 1A03, 1AA3 must be completed by the end of Level II.
2. Students who intend to complete Biochemistry courses or who wish to be eligible for a wider selection of Biology and Psychology courses must complete a total of 18 units as follows: BIOLOGY 1A03, 1AA3, CHEM 1A03, PSYCH 1A03, 1AA3
3. Registration in the B.Sc. Life Science program does not guarantee access to all courses. Some courses have program restrictions and students are responsible to read course prerequisites carefully.

LIFE SCIENCE COURSE LIST

BIOCHEM 2EE3, 3D03, 3G03, 3H03, 3N03; all Levels II, III Biology courses (except BIOLOGY 3Q03, 3QQ3); CHEM 2E03, 2OA3, 2OB3; all Levels II, III Psychology courses; STATS 2MA3

REQUIREMENTS

90 units total (Levels I to III), of which no more than 42 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

- 12 units from Level II courses from Life Science Course List
- 6 units from Faculty of Science courses excluding Life Science Course List (See Notes 1 and 2 above.)
- 12 units Electives, excluding Biology and Psychology

LEVEL III: 30 UNITS

- 12 units from Level III courses from Life Science Course List
- 3 units from Faculty of Science courses excluding the Life Science Course List
- 15 units Electives, excluding Biology and Psychology

Honours Molecular Biology**{2365}****PROGRAM OVERVIEW**

Honours Molecular Biology is a research-intensive program that focuses on laboratory research and communication skills, preparing students for graduate studies or careers in industry or academic research laboratories. Jointly offered by the Departments of Biology, Biochemistry and Biomedical Sciences and Pathology and Molecular Medicine to provide students with a broad view and understanding of biological processes from a molecular perspective. Students will develop knowledge and understanding of the structure, interaction and function of biomolecules and the molecular basis of cellular and organismal biology.

ADMISSION**Enrolment in this program is limited.** Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:

- 6 units BIOLOGY 1A03, 1AA3, with an average of at least 6.0
- 6 units CHEM 1A03, 1AA3
- 3 units MATH 1A03
- 3 units PHYSICS 1B03
- 3 units STATS 1CC3
- 3 units from Science I Course List

A grade of at least C+ in three of CHEM 1A03, 1AA3, MATH 1A03, STATS 1CC3 is required.

NOTES

1. This program is administered within the Faculty of Science through a Committee of Instruction and also draws on the Departments of Biology, Biochemistry and Biomedical Sciences and Pathology and Molecular Medicine.
2. Information may be obtained through the Program Administrators in Life Sciences Building, Room 118 or Health Science Centre, Room 4H43 who can refer students to the appropriate faculty counsellor.
3. A Minor in Biochemistry, Biology, or Chemistry is not permitted in the Honours Molecular Biology program.
4. Students who do not meet all of the requirements of the program may apply to transfer to Honours Biology or Honours Biochemistry.
5. BIOLOGY 2A03, 2D03, CHEM 2N03, 2R03, ORIGINS 2FF3 are recommended electives in Level II.
6. MOL BIOL 3I03 is strongly recommended as an elective in Level III.

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

24 units BIOCHEM 2B03, 2BB3, BIOLOGY 2C03, CHEM 2OA3, 2OB3, MOL BIOL 2B03, 2L06

6 units Electives (See Note 5 above.)

LEVEL III: 30 UNITS

18 units BIOCHEM 3D03, BIOLOGY 2EE3, 3O03, 3S03, MOL BIOL 3A03, 3V03

6 units from BIOLOGY 3H03, 3HH3, 3I03, 3M03

6 units Electives (See Note 6 above.)

LEVEL IV: 30 UNITS

15 units BIOCHEM 4E03, MOL BIOL 4A03, 4R09

9 units from BIOCHEM 4EE3, 4H03, 4N03, 4Q03, BIOLOGY 4B03, 4E03, 4P03, 4PP3, 4R03, 4T03, 4V03, HTH SCI 4I13, MOL BIOL 4H03, 4J03

6 units Electives

ORIGINS INSTITUTE

The Origins Institute is an intellectual enterprise that promotes, maintains, and strengthens interdisciplinary collaboration among researchers who are interested in answering scientific questions concerning six origins themes:

- space-time
- elements
- structure in the cosmos
- life
- species and biodiversity
- humanity

The Origins Research Specialization curriculum is designed to introduce natural science to students through these themes. Students graduating from the specialization will possess comprehensive, multifaceted knowledge about the natural world.

NOTE

The Origins Research Specialization curriculum must be taken in conjunction with the Honours program in Biochemistry, Biology, Chemistry, Mathematics and Statistics, Physics or Psychology. It also may be taken in conjunction with the Honours Arts and Science program. Students seeking admission to the specialization must choose a program from the listing above and subsequently complete the requirements for that Honours program and 27 units of ORIGINS courses, as specified below.

Origins Research Specialization

Enrolment in this specialization is limited. Selection is based partially on academic achievement and requires completion of any Level I program with a Cumulative Average of at least 6.0, and the completion of admission requirements for an appropriate Honours program (see Note above). In addition, students will be required to complete a supplementary application.

NOTES

1. Information about the specialization and the admission and selection procedures may be accessed at the Origins Institute web site at <http://origins.mcmaster.ca> or by contacting the Associate Director (Jon Stone, Life Sciences Building, Room 327, 905-525-9140 ext. 26136 or email jstoner@mcmaster.ca). Students must apply for their Level II Honours program with the Origins Research Specialization using the *Application for Admission to Level II* on SOLAR (Student On-line Academic Registration). See *Admission to Level II Programs* in this section in the Calendar.
2. Students must refer to the description for the Honours program that they seek to combine with the Origins Specialization for specific admission and program requirements.
3. ORIGINS 2B03, 2FF3 and 2S03 must be completed upon completion of Level III.
4. Students may satisfy all requirements for an appropriate Honours program and the Origins Research Specialization. Unless stated in the Undergraduate Calendar, students should consult with program administrators and the Associate Director for the Origins Institute to devise a curriculum.

COURSE LIST

ORIGINS 3A03, 3B03, 3C03, 3D03, 3E03, 3F03

REQUIREMENTS

27 units total (Levels II to IV)

9 units ORIGINS 2B03, 2FF3, 2S03 (See Note 3 above.)

6 units from Origins Course List

12 units ORIGINS 3S03, 4A09

Honours Physical Science**{2516}****FORMERLY HONOURS SCIENCE (PHYSICAL SCIENCE)**

(Includes Chemistry, Materials Science and Physics)

ADMISSION

2007-2008 ONLY: Completion of any Level I program with a Cumulative Average of at least 5.0 including:

6 units MATH 1A03, 1AA3

6 units from CHEM 1A03, 1AA3, PHYSICS 1B03, 1BA3, 1BB3

12 units from Science I Course List

A grade of at least C+ in one of CHEM 1AA3, PHYSICS 1BA3, 1BB3 is required.

EFFECTIVE 2008-2009: Completion of any Level I program with a Cumulative Average of at least 6.0 including:

6 units MATH 1A03, 1AA3

9 units from CHEM 1A03, 1AA3, PHYSICS 1B03, 1BA3, 1BB3

12 units from Science I Course List (See Note 2 below.)

An average of at least 6.0 in nine units from CHEM 1A03, 1AA3, PHYSICS 1B03, 1BA3, 1BB3 is required.

NOTES

1. For students who entered the program in September 2007 or prior, at each academic review after completion of Level I, a Cumulative Average of at least 6.0 is required to continue in the Honours Physical Science program.
2. Twelve units from CHEM 1A03, 1AA3, MATH 1AA3, PHYSICS 1B03, 1BA3 (or 1BB3) must be completed by the end of Level II.
3. Students intending to take upper level Physics courses should take MATH 1B03 (or 1D03) by the end of Level II.
4. MATLS 1M03 is recommended as an introduction to Materials Science.
5. Registration in the Honours Physical Science program does not guarantee access to all courses. Some courses have program restrictions and students are responsible to read course prerequisites carefully.

PHYSICAL SCIENCE COURSE LIST

All Levels II, III, IV Astronomy, Chemistry, Materials Science, Medical Physics, Physics courses; GEO 2Q03, 3Q03, 3V03; MATH 2A03, 2C03, 3C03, 3D03

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

- 12 units from Level II courses from Physical Science Course List
- 6 units from Faculty of Science courses excluding the Physical Science Course List
- 12 units Electives (See *Notes 2 and 3* above.)

LEVEL III: 30 UNITS

- 12 units from Levels III, IV courses from Physical Science Course List
- 3 units from Faculty of Science courses excluding the Physical Science Course List
- 15 units Electives

LEVEL IV: 30 UNITS

- 18 units from Levels II, III, IV courses from Physical Science Course List of which at least 12 units must be Levels III, IV
- 6 units from Faculty of Science courses excluding the Physical Science Course List
- 6 units Electives

B.Sc. in Physical Science

{1435}

ADMISSION

2007-2008 ONLY: Completion of any Level I program with a Cumulative Average of at least 3.5 including:

- 6 units MATH 1A03, 1AA3
- 6 units from CHEM 1A03, 1AA3, PHYSICS 1B03, 1BA3, 1BB3
- 12 units from Science I Course List with an average of at least 4.0 in six units (See *Note 1* below.)

EFFECTIVE 2008-2009: Completion of any Level I program with a Cumulative Average of at least 3.5 including:

- 6 units MATH 1A03, 1AA3
- 9 units from CHEM 1A03, 1AA3, PHYSICS 1B03, 1BA3, 1BB3 with an average of at least 4.0 (See *Note 1* below.)
- 9 units from Science I Course List (See *Note 1* below.)

NOTES

- Twelve units from CHEM 1A03, 1AA3, MATH 1AA3, PHYSICS 1B03, 1BA3, 1BB3 must be completed by the end of Level II.
- Students are responsible for ensuring that prerequisites for anticipated courses for Level III are completed in Level II. As an aid in selecting appropriate courses for Level II, students should refer to the program requirements for the Core programs for Honours Chemistry, Honours Physics or Honours Materials Science.
- Students should seek academic counselling to ensure that their choices are appropriate. For counselling, students should approach the Departments of Chemistry, Physics or Materials Science and Engineering.
- Students proceeding in Physics must include PHYSICS 2B06 and MATH 2A03 and 2C03 in Level II.
- Students intending to take upper level Physics courses should complete MATH 1B03 (or 1D03) by the end of Level II.
- Registration in the B.Sc. Physical Science program does not guarantee access to all courses. Some courses have program restrictions and students are responsible to read course prerequisites carefully.

PHYSICAL SCIENCE COURSE LIST

Levels II, III Astronomy, Chemistry, Materials Science, Medical Physics and Physics courses; GEO 2Q03, 3Q03, 3V03; MATH 3C03, 3D03

REQUIREMENTS

90 units total (Levels I to III), of which no more than 42 units may be Level I

LEVEL I

30 units (See *Admission* above.)

LEVEL II: 30 UNITS

- 12 units from Level II courses from Physical Science Course List
- 6 units from Faculty of Science courses (See *Note 1* above.)
- 12 units Electives

LEVEL III: 30 UNITS

- 12 units from Level III courses Physical Science Course List
- 3 units from Faculty of Science courses
- 15 units Electives

HONOURS SCIENCE PROGRAMS**Honours Geoscience**

FORMERLY HONOURS SCIENCE (GEOSCIENCE)
(See School of Geography and Earth Sciences)

Honours Life Science

FORMERLY HONOURS SCIENCE (LIFE SCIENCE)
(See Interdisciplinary Programs)

Honours Mathematical Science

FORMERLY HONOURS SCIENCE (MATHEMATICAL SCIENCE)
(See Department of Mathematics and Statistics)

Honours Physical Science

FORMERLY HONOURS SCIENCE (PHYSICAL SCIENCE)
(See Interdisciplinary Programs)

THREE-LEVEL BACHELOR OF SCIENCE (B.SC.) PROGRAMS**B.Sc. in Geoscience**

(See School of Geography and Earth Sciences)

B.Sc. in Life Science

(See Interdisciplinary Programs)

B.Sc. in Mathematical Science

(See Department of Mathematics and Statistics)

B.Sc. in Physical Science

(See Interdisciplinary Programs)

FACULTY OF SOCIAL SCIENCES

WEB ADDRESS: <http://www.socsci.mcmaster.ca/adeans/>

E-MAIL ADDRESS: socsfac@mcmaster.ca

Kenneth Taylor Hall, Room 129

Ext. 23772

Dean of Social Sciences

S. Elliott/M.A., Ph.D.

Associate Dean

S. Watt/M.S.W., D.S.W., R.S.W.

Assistant Dean (Studies)

E. Frank/M.A.

Manager, Experiential Education

S. Vajoczki/B.A., M.Sc.

Student Advisors

K. Cale/B.A.

S. Hunt/B.A.

E. Moore

W. Spencer/B.A.

Career Development Coordinator

Cristina DeSilvio/B.A.

Community Education Coordinator

Ruthanne Talbot/B.A.

The social sciences are concerned with the study of human activities and relationships and their social, political, economic, cultural and spatial contexts. Through the pre-industrial to the post-industrial eras, social scientists examine social, economic, cultural and political issues experienced by individuals, groups, and societies as well as the interactions between people and their environments, both natural and built.

The Faculty offers a range of degree programs in Anthropology, Economics, Geography, Gerontology, Health Studies, Kinesiology, Labour Studies, Political Science, Psychology, Religious Studies, Social Work and Sociology. In addition, there are various opportunities for students to link their academic goals with their career interests. These experiential education initiatives include, but are not limited to, inquiry, internships, academic placements, a career planning course, student project grants, and undergraduate summer research assistantships.

Students are strongly advised to take advantage of the extensive advisory services provided by the Faculty. New students in particular should plan a program of study that will allow them a number of options for Level II.

The Faculty of Social Sciences encourages students to become engaged in a wide variety of learning opportunities. These experiences can enrich learning, open new fields of study, and build transferable skills that prepare you for further academic work and for a range of careers. However, you should note that some courses, and many important extra-curricular opportunities for students in the Faculty of Social Sciences, require students to have cleared police criminal checks which can be obtained through Hamilton-Wentworth Police Services. Additionally, students may be required to pass TB tests and have immunization for some contagious diseases. Costs related to these requirements are the responsibility of the student.

PROGRAMS AND DEGREES

A. Level I Programs

Social Sciences I

{0720}

PROGRAM NOTE

Students should select courses based on their academic interests and anticipated Level II program of study. Elective courses may be taken from other faculties, where requisites are met.

COURSE LIST 1

ANTHROP 1A03, 1B03, 1Z03

ECON 1B03, 1BB3

GEO 1HS3, 1HU3

GERONTOL 1A03

HEALTHST 1A03

INQUIRY 1SS3

LABR ST 1A03, 1C03

POL SCI 1G06

PSYCH 1A03, 1AA3

RELIG ST 1B06, 1D06, 1E03, 1I03

SOC WORK 1A06

SOCIOL 1A06

REQUIREMENTS: 30 UNITS

12 units from Course List 1

18 units Electives, which may include courses from Course List 1

Kinesiology I

{0308}

ENROLMENT IN THIS PROGRAM IS LIMITED.

PROGRAM NOTES

- Application is made to the Kinesiology I Program.
- The Department of Kinesiology offers two Honours program options beyond Level I. The Honours Bachelor of Kinesiology (Hons.B.Kin.) and the Honours Bachelor of Science (Hons. B.Sc.). Effective September 2008, the Department of Kinesiology intends to replace the existing Honours Bachelor of Science (Hons. B.Sc.) degree available to Kinesiology students with an Honours Bachelor of Science Kinesiology degree.
- Effective 2007-2008**, students who intend to register in the Honours B.Sc. program must successfully complete one of MATH 1A03, 1B03 or 1D03 by the end of Level II. STATS 1CC3 or KINESIOL 3C03 and six units of electives, selected from the Faculty of Science must be completed by the end of Level IV. (See *Department of Kinesiology, in the Faculty of Science*, section of this Calendar.)
- Effective 2008-2009**, students who intend to register in the B.Sc.Kinesiology program must complete MATH 1A03 or 1LS3 by the end of Level II. Students without Grade 12 Calculus and Vectors U will be required to complete MATH 1F03 prior to completion of MATH 1A03 or 1LS3.
- The Honours Bachelor of Kinesiology, the Honours Bachelor of Science, and the proposed Honours Bachelor of Science Kinesiology provide students the opportunity to complete course requirements for various professional degree programs. Students are strongly encouraged to seek advice in determining which program option is best suited for them.
- Effective 2008-2009**, upon completion of Kinesiology I, students who have achieved an average of at least 6.0 in KINESIOL 1A03, 1AA3, 1C03, 1E03, 1F03, 1G03 and whose C.A. is between 5.5 and 5.9 may register in Level II Honours Kinesiology but will be placed on program probation for one reviewing period. A student may be on program probation only once. Upon completion of Kinesiology I, students who have achieved an average of at least 6.0 in KINESIOL 1A03, 1AA3, 1C03, 1E03, 1F03, 1G03 and whose C.A. is between 3.5 and 5.4 may register in Level II Kinesiology General and, with permission, take Level II Kinesiology required courses. At their next review, such students must achieve a C.A. of at least 6.0 to transfer to an Honours Kinesiology program. Upon completion of Kinesiology I, students who have not achieved an average of 6.0 in KINESIOL 1A03, 1AA3, 1C03, 1E03, 1F03, 1G03 and whose C.A. is between 3.5 and 5.4 may register in Level II Kinesiology General for one reviewing period. During that period a student may not take Level II Kinesiology courses but may upgrade or repeat Level I Kinesiology courses. At the end of that period students who have achieved an average of at least 6.0 in KINESIOL 1A03, 1AA3, 1C03, 1E03, 1F03, 1G03 and have a C.A. of at least 6.0 may transfer to the Honours Kinesiology program. Students who fail to meet the minimum requirements for transfer to Honours Kinesiology must transfer to a non-Kinesiology program for which they qualify.

REQUIREMENTS: 30 UNITS (EFFECTIVE 2007-2008)

18 units KINESIOL 1A03, 1AA3, 1C03, 1E03, 1F03, 1G03

12 units Electives (See Note 3 above.)

B. Degree Programs

HONOURS PROGRAMS (HONOURS BACHELOR OF ARTS AND HONOURS BACHELOR OF KINESIOLOGY)

Honours Bachelor of Arts programs and the Honours Bachelor of Kinesiology degree program consist of a total of 120 units of work normally completed over four years. Honours programs provide a concentration in the particular field, as well as an extended time of study, and are normally a requirement for those who contemplate proceeding to graduate studies. Kinesiology students who successfully complete all requirements of the first three levels of an Honours Kinesiology degree may request permission of the Office of the Associate Dean of Social Sciences for transfer to graduate with a three-level Bachelor of Kinesiology degree.

Students enrolled in an Honours program in the Faculty of Social Sciences, with the exception of Honours Psychology and the Honours Bachelor of Kinesiology, in addition to meeting the University requirements for an Honours degree (see the *General Academic Regulations* section in this Calendar) must also fulfill the following requirements prescribed by the Faculty:

- six units from the Faculty of Humanities and/or the Department of Religious Studies. (Students enrolled in Religious Studies programs are required to complete six units from the Faculty of Humanities.)

Combined Honours Bachelor of Arts Programs: Subject to possible timetable restrictions, and provided that the student meets the requirements for entry into each of the relevant Honours programs, a student may combine work in any two departments and be graduated with a Combined Honours degree. These combinations are available within the Faculty, with programs in the Faculty of Humanities, and with the Arts and Science Program. All Combined Honours programs must be approved by both Departments concerned as well as by the Office of the Associate Dean(s) Studies. * Students will normally complete approximately 36 units of work beyond Level I in each component of the program (normally 12 units per level in each subject). The Honours B.Kin. degree is not available in combination with another subject.

Minor: A Minor is an option available to students enrolled in a four- or five-level program. Normally students must complete a minimum of 24 units in the Minor subject. Students are responsible for ensuring that the courses taken meet the requirements for a Minor. Students who have the necessary requirements may apply for recognition of that Minor when they graduate. If granted, this recognition will be recorded on the student's transcript. For further information see Minors in the *General Academic Regulations* section of this calendar.

Combined B.A./B.S.W.: The School of Social Work offers a Combined B.A./B.S.W. program of studies leading to a B.A. and a B.S.W. degree. (See the program description in this section.)

The B.S.W. degree may be attained separately as a subsequent degree by those students who have already received one or more undergraduate degrees.

Bachelor of Arts Programs: B.A. programs consist of a total of 90 units of work, normally completed over three years.

Three-level Combined Bachelor's degree programs are available only in Indigenous Studies and Another Subject. The other subject may be from the Faculty of Social Sciences or the Faculty of Humanities. These programs may also be combined with the B.S.W. as a four-level program.

Internship Options: Internships allow students to explore careers, to develop employability skills and to make important contacts for job searches after graduation. The Faculty of Social Sciences offers both part-time and full-time, non-credit, paid work opportunities of four, eight, or 12 months duration. Part-time and summer internships are open to all students and provide valuable workplace experience without extending their degree. Full-time internships of eight months or more, require registration in an Honours program and there is a nominal administrative fee. Only those students who have successfully completed all of their Level I program requirements and SOC SCI 2E01 may apply for posted opportunities. Internships must be undertaken before a student has completed all requirements for the degree. A brief notation describing the internship is placed on the student's transcript upon receipt of a job report from the student and a performance evaluation by the employer.

Further details of internship options may be obtained from:

Internship Coordinator,
Kenneth Taylor Hall, Room 102
(905) 525-9140, extension 23228
email: exp.ed@mcmaster.ca

ACADEMIC REGULATIONS

STUDENT ACADEMIC RESPONSIBILITY

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

ACCESS TO COURSES

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases priority is given to students from particular programs or Faculties.

All students are encouraged to register as soon as MUGSI/SOLAR is available to them.

Students enrolled in a program in the Faculty of Social Sciences, in addition to meeting the Academic Regulations of the University, shall be subject to the following regulations of the Faculty of Social Sciences.

ADMISSION TO LEVEL II PROGRAMS

Any student seeking admission to a Level II program in the Faculty of Social Sciences, with the exception of Combined B.A./B.S.W. programs, for the following Fall/Winter session must submit an *Application for Admission to Level II* through MUGSI by April 1. The application allows students to rank four program choices. Students will be notified of their eligibility for the Level II programs to which they have applied on their grade report in June.

TRANSFER TO THE FACULTY OF SOCIAL SCIENCES

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

Students who do not meet these requirements must consult with the Office of the Associate Dean. Requests for transfer will be considered at the same time as applications for reinstatement (see below).

TRANSFER/APPLICATION TO KINESIOLOGY I

Any student seeking transfer/admission to Kinesiology I for the following Fall/Winter session must submit an *Application for Admission* through MUGSI by April 1. The application allows students to rank four program choices. Students will be notified of their eligibility for transfer to Kinesiology I on their grade reports in June.

A limited number of exceptionally qualified students are admitted each year. To be considered, applicants must have an average of at least 8.0 (B) on a minimum of 24 units of university work taken on a full-time basis. McMaster students interested in transferring may contact the Undergraduate Administrative Assistant (Kinesiology) or the Office of the Associate Dean, Social Sciences. Students transferring from another university should see the *Admission Requirements* and *Application Procedures* sections of this Calendar. **Effective September, 2007**, to be considered, applicants must complete a minimum of 24 units of university work taken on a full-time basis, including an average of at least 6.0 in either BIOLOGY 1A03 and 1AA3 or KINESIOL 1Y03 and 1YY3. Given the number of required units and prerequisites of Kinesiology courses, transfer students may not be able to complete the requirements in three additional years of study.

REINSTATEMENT

A student who may not continue at the University may apply for reinstatement. Application for reinstatement must be made to the Office of the Registrar using the *Reinstatement Request Form* by the application deadline for the session. See the *Sessional Dates* section of this Calendar. Reinstatement forms will be carefully reviewed and the evidence considered will include the student's academic performance before and after admission to McMaster, a letter of explanation and documentation of any extenuating circumstances.

Reinstatement is not automatic or guaranteed. Decisions are normally made after June 30 for September entry. **Effective September 1997**, the Cumulative Average for students who are reinstated is reset to 0.0 on zero units. Credit is retained

for courses in which passing grades have been achieved. **NOTE:** If at a review after reinstatement the Cumulative Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.

Former Kinesiology students will be considered for reinstatement to Kinesiology upon completion of a minimum of 24 units of university work taken on a full-time basis in a non-Kinesiology program with a minimum average of 7.0 (B-). Application forms are available from the Office of the Associate Dean or the Department of Kinesiology. The application deadline is April 30 for September entry. Reinstatement is not guaranteed.

DEADLINES

The Faculty of Social Sciences will not consider applications for admission, admission to a second degree or continuing studies, registration, or dropping and adding of courses after the deadlines stated in this Calendar under *Sessional Dates and Application Procedures*, unless written documentation is provided showing good cause, as determined by the Faculty.

HUMANITIES/RELIGIOUS STUDIES REQUIREMENT

Students registered in the Faculty of Social Sciences, except for those in Honours Kinesiology, Honours Psychology and those completing a B.A. with a B.S.W., are required to complete six units of courses chosen from the Faculty of Humanities and/or the Department of Religious Studies.

Students enrolled in Religious Studies programs are required to complete six units from the Faculty of Humanities.

Students in the B.A. Psychology programs should note the additional Humanities or Science requirements.

ACADEMIC ADVISING

The aim of academic advising is to help students tailor a program of studies to fit their interests. Advising also involves reviewing these interests from time to time to accommodate changing plans, needs and academic performance.

Advising is available throughout the year from the Office of the Associate Dean of Social Sciences and the departments or academic units in the Faculty of Social Sciences. It is strongly recommended that students consult with a Departmental Undergraduate Advisor during March in conjunction with the Level II program application.

AWARDS

For conditions and terms of awards for full-time and part-time students, please refer to the *Undergraduate Academic Awards* section of this Calendar.

OVERLOAD

Normally students may not register in more than 30 units during the Fall/Winter Session (36 units for students in a B.A./B.S.W. program). In the following circumstances an overload of up to six units may be taken:

1. if a student has a Sessional Average of at least 7.0 in the immediately preceding review period.
2. if the student is registered in the final level of his/her program.

Students wishing to register in more than 12 units during the Spring/Summer Session, or more than six units in either term of that Session may do so only with the permission of the Office the Associate Dean, Social Sciences.

WITHDRAWAL

Students who wish to withdraw from the University may cancel courses on SOLAR and must surrender their McMaster Identification Card validation sticker to Financial Services Office to ensure the processing of any fee refunds. Students who fail to withdraw formally from any course(s) by the stated deadlines will remain registered whether or not they attend classes and will be assigned a grade.

LETTER OF PERMISSION

Students in good academic standing who wish to attend another university to take courses for credit toward a McMaster degree must first request a Letter of Permission from the Office of the Associate Dean. Students should take note of any conditions on the Letter of Permission that might apply, including the requirement of a grade of at least C- for transfer credit. Courses taken at another university cannot be used to satisfy the university's minimum residence requirements, will not be included in the calculation of the McMaster average, and therefore cannot be used to raise standing. The transcript designations will read COM, indicating *complete*, when a grade of C- or better is attained.

STUDENT EXCHANGE PROGRAMS

McMaster University has agreements with institutions in Canada and abroad, including Australia, France, and the United Kingdom, to provide students the opportunity to participate in an exchange program for one year or a term. Exchanges allow students to gain a varied perspective on their course of study and enhance their professional and personal goals. In addition, exchange programs offer students the most inexpensive means of studying abroad, as students participating in these exchanges avoid the foreign student fees by paying fees to McMaster.

All students must have completed at least one year of continuous study and be in good standing to be eligible to participate in an exchange. In most cases, students who participate in exchange programs go abroad for the third Level of an Honours program.

Students interested in any exchange program must discuss their plans with their department and with the Office of the Associate Dean if they intend to transfer credit to their McMaster degree program. Such discussions should begin about one year before they plan to enrol elsewhere.

For further information please see *International Study* in the *General Academic Regulations* section in this Calendar. Information concerning student exchanges can also be found in the *Academic Facilities, Student Services and Organizations* section of this Calendar under the heading *Centre for Student Development, International Student Services*.

Acceptance to the Ontario and University-wide Exchange Programs is by recommendation. Application forms can be obtained from:

Centre for Student Development

Student Exchanges

Gilmour Hall, Room 104

Telephone: (905) 525-9140, extension 24748

DEPARTMENT OF ANTHROPOLOGY

WEB ADDRESS: <http://www.socsci.mcmaster.ca/anthro/>

Honours Arts & Science and Anthropology

(B.Arts.Sc.; See Arts & Science Program)

ANTHROPOLOGY SUBFIELDS

(Applicable to all Anthropology programs)

Anthropology includes the four major subfields of Social/Cultural Anthropology, Physical/Biological Anthropology, Archaeology, and Linguistics. It should be noted that each subfield has its own sequence of courses and prerequisites. (See the *Course Listings* section in this Calendar.)

CULTURAL/SOCIAL ANTHROPOLOGY

ANTHROP 2B03, 2F03, 2G03, 2GG3, 2H03, 2P03, 2R03, 2X03, 2XX3, 2Z03, 3B03, 3G03, 3L03, 3P03, 3Q03, 3RR3, 3T03, 3V03, 3Y03, 3Z03, 3ZZ3, 4AE3, 4D03, 4I03, 4N03, 4Q03

PHYSICAL/BIOLOGICAL ANTHROPOLOGY

ANTHROP 2AN3, 2D03, 2DD3, 2E03, 2FA3, 2FF3, 2U03, 3C03, 3H03, 3N03, 3PP3, 3R03, 4H03, 4J03, 4JJ3, 4R03, 4S03 (Relevant courses are also offered by Biology and Kinesiology.)

ARCHAEOLOGY

ANTHROP 2C03, 2O03, 2PA3, 2VV3, 2W03, 3AS3, 3CA3, 3CC6, 3DD3, 3E03, 3EE3, 3K03, 3X03, 4E03, 4EE3, 4F03, 4HF3, 4M03, 4U03 (Relevant courses are also offered by the School of Geography and Earth Sciences, History and Classics.)

LINGUISTICS

ANTHROP 2LC3, 2L03, 2LL3, 2LP3, 3A03, 3I03, 3II3, 3M03, 4LB3, 4LC3, 4XX3

OTHER COURSES

Courses not distinguished by subfield include the independent study course ANTHROP 3IS3; topic courses ANTHROP 3WW3, 4G03, 4GG3, as well as the seminar courses ANTHROP 4B03 and 4BB3.

In planning a program, it is important for students to take note of the prerequisites of certain upper-level courses.

Honours Anthropology**{2010}****ADMISSION**

Completion of any Level I program with a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units from ANTHROP 1A03, 1B03, 1Z03.

REQUIREMENTS

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

30 units from the Level I program completed prior to admission to the program. (See *Admission* above.)

12 units ANTHROP 2E03, 2F03, 2PA3, 3L03

3 units from ANTHROP 2D03, 2DD3, 2FF3, 2Z03, 3H03, 3K03, 3P03

3 units ANTHROP 4I03

9 units Level IV Anthropology

24 units Levels II, III or IV Anthropology

3 units from SOC SCI 2J03 or STATS 1CC3*

36 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

*If requirement completed in Level I, these units will be taken as electives.

Combined Honours in Anthropology and Another Subject**ADMISSION**

Completion of any Level I program with a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units from ANTHROP 1A03, 1B03, 1Z03. Satisfaction of admission requirements for the Honours program in the other B.A. subject.

NOTE

Subject to meeting admission requirements, students may combine two subjects and be graduated with a combined honours B.A. degree. These combinations are available within the Faculty, with programs in the Faculty of Humanities and with the Arts and Science Program.

REQUIREMENTS

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

30 units from the Level I program completed prior to admission to the program. (See *Admission* above.)

12 units ANTHROP 2E03, 2F03, 2PA3, 3L03

3 units from ANTHROP 2D03, 2DD3, 2FF3, 2Z03, 3H03, 3K03, 3P03

3 units ANTHROP 4I03

3 units Level IV Anthropology

15 units Levels II, III or IV Anthropology

36 units courses specified for the other subject

3 units from SOC SCI 2J03 or STATS 1CC3* or in combined programs within the Faculty of Social Sciences, the Research Methods/Statistics requirement specified for the other subject.

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 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 program with a Cumulative Average of at least 3.5 including an average of at least 4.0 in six units from ANTHROP 1A03, 1B03, 1Z03.

REQUIREMENTS

90 units total (Levels I to III), of which 42 units may be Level I

30 units from the Level I program completed prior to admission to the program. (See *Admission* above.)

6 units from ANTHROP 2E03, 2F03, 2PA3

18 units Levels 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 Levels II, III or IV Anthropology

INTERDISCIPLINARY MINOR IN ARCHAEOLOGY

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

DEPARTMENT OF ECONOMICS

WEB ADDRESS: <http://www.mcmaster.ca/economics/>

Honours Arts & Science and Economics

(B.Arts.Sc.; See Arts & Science Program)

Honours Economics (Specialist Option) {2151}

The Honours Economics (Specialist Option) is being phased out. Registration in Level IV will be last available in September 2007.

NOTES

1. COMMERCE 2FA3 may be substituted for ECON 2I03.
2. Students with prior credit in a course equivalent to ECON 2B03 are exempt from this requirement. See ECON 2B03 in the *Course Listings* section of this Calendar for equivalencies.

REQUIREMENTS

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

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

21 units ECON 2G03, 2GG3, 2H03, 2HH3, 3F03, 3G03, 4A03

6 units from ECON 3A03, 3AA3, 4T03, 4TT3

24 units Levels II, III, IV Economics with no more than six units from ECON 2A03, 2C03, 2D03, 2E03, 2F03, 2I03, 2J03, 2N03, 2P03, 2T03 (See *Notes 1 and 2* above.)

6 units ECON 2B03 and 3U03 (See *Note 2* above.)

3 units* from MATH 1A03 or 1M03

3 units** from STATS 1L03 (or Grade 12 Mathematics of Data Management U)

27 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies. The number of units of Economics courses above Level I (excluding ECON 2B03 and 3U03) must not exceed 60.

*If requirement completed in Level I, these units will be taken as electives.

**If requirement completed in Level I or with Grade 12 U courses, these units will be taken as electives.

Honours Economics**{2150}****ADMISSION**

Completion of any Level I program with a Cumulative Average of at least 6.0 including a grade of B- in ECON 1A06 or an average of at least 7.0 in ECON 1B03 and 1BB3. Credit in Grade 12 Advanced Functions and Introductory Calculus U or MATH 1K03 or equivalent.

NOTES

1. COMMERCE 2FA3 may be substituted for ECON 2I03.
2. Students with prior credit in a course equivalent to ECON 2B03 are exempt from this requirement. See ECON 2B03 in the *Course Listings* section of this Calendar for equivalencies.
3. Many graduate programs in Economics require ECON 3G03, 4T03 and 4TT3. Students interested in an M.A. in Economics are advised to consult a departmental advisor for more detailed information.

REQUIREMENTS

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

30 units from the Level I program completed prior to admission to the program. (See *Admission* above.)

18 units ECON 2G03, 2GG3, 2H03, 2HH3, 3F03, 4A03

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24 units	Levels II, III, IV Economics with no more than six units from ECON 2A03, 2C03, 2D03, 2E03, 2F03, 2I03, 2J03, 2N03, 2P03, 2T03 (See <i>Note 1</i> above.)
6 units	ECON 2B03 and 3U03 (See <i>Note 2</i> above.)
3 units*	from MATH 1A03 or 1M03
3 units**	from STATS 1L03 (or Grade 12 Mathematics of Data Management U)
36 units	Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies. The number of units of Economics courses above Level I (excluding ECON 2B03 and 3U03) must not exceed 60.

*If requirement completed in Level I, these units will be taken as electives.

**If requirement completed in Level I or with Grade 12 U courses, these units will be taken as electives.

Combined Honours in Economics and Another Subject

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0 including a grade of B- in ECON 1A06 or an average of at least 7.0 in ECON 1B03 and 1BB3. Credit in Grade 12 Advanced Functions and Introductory Calculus U or MATH 1K03 or equivalent. Satisfaction of admission requirements for the Honours program in the other B.A. subject.

NOTES

1. Subject to meeting admission requirements, students may combine two subjects and be graduated with a combined honours B.A. degree. These combinations are available within the Faculty, with programs in the Faculty of Humanities and with the Arts and Science Program.
2. One of Grade 12 Mathematics of Data Management U, STATS 1L03 is a prerequisite for the research methods courses offered by the Department of Economics (ECON 2B03).
3. Students registered in Combined Honours programs within the Faculty of Social Sciences who wish to satisfy the Inquiry and Honours Seminar requirements specified by the other department may replace ECON 3F03 and 4A03 with another six units Economics.
4. COMMERCE 2FA3 may be substituted for ECON 2I03.

REQUIREMENTS

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

30 units	from the Level I program completed prior to admission to the program. (See <i>Admission</i> above.)
18 units	ECON 2G03, 2GG3, 2H03, 2HH3, 3F03, 4A03 (See <i>Note 3</i> above.)
15 units	Levels II, III, IV Economics with no more than six units from ECON 2A03, 2C03, 2D03, 2E03, 2F03, 2I03, 2J03, 2N03, 2P03, 2T03 (See <i>Note 4</i> above.)
36 units	courses specified for the other subject
6 units	ECON 2B03 and 3U03; or, in combined programs within the Faculty of Social Sciences, the Research Methods/Statistics requirement specified for the other subject. (See <i>Note 2</i> above.)
3 units*	from MATH 1A03 or 1M03
3 units**	from STATS 1L03 (or Grade 12 Mathematics of Data Management U)
9 units	Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities 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 Grade 12 U courses, these units will be taken as electives.

Honours Economics and Computer Science {2150145}

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0, including an average of at least 7.0 in ECON 1B03 and 1BB3 (or a grade of at least B- in ECON 1A06), and a weighted average of at least 7.0 in ECON 1B03, 1BB3 (or 1A06), COMP SCI 1MD3 and 1FC3; MATH 1A03, 1AA3 and 1B03. MATH 1B03 may be postponed until Level II.

NOTES

1. COMMERCE 2FA3 may be substituted for ECON 2I03.
2. Students with prior credit in a course equivalent to ECON 2B03 are exempt from this requirement. See ECON 2B03 in the *Course Listings* section of this Calendar for equivalencies.

REQUIREMENTS

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

30 units	from the Level I program completed prior to admission to the program. (See <i>Admission</i> above.)
18 units	ECON 2G03, 2GG3, 2H03, 2HH3, 3F03, 4A03
18 units	Levels II, III, IV Economics with no more than six units from ECON 2A03, 2C03, 2D03, 2E03, 2F03, 2I03, 2J03, 2N03, 2P03, 2T03
18 units	COMP SCI 2CA3, 2ME3, 2MF3, 2MJ3, 2O03, 2SC3
9 units	from COMP SCI 3CN3, 3DA3, 3DB3, 3IS3, 3MH3, 4HC3, 4WW3
3 units	Levels III or IV Computer Science except COMP SCI 4ZP6
6-9 units	STATS 2D03 and either STATS 2MB3, or 3D03 and 3DD3 (or 3D06); or ECON 2B03 and 3U03 (See <i>Note 2</i> above.)
15-18 units	Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the department of Religious Studies.

Honours Economics and Mathematics {2150320}

Students who entered this program prior to 2007 may see an Academic Advisor in the Office of the Associate Dean for program requirements

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0 including MATH 1A03 (or 1X03), and a grade of at least B- in each of ECON 1A06 (or an average of at least 7.0 in ECON 1B03 and 1BB3), MATH 1AA3 (or 1XX3) and 1B03.

NOTES

1. COMMERCE 2FA3 may be substituted for ECON 2I03.
2. Students with prior credit in a course equivalent to ECON 2B03 are exempt from this requirement. See ECON 2B03 in the *Course Listings* section of this Calendar for equivalencies.
3. Neither ECON 2B03 nor 3U03 can be used to satisfy these required units.
4. Neither STATS 2D03 nor 2MB3 can be used to satisfy these required units.

REQUIREMENTS

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

30 units	from the Level I program completed prior to admission to the program. (See <i>Admission</i> above.)
18 units	ECON 2G03, 2GG3, 2H03, 2HH3, 3F03, 4A03
12 units	Levels II, III, IV Economics with no more than six units from ECON 2A03, 2C03, 2D03, 2E03, 2F03, 2I03, 2J03, 2N03, 2P03, 2T03 (See <i>Note 1</i> above.)
18 units	MATH 2C03, 2R03, 2X03 (or 2A03), 2XX3 (or 2AB3), 3A03, 3X03 (See <i>Note 4</i> above.)
12 units	Levels II, III, IV Mathematics, Statistics with no more than six units at Level II, and at least three units at Level IV
12 units	six units from ECON 2B03, 3U03 and six units from Levels III, IV Mathematics or Statistics
	or
	six units from STATS 2D03, 2MB3 and six units from Levels III, IV Economics (See <i>Note 2</i> above.)
9-18 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.

B.A. in Economics {1150}

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 3.5 and a grade of at least C- in ECON 1A06 or an average of at least 4.0 in ECON 1B03 and 1BB3. Credit in Grade 12 Advanced Functions and Introductory Calculus U or MATH 1K03 or equivalent.

NOTES

1. COMMERCE 2FA3 may be substituted for ECON 2I03.
2. Students with prior credit in a course equivalent to ECON 2B03 are exempt from this requirement. See ECON 2B03 in the *Course Listings* section of this Calendar for equivalencies.

REQUIREMENTS

90 units total (Levels I to III), of which 42 units may be Level I

- 30 units from the Level I program completed prior to admission to the program. (See *Admission* above.)
- 9 units ECON 2B03, 2G03, 2H03 (See *Note 2* above.)
- 15 units Levels II, III, IV Economics with no more than six units from ECON 2A03, 2C03, 2D03, 2E03, 2F03, 2I03, 2J03, 2N03, 2P03, 2T03 (See *Note 1* above.)
- 3 units* from MATH 1A03 or 1M03
- 3 units** from STATS 1L03 (or Grade 12 Mathematics of Data Management U)
- 30 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies. The number of units of Economics courses above Level I (excluding ECON 2B03 and 3U03) must not exceed 36.

*If requirement completed in Level I, these units will be taken as electives.

**If requirement completed in Level I or with Grade 12 U courses, these units will be taken as electives.

Minor in Economics**NOTES**

- 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.
- COMMERCE 2FA3 may be substituted for ECON 2I03.
- COMMERCE 2QA3 (or equivalent statistics course) may be substituted for ECON 2B03.

REQUIREMENTS

24 units total

- 6 units ECON 1B03 and 1BB3 (or ECON 1A06)
- 18 units Levels II, III, IV Economics with no more than six units from ECON 2A03, 2C03, 2D03, 2E03, 2F03, 2I03, 2J03, 2N03, 2P03, 2T03. (See *Notes* above.)

SCHOOL OF GEOGRAPHY AND EARTH SCIENCES

WEB ADDRESS: <http://www.science.mcmaster.ca/geo/>

Honours Arts & Science and Geography

(B.Arts.Sc.; See Arts & Science Program)

Honours Geography {2240}**ADMISSION**

Completion of any Level I program with a Cumulative Average of at least 6.0 including an average of at least 6.0 in six units from GEO 1HS3, 1HU3, ENVIR SC 1A03, 1B03, 1G03.

NOTES

- One of SOC SCI 2J03 or STATS 1CC3 must be completed by the end of 60 units.
- Students are encouraged to check prerequisites of upper-level Geo courses and to speak with an Undergraduate Advisor in the School of Geography and Earth Sciences regarding course selection.
- Students who entered the program prior to September 2001, need only complete 12 units of Level IV Geo, including one of GEO 4CC3 or 4R06 and will increase their electives by three units.
- Upon completion of 60 units, including satisfactory completion of admission requirements, Honours Geography students may choose to register in one of the three following specializations:

- Environment and Health
- Geographic Information Systems (G.I.S.) and Spatial Analysis
- Urban Social Geography

These specializations are intended to provide students with opportunities to select courses from recognized areas of geographic inquiry and to acquire knowledge and skills for employment and/or graduate study in these areas. Program codes and requirements for Levels III and IV of each specialization are outlined below. **Honours Geography students are not required to complete a specialization.** Those who decide not to specialize will remain registered in the Honours Geography program.

- Students interested in completing a specialization should review admission requirements below.
- A Minor in Environmental Studies is not permitted for students who are registered in the Honours Geography/Environment and Health Specialization.
- A Minor in Geographic Information Systems (G.I.S.) is not permitted for students who are registered in the Honours Geography/G.I.S. and Spatial Analysis Specialization Program.
- Students considering the Geographic Information Systems (G.I.S.) and Spatial Analysis specialization are strongly encouraged to complete MATH 1K03 if a Grade 12 Mathematics U was not completed.

REQUIREMENTS

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

LEVEL I: 30 UNITS

- 30 units from the Level I program completed prior to admission to the program (See *Admission* above.)

LEVEL II: 30 UNITS

- 3 units GEO 2I03
- 3 units from GEO 2E03, 2HR3
- 12 units from Level II or III Geo, excluding GEO 2GG3, 2HC3, 2HG3, 2HU3, 2MM3, 2WW3, 3AA3, 3CC3, 3DD3, 3HJ3, 3HR3, 3NN3 (See *Note 5* above.)
- 3 units from SOC SCI 2J03 or STATS 1CC3* (See *Note 1* above.)
- 9 units Electives

LEVELS III AND IV: 60 UNITS

(See below for the Level III and IV requirements for Specializations)

- 3 units GEO 3R03
- 3 units from GEO 3FE3, 3HF3
- 15 units Level IV Geo, including one of GEO 4CC3 or 4R06 (See *Note 3* above.)
- 12 units Level III Geo, excluding GEO 3CC3, 3DD3, 3HJ3, 3HR3, 3NN3
- 27 units Electives. If not already completed, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

*If requirement completed in Level I or II, these units will be taken as electives.

Environment and**{2240868}****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 from GEO 3A03, 3HE3, 3HG3, 3HH3, 3HU3
- 9 units GEO 4A03, 4HH3, 4HY3
- 6 units Level IV Geo, including one of GEO 4CC3 or 4R06
- 27 units Electives. If not already completed, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

G.I.S. and Spatial**{2240870}****Analysis Specialization****ADMISSION**

Completion of Level II Honours Geography, including a grade of at least C+ in GEO 2I03 and completion of GEO 2HA3. (See *Note 7* above.)

NOTE

Students considering this specialization are strongly encouraged to complete MATH 1K03 if a Grade 12 Math U was not completed.

REQUIREMENTS**LEVELS III AND IV: 60 UNITS**

- 3 units GEO 3R03
- 3 units from GEO 3FE3, 3HF3
- 18 units from GEO 3HD3, 3HG3, 3I03, 3S03, 3Y03, 4D03, 4I03, 4S03
- 6 units Level IV Geo, including one of GEO 4CC3 or 4R06
- 30 units Electives. If not already completed, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

Urban Social Geography Specialization

{2240872}

ADMISSION

Completion of a Level II Honours Geography program, including one of GEO 2HB3, 2HD3, 2HY3.

REQUIREMENTS

LEVELS III AND IV: 60 UNITS

- 3 units GEO 3R03
- 3 units from GEO 3FE3, 3HF3
- 12 units from GEO 2HB3, 2HD3, 2HY3 (if not completed in Level II), 3HD3, 3HG3, 3HT3, 3HU3, 3HZ3
- 9 units GEO 4HT3, 4HY3, 4HZ3
- 6 units Level IV Geo, including one of GEO 4CC3 or 4R06
- 27 units Electives. If not already completed, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

Honours Geography and Environmental Studies

{2243}

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0 including an average of at least 6.0 in six units from GEO 1HS3, 1HU3, ENVIR SC 1A03, 1B03, 1G03. (See Note 1 below.)

NOTES

1. GEO 1HS3, 1HU3 and one of ENVIR SC 1A03, 1B03, 1G03 must be completed by the end of 60 units.
2. One of SOC SCI 2J03 or STATS 1CC3 must be completed by the end of 60 units.
3. Students are encouraged to check prerequisites of upper-level Geo courses and to speak with an Undergraduate Advisor in the School of Geography and Earth Sciences regarding course selection.
4. Students who entered the program prior to September 2006 may use GEO 3NN3 as three units of Level III Geo.

REQUIREMENTS

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

- 30 units from the Level I program completed prior to admission to the program. (See Admission above.)
- 18 units GEO 2A03, 2I03, 3A03, 3HE3, 3R03, 4A03
- 3 units from GEO 2E03, 2HR3
- 3 units from GEO 3FE3, 3HF3
- 15 units Level IV Geo, including one of GEO 4CC3 or 4R06
- 12 units Level III Geo, excluding GEO 3CC3, 3DD3, 3HJ3, 3HR3, 3NN3 (See Note 4 above.)
- 12 units Levels II or III Geo, excluding GEO 2GG3, 2HC3, 2HU3, 2MM3, 2WW3, 3AA3, 3CC3, 3DD3, 3HJ3, 3HR3, 3NN3 (See Note 4 above.)
- 6 units* GEO 1HS3, 1HU3, which must be completed by the end of 60 units
- 3 units* from ENVIR SC 1A03, 1B03, 1G03, which must be completed by the end of 60 units
- 3 units from SOC SCI 2J03 or STATS 1CC3* (See Note 2 above.)
- 15 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

*If requirement completed in Level I, these units will be taken as electives.

Combined Honours in Geography and Another Subject

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0 including an average of at least 6.0 in six units from GEO 1HS3, 1HU3, ENVIR SC 1A03, 1B03, 1G03 and satisfaction of admission requirements for the Honours program in the other B.A. subject.

NOTES

1. Subject to meeting admission requirements, students may combine two subjects and be graduated with a combined honours B.A. degree. These combinations are available within the Faculty, with programs in the Faculty of Humanities and with the Arts and Science Program.

2. Students are encouraged to check prerequisites of upper-level Geo courses and to speak with an Undergraduate Advisor in the School of Geography and Earth Sciences regarding course selection.
3. Students who entered the program prior to September 2001, may substitute three units of Level IV Geo with electives.
4. Students in a combined Honours program within the Faculty of Social Sciences may substitute GEO 2HR3 with the three or six unit Research Methods course specified for the other subject (i.e. GERONTOL 2C03, HEALTHST 2B03, POL SCI 3N06, SOCIOL 2Z03).

REQUIREMENTS

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

- 30 units from the Level I program completed prior to admission to the program. (See Admission above.)
- 6 units GEO 2I03, 3R03
- 3 units from GEO 2E03, 2HR3 (See Note 4 above.)
- 3 units from GEO 3FE3, 3HF3
- 6 units Level III Geo, excluding GEO 3CC3, 3DD3, 3HJ3, 3HR3, 3NN3
- 9 units Levels II or III Geo, excluding GEO 2GG3, 2HC3, 2HG3, 2HU3, 2MM3, 2WW3, 3AA3, 3CC3, 3DD3, 3HJ3, 3HR3, 3NN3
- 15 units Level IV Geo, including one of GEO 4CC3 or 4R06 (See Note 3 above.)
- 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 1CC3*
- 9-12 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies. Students combining Geography and Arts & Science or with a Humanities subject, are exempt from this requirement.

*If requirement completed in Level I, these units will be taken as electives.

B.A. in Geography

{1240}

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 3.5 including an average of at least 4.0 in six units from GEO 1HS3, 1HU3, ENVIR SC 1A03, 1B03, 1G03.

NOTE

Students who entered this program prior to September 2007 may use GEO 3AA3 as three units of Level III Geo.

REQUIREMENTS

90 units total (Levels I to III), of which 42 units may be Level I

- 30 units from the Level I program completed prior to admission to the program. (See Admission above.)
- 12 units Level II Geo with no more than six units from GEO 2GG3, 2HC3, 2HG3, 2HU3, 2MM3, 2WW3
- 12 units Level III Geo with no more than six units from GEO 3AA3, 3CC3, 3DD3, 3HJ3, 3HR3, 3NN3
- 36 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

Minor in Geography

NOTE

Students who entered this program prior to September 2007 may use GEO 3AA3 as three units of Level III Geo.

REQUIREMENTS

24 units total

- 6 units from ENVIR SC 1A03, 1B03, 1G03, GEO 1HS3, 1HU3
- 18 units Levels II, III or IV Geo, including at least six units of Levels III or IV. No more than six units may be from GEO 2GG3, 2HC3, 2HG3, 2HU3, 2MM3, 2WW3, 3AA3, 3CC3, 3DD3, 3HJ3, 3HR3, 3NN3

Minor in Environmental Studies

NOTES

1. The Minor in Environmental Studies is not permitted for students who are registered in the Honours Geography/Environment and Health Specialization Program.

- At least nine of the 12 Course List units must be selected from outside the student's own department or school.
- At least six Course List units must be outside of Geo.

COURSE LIST

ANTHROP	2AN3, 2F03, 2H03, 2U03, 3C03, 3Z03, 4AE3, 4P03
BIOLOGY	2D03, 2E03, 2F03, 3SS3, 3TT3, 4Y03
ECON	2J03, 3W03
GEO	2A03, 2GG3, 2HG3, 2WW3, 3A03, 3CC3, 3HE3, 3HH3, 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
- 6 units from GEO 2A03, 3A03, 4A03
- 12 units from Course List including at least six units from Levels III or IV (See Notes 2 and 3 above.)

Minor in Geographic Information Systems (G.I.S.)**NOTES**

- The Minor in Geographic Information Systems (G.I.S.) is not permitted for students who are registered in the Honours Geography/G.I.S. and Spatial Analysis Specialization Program.
- Students registered in the Honours Geography (B. A.) or any Earth and Environmental Sciences (B.Sc.) program may use six units from GEO 1HS3, 1HU3, ENVIR SC 1A03, 1B03, 1G03; and GEO 2I03 and 3Y03 toward both their program requirements and the G.I.S. Minor.
- Progression to Level III courses is conditional upon achieving a grade of at least C+ in GEO 2I03. Students who do not meet this requirement may not complete the Minor.

REQUIREMENTS

24 units total

- 6 units from ENVIR SC 1A03, 1B03, 1G03, GEO 1HS3, 1HU3 (See Note 2 above.)
- 18 units GEO 2I03, 3I03, 3S03, 3Y03, 4I03, 4S03 (See Notes 2 and 3 above.)

CERTIFICATE IN G.I.S.**(Geographic Information Systems)**

For further information see the *Certificate and Diploma Programs* section of this Calendar.

DEPARTMENT OF HEALTH, AGING AND SOCIETY

WEB ADDRESS: <http://www.socsci.mcmaster.ca/has-dept>**Honours Arts & Science and Gerontology**

(B.Arts.Sc.; See Arts & Science Program)

Honours Arts & Science and Health Studies

(B.Arts.Sc.; See Arts & Science Program)

Honours Gerontology

{2265}

ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a minimum Cumulative Average of 6.0 including a grade of at least B- in GERONTOL 1A03 or 1A06.

NOTES

- Application for admission must be made by April 1. See *Admission to Level II Programs in Academic Regulations* in this section of the Calendar.
- Students who have not taken GERONTOL 1A03 or 1A06 in Level I may be considered for admission to the program if they have an equivalent introductory gerontology course. Such students must consult the Chair regarding equivalency prior to applying.
- Courses other than those listed in the Course List may be substituted with the prior permission of the Chair.

- Students are strongly recommended to complete GERONTOL 2C03 and SOC SCI 2J03 (or another approved statistics course) by the end of Level II and to complete GERONTOL 3R03 by the end of Level III.
- Students are strongly recommended to complete GERONTOL 2E03 prior to registration in GERONTOL 3B03.

COURSE LIST

ANTHROP	3Z03, 3ZZ3
ECON	3D03, 3Q03, 3Z03
GEO	2HG3, 3HH3
HEALTHST	2AA3, 2C03, 2D03, 3AA3, 3CC3, 3D03, 3E03, 3H03, 3HH3, 3YY3, 4C03
HTH SCI	3B03
KINESIOL	3F03, 3SS3
PHILOS	2D03, 3C03
RELIG ST	2C03, 2M03, 2N03, 2WW3
SOC WORK	3C03, 4L03, 4R03
SOCIOL	3CC3, 3G03, 3HH3

or other designated and approved courses. (See Note 3 above.)

REQUIREMENTS

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

- 30 units from the Level I program completed prior to admission to the program. (See *Admission* above.)
- 18 units GERONTOL 2B03, 2D03, 3B03, 3D03, 4A06
- 3 units Level IV Gerontology
- 18 units Levels II, III or IV Gerontology or courses from Course List
- 6 units GERONTOL 2C03, 3R03 (See Note 4 above.)
- 3 units from SOC SCI 2J03, STATS 1CC3 (See Note 4 above.)
- 42 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

*If requirement completed in Level I, these units will be taken as electives.

Combined Honours in Gerontology and Another Subject

ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a minimum Cumulative Average of 6.0 including a grade of at least B- in GERONTOL 1A03 or 1A06 and satisfaction of admission requirements for the Honours B.A. program in the other subject.

NOTES

- Students enrolled prior to September 2003 in combined Honours B. A. in Gerontology, Health Studies and another subject should consult an academic advisor in the Office of the Associate Dean, Social Sciences for program requirements.
- Application for admission must be made by April 1. See *Admission to Level II Programs in Academic Regulations* in this section of the Calendar.
- Students who have not taken GERONTOL 1A03 or 1A06 in Level I may be considered for admission to the program if they have an equivalent introductory gerontology course. Such students must consult the Chair regarding equivalency prior to applying.
- Courses other than those listed in Course List may be substituted with the prior permission of the Chair.
- Students are strongly recommended to complete GERONTOL 2C03 and SOC SCI 2J03 (or another approved statistics course) by the end of Level II and complete GERONTOL 3R03 by the end of Level III.
- Students who choose to complete a 6 unit, Level IV thesis (independent study) in the other subject may replace GERONTOL 4A06 with six units of Levels III or IV Gerontology or courses from Course List. This substitution must be approved by the Chair.
- Students are strongly recommended to complete GERONTOL 2E03 prior to registration in GERONTOL 3B03.
- Students who entered the program prior to September 2003 or students who have permission of the Chair to complete the Research Methods as required by their other component will replace GERONTOL 3R03 with a three unit elective.

COURSE LIST

ANTHROP	3Z03, 3ZZ3
ECON	3D03, 3Q03, 3Z03
GEO	2HG3, 3HH3
HEALTHST	2AA3, 2C03, 2D03, 3AA3, 3A03, 3CC3, 3D03, 3E03, 3H03, 3HH3, 3YY3, 4C03
HTH SCI	3B03
KINESIOL	3F03, 3SS3
PHILOS	2D03, 3C03
RELIG ST	2C03, 2M03, 2N03, 2WW3
SOC WORK	3C03, 4L03, 4R03
SOCIOL	3CC3, 3G03, 3HH3

or other designated and approved courses. (See Note 4 above.)

REQUIREMENTS

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

30 units from the Level I program completed prior to admission to the program. (See Admission above.)

12 units GERONTOL 2B03, 2D03, 3B03, 3D03

6 units GERONTOL 4A06 or if available, a thesis in the other subject (See Note 6 above.)

3 units Level IV Gerontology

12 units Level II, III or IV Gerontology or courses from Course List 1 (See Note 4 above.)

36 units Courses as specified for the other subject

6 units GERONTOL 2C03, 3R03 (See Notes 5 and 8 above.)

3-6 units from SOC SCI 2J03, STATS 1CC3* (or GERONTOL 3G03), or in combined programs within the Faculty of Social Sciences, the Research Methods/Statistics requirement specified for the other subject.

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**{1265}****ADMISSION**

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a minimum Cumulative Average of 3.5 including a grade of at least C- in GERONTOL 1A03 or 1A06.

NOTES

1. Application for admission must be made by April 1. See Admission to Level II Programs in Academic Regulations in this section of the Calendar.
2. Students who have not taken GERONTOL 1A03 or 1A06 in Level I may be considered for admission to the program if they have an equivalent introductory Gerontology course. Such students must consult the Chair regarding equivalency prior to applying.
3. Courses other than those listed in Course List may be substituted, with the prior permission of the Chair.
4. Students in the B.A. in Gerontology and Social Work program should consult with the Chair regarding GERONTOL 3B03 (the Gerontology Field Observation requirement) and SOC WORK 3DD6.
5. Students are strongly recommended to complete GERONTOL 2E03 prior to registration in GERONTOL 3B03.

COURSE LIST

ANTHROP	3Z03, 3ZZ3
ECON	3D03, 3Q03, 3Z03
GEO	2HG3, 3HH3
HEALTHST	2AA3, 2C03, 2D03, 3AA3, 3A03, 3CC3, 3D03, 3E03, 3H03, 3HH3, 3YY3
HTH SCI	3B03
KINESIOL	3F03, 3SS3
PHILOS	2D03, 3C03
RELIG ST	2C03, 2M03, 2N03, 2WW3
SOC WORK	3C03, 4L03, 4R03
SOCIOL	3CC3, 3G03, 3HH3

or other designated and approved courses. (See Note 3 above.)

REQUIREMENTS

90 units total (Levels I to III), of which 42 units may be Level I

30 units from the Level I program completed prior to admission to the program (See Admission above.)

12 units GERONTOL 2B03, 2D03, 3B03, 3D03

3 units GERONTOL 2C03

9 units Levels II, III or IV Gerontology or courses from Course List 1 (See Note 3 above.)

36 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

Minor in Gerontology**ADMISSION**

Enrolment in the Minor is limited. Selection is based on academic achievement but requires, as a minimum, completion of GERONTOL 1A03 with a minimum grade of B- and registration in a four- or five-level program. The department will admit a maximum of 10 students to the Minor in Gerontology each year.

NOTES

1. Application for admission (forms available from the Department of Health, Aging and Society) must be made to the Chair by April 30.
2. Students may not transfer from the Minor in Gerontology to another Gerontology program except by the normal application process.
3. Kinesiology students completing a Minor in Gerontology may substitute KINESIOL 4SS3 for GERONTOL 2B03.
4. Students completing a Minor in Gerontology must contact the Department of Health, Aging and Society to request permission for their Fall/Winter Gerontology courses by May 31.

COURSE LIST

ANTHROP	3Z03, 3ZZ3
ECON	3D03, 3Q03, 3Z03
GEO	2HG3, 3HH3
GERONTOL	2E03, 2F03, 3H03, 3J03, 3K03, 3L03, 3M03, 3N03
HEALTHST	2AA3, 2C03, 2D03, 3AA3, 3CC3, 3D03, 3E03, 3H03, 3HH3, 3YY3, 4C03
HTH SCI	3B03
KINESIOL	3F03, 3SS3
PHILOS	2D03, 3C03
RELIG ST	2C03, 2M03, 2N03, 2WW3
SOC WORK	3C03, 4L03, 4R03
SOCIOL	3CC3, 3G03, 3HH3

REQUIREMENTS

24 units total

3 units GERONTOL 1A03

9 units GERONTOL 2B03, 2D03, 3D03 (See Note 3 above.)

12 units from Course List

Honours Health Studies**{2273}****ADMISSION**

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a minimum Cumulative Average of 6.0 including a grade of at least B- in 3 units from HEALTHST 1A03, 1E03, 1S03.

NOTES

1. Application for admission must be made by April 1. See Admission to Level II Programs in Academic Regulations in this section of the Calendar.
2. Courses other than those listed below in the Course List may be substituted with the prior permission of the Chair. Students wishing to apply for substitutions must contact the Administrative Coordinator of the Department of Health, Aging and Society.
3. Students who previously completed SCIENCE 2G03 may use these units to fulfill Course List requirements.
4. Students who entered the program prior to September 2004 may substitute HEALTHST 3A03 for 3AA3.
5. Students who entered the program prior to September 2004 may replace HEALTHST 3G03 with three units of Level II, III or IV Health Studies.
6. Students who completed GERONTOL 2B03 or 3Q03, prior to September 2005, may use these units to fulfill Course List requirements.

COURSE LIST

(Students are responsible for ensuring that course prerequisites are fulfilled.)

ANTHROP	2AN3, 2U03, 3C03, 3Q03, 3Y03, 3Z03, 3ZZ3
ECON	3Z03
GEO	3HH3
GERONTOL	2F03, 3H03, 3K03, 3L03, 3N03
HTH SCI	2G03, 2J03

HISTORY	3V03
INDIG ST	3H03, 3HH3
KINESIOL	3A03, 3SS3
PHILOS	2D03, 3C03
PSYCH	3B03, 3N03, 3NN3
RELIG ST	2C03, 2M03, 2N03, 2WWW3
SOC WORK	3C03, 3O03
SOCIOL	3G03, 3HH3
WOMEN ST	2HH3

REQUIREMENTS

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

- 30 units from the Level I program completed prior to admission to the program. (See *Admission* above.)
- 3 units from HEALTHST 2A03, 2AA3
- 3 units HEALTHST 3AA3 (See *Note 4* above.)
- 18 units from Levels II, III, IV Health Studies or GERONTOL 4I03, of which at least three units must be at Level IV
- 3 units HEALTHST 4A03
- 3 units from HEALTHST 4C03, 4D03
- 12 units from Course List (See *Notes 3 and 6* above.)
- 3 units HEALTHST 2B03
- 3 units HEALTHST 3G03 (See *Note 5* above.)
- 3 units from SOC SCI 2J03 or STATS 1CC3* or an equivalent statistics course
- 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.

*If requirement completed in Level I, these units will be taken as electives.

Combined Honours in Health Studies and Another Subject

ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a minimum Cumulative Average of 6.0 including a grade of at least B- in 3 units from HEALTHST 1A03, 1E03, 1S03, and satisfaction of admission requirements for the Honours B.A. program in the other subject.

NOTES

1. Application for admission must be made by **April 1**. See *Admission to Level II Programs in Academic Regulations* in this section of the Calendar.
2. While students are strongly encouraged to complete HEALTHST 2B03 to satisfy the Research Methods requirement of the degree those who choose to complete the Research Methods course as required by their other component, will replace HEALTHST 2B03 with three units of Levels II, III or IV Health Studies.
3. Students who previously completed SCIENCE 2G03 may use these units to fulfill Course List requirements.
4. Students who entered the program prior to September 2004 may substitute HEALTHST 3A03 for 3AA3.
5. Students who entered the program prior to September 2004 or students who have permission of the Chair to complete the Research Methods as required by their other component will replace HEALTHST 3G03 with three units of Level II, III or IV Health Studies.
6. Students who completed GERONTOL 2B03 or 3Q03, prior to September 2005, may use these units to fulfill Course List requirements.

COURSE LIST

(Students are responsible for ensuring that course prerequisites are fulfilled.)

ANTHROP	2AN3, 2FF3, 2U03, 3C03, 3Q03, 3Y03, 3Z03, 3ZZ3, 4S03
ECON	3Z03
GEO	3HH3
GERONTOL	2F03, 3H03, 3K03, 3L03, 3N03
HTH SCI	2G03, 2J03
HISTORY	3V03
INDIG ST	3H03, 3HH3
KINESIOL	3A03, 3SS3
PHILOS	2D03, 3C03
PSYCH	3B03, 3N03, 3NN3
RELIG ST	2C03, 2M03, 2N03, 2WWW3
SOC WORK	3C03, 3O03
SOCIOL	3G03, 3HH3, 4G03
WOMEN ST	2HH3

REQUIREMENTS

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

- 30 units from the Level I program completed prior to admission to the program. (See *Admission* above.)
- 3 units from HEALTHST 2A03, 2AA3
- 3 units HEALTHST 3AA3 (See *Note 4* above.)
- 9 units Levels II, III or IV Health Studies or GERONTOL 4I03, of which at least three units must be at Level IV
- 3 units HEALTHST 4A03
- 3 units from HEALTHST 4C03, 4D03
- 9 units from Course List (See *Notes 3 and 6* above.)
- 36 units courses specified for the other subject
- 3 units HEALTHST 2B03 or an equivalent research methods course if required by the other subject (See *Note 2* above.)
- 3 units HEALTHST 3G03 (See *Note 5* above.)
- 3-6 units from SOC SCI 2J03 or STATS 1CC3* or an equivalent statistics course as prescribed by other Social Sciences programs
- 12-15 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

*If requirement completed in Level I, these units will be taken as electives.

B.A. in Health Studies**{1273}****ADMISSION**

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a minimum Cumulative Average of 3.5 including a grade of at least C- in 3 units from HEALTHST 1A03, 1E03 or 1S03.

NOTES

1. Application for admission must be made by **April 1**. See *Admission to Level II Programs in Academic Regulations* in this section of the Calendar.
2. Courses other than those listed below in Course List may be substituted with the prior permission of the Chair. Students wishing to apply for substitutions must contact the Administrative Coordinator of the Department of Health, Aging and Society.
3. Students who previously completed SCIENCE 2G03 may use these units toward Course List.
4. Students who entered the program prior to September 2004 may substitute HEALTHST 3A03 for 3AA3.
5. Students who completed GERONTOL 2B03 or 3Q03, prior to September 2005, may use these units to fulfill Course List requirements.

COURSE LIST

(Students are responsible for ensuring that course prerequisites are fulfilled.)

ANTHROP	2AN3, 2U03, 3C03, 3Q03, 3Y03, 3Z03, 3ZZ3
ECON	3Z03
GEO	3HH3
GERONTOL	2F03, 3H03, 3K03, 3L03, 3N03
HTH SCI	2G03, 2J03
HISTORY	3V03
INDIG ST	3H03, 3HH3
KINESIOL	3A03, 3SS3
PHILOS	2D03, 3C03
PSYCH	3B03, 3N03, 3NN3
RELIG ST	2C03, 2M03, 2N03, 2WWW3
SOC WORK	3C03, 3O03
SOCIOL	3G03, 3HH3
WOMEN ST	2HH3

REQUIREMENTS

90 units total (Levels I to III), of which 42 units may be Level I

- 30 units from the level I program completed prior to admission to the program (See *Admission* above.)
- 3 units from HEALTHST 2A03, 2AA3
- 3 units HEALTHST 3AA3 (See *Note 4* above.)
- 3 units HEALTHST 2B03
- 9 units Levels II or III Health Studies, of which at least three units must be at Level III
- 6 units from Course List (See *Notes 3 and 5* above.)
- 36 units Electives

Minor in Health Studies**NOTES**

1. Students are responsible for ensuring that course prerequisites are fulfilled.
2. Students who completed SCIENCE 2G03 before September 2003 may use these units toward the Minor requirements.
3. KINESIOL 2G03 and 3A03 may be used to satisfy Health Studies requirements for Kinesiology students pursuing a Minor in Health Studies.
4. Students who completed GERONTOL 2B03, 3Q03 or HEALTHST 3A03 prior to September 2005, may use these units to fulfill Course List requirements.

COURSE LIST

ANTHROP	2AN3, 2FF3, 2U03, 3C03, 3Q03, 3Y03, 3Z03, 3ZZ3, 4S03
ECON	2CC3, 3Z03
GEO	3HH3
GERONTOL	2F03, 3H03, 3K03, 3L03, 3N03, 4I03
HEALTHST	2C03, 2D03, 2E03, 2H03, 3C03, 3D03, 3E03, 3F03, 3H03, 3M03, 3Y03
HTH SCI	2G03, 2I03, 2J03, 3Y03
HISTORY	3V03, 3Y03
INDIG ST	3H03, 3HH3
KINESIOL	3SS3
LABR ST	3D03
PHILOS	2D03, 3C03
POL SCI	3M03
PSYCH	3B03, 3N03, 3NN3
RELIG ST	2C03, 2M03, 2N03, 2WW3
SOC WORK	3C03, 3O03
SOCIOL	3G03, 3HH3, 4G03
WOMEN ST	2H03, 2HH3

REQUIREMENTS

24 units total

3 units from Level I Health Studies

21 units from the Course List

COMBINED B.A. IN INDIGENOUS STUDIES AND ANOTHER SUBJECT

See the *Combined B.A. Indigenous Studies and Another Subject* section of this Calendar.

DEPARTMENT OF KINESIOLOGYWEB ADDRESS: <http://www.mcmaster.ca/kinesiology/>**Honours Kinesiology (B.Sc.)**

(See B.Sc. program in Kinesiology, Faculty of Science, Department of Kinesiology)

Honours B.Sc. Kinesiology

(See B.Sc. Kinesiology program, Faculty of Science, Department of Kinesiology)

Kinesiology I {0308}**REQUIREMENTS FOR STUDENTS WHO ENTERED KINESIOLOGY I IN 2007-2008****ENROLMENT IN THIS PROGRAM IS LIMITED.****NOTES**

1. Application is made to the Kinesiology I Program.
2. The Department of Kinesiology offers two Honours program options beyond Level I. The Honours Bachelor of Kinesiology (Hons.B.Kin.) and the Honours Bachelor of Science (Hons.B.Sc.). Beginning, September 2008, the Department of Kinesiology intends to replace the existing Honours Bachelor of Science (Hons.B.Sc.) degree available to Kinesiology students with an Honours Bachelor of Science Kinesiology degree.
3. **Effective 2007-2008**, students who intend to register in the Honours B.Sc. program must successfully complete one of MATH 1A03, 1B03 or 1D03 by the end of Level II. STATS 1CC3 or KINESIOL 3C03 and six units of electives, selected from the Faculty of Science must be completed by the end of Level IV. (See *Department of Kinesiology in the Faculty of Science* section of this Calendar.)

4. **Effective 2008-2009**, students who intend to register in the B.Sc. Kinesiology program must complete MATH 1A03 or 1LS3 by the end of Level II. Students without Grade 12 Calculus and Vectors U will be required to complete MATH 1F03 prior to completion of MATH 1A03 or 1LS3.
5. The Honours Bachelor of Kinesiology, the Honours Bachelor of Science, and the proposed Honours Bachelor of Science Kinesiology programs provide students the opportunity to complete course requirements for various professional degree programs. Students are strongly encouraged to seek advice in determining which program option is best suited for them.

REQUIREMENTS: 30 UNITS (EFFECTIVE 2007-2008)

18 units KINESIOL 1A03, 1AA3, 1C03, 1E03, 1F03, 1G03

12 units Electives

Honours Bachelor of Kinesiology {2303}**REQUIREMENTS FOR STUDENTS WHO ENTERED KINESIOLOGY I IN 2006-2007****ADMISSION**

Completion of Kinesiology I with a Cumulative Average of at least 6.0 including an average of at least 6.0 in KINESIOL 1A06, 1E03, 1H03.

NOTES

1. Students may register in a **maximum of 15 units** of Levels III or IV Kinesiology courses in Level III of their program.
2. Kinesiology courses **may not** be used toward the elective component of the degree.
3. Upon completion of Kinesiology I, students who have achieved an average of at least 6.0 in KINESIOL 1A06, 1E03, 1H03, and whose C.A. is between 5.5 and 5.9 may register in Level II Honours Kinesiology but will be placed on program probation for one reviewing period. A student may be on program probation only once. Upon completion of Kinesiology I, students who have achieved an average of at least 6.0 in KINESIOL 1A06, 1E03, 1H03, and whose C.A. is between 3.5 and 5.4 may register in Level II Kinesiology General and, with permission, take Level II Kinesiology required courses. At their next review, such students must achieve a C.A. of at least 6.0 to transfer to an Honours Kinesiology program. Upon completion of Kinesiology I, students who have not achieved an average of at least 6.0 in KINESIOL 1A06, 1E03, 1H03, and whose C.A. is between 3.5 and 5.4 may register in Level II Kinesiology General for one reviewing period. During that period a student may not take Level II Kinesiology courses but may upgrade or repeat Level I Kinesiology courses. At the end of that period, students who have achieved an average of at least 6.0 in KINESIOL 1A06, 1E03, 1H03, and have a C.A. of at least 6.0 may transfer to the Honours Kinesiology program. Students who fail to meet the minimum requirements for transfer to Honours Kinesiology must transfer to a non-Kinesiology program for which they qualify.

REQUIREMENTS

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

LEVEL I: 30 UNITS30 units Kinesiology I completed prior to admission to the program. (See *Admission* above.)**LEVEL II: 30 UNITS**

15 units KINESIOL 2A03, 2C06, 2G03, 2H03

3 units from SOC SCI 2J03, STATS 1CC3*

12 units Electives

LEVELS III AND IV: 60 UNITS30 units Levels 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.

Honours Bachelor of Kinesiology (B.Kin) {2303}**REQUIREMENTS FOR STUDENTS WHO ENTERED KINESIOLOGY I IN 2007-2008.****ADMISSION**

Completion of Kinesiology I with a Cumulative Average of at least 6.0 including an average of at least 6.0 in KINESIOL 1A03, 1AA3, 1C03, 1E03, 1F03, 1G03.

NOTE

Kinesiology courses **may not** be used toward the elective component of the degree.

REQUIREMENTS

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

LEVEL I: 30 UNITS

30 units from Kinesiology I completed prior to admission to the program. (See *Admission* above.)

LEVEL II: 30 UNITS (EFFECTIVE 2008-2009)

18 units KINESIOL 2A03, 2C03, 2CC3, 2E03 2F03, 2G03
12 units Electives

LEVELS III AND IV: 60 UNITS (EFFECTIVE 2009-2010)

36 units Levels III or IV Kinesiology of which at least nine units must be Level IV
24 units Electives (See *Note* above.)

Bachelor of Kinesiology Major **{3308}**

(Formerly Bachelor of Kinesiology)

Students who registered in this program prior to 2005 may see an Academic Advisor in the Office of the Associate Dean for program requirements.

LABOUR STUDIES

WEB ADDRESS: <http://socserv.mcmaster.ca/labourstudies/>

Honours Labour Studies **{2640}**

ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units from LABR ST 1A03 and one of LABR ST 1C03 or 1Z03.

NOTES

1. Application for admission must be made by **April 1**. See *Admission to Level II Programs* in *Academic Regulations* in this section of the Calendar.
2. Students are encouraged to consult the Labour Studies web site at: <http://socserv.mcmaster.ca/labourstudies/>.
3. Students may not transfer to another Labour Studies program except by the normal application process.
4. Students who complete a six unit Research Methods/Statistics course will reduce their elective component by three units.
5. Students who entered the program prior to September 2003, and who completed LABR ST/SOCIOL 2I06, will use this course to satisfy six units of Course List 1 and not Course List 2.
6. Students who have completed LABR ST 4D03 need not complete LABR ST 4C03 or 4E03.
7. Students are encouraged to complete LABR ST 3H03 before registering in LABR ST 4A06.
8. Students who have completed LABR ST 1Z03 may substitute three units Level II or III Labour Studies for LABR ST 2E03.
9. Students who completed ECON 2E03 or HISTORY 3N03 prior to September 2006 may use these as units towards Course List 2.

COURSE LIST 1

COMMERCE 2BA3, 4BC3, 4BD3
LABR ST 2B03, 2BB3, 2G03, 3A03, 3B03, 3C03, 3D03, 3E03, 3F03, 3G03, 3J03, 3W03

COURSE LIST 2

COMMERCE 3BC3
ECON 2C03, 2F03, 2K03, 2N03
GERONTOL 3J03
HISTORY 3W03, 3WW3
POL SCI 3D03, 3E03, 3EE3, 3F03
SOCIOL 2E06, 2I03, 2Q06, 2R03, 2RR3, 2V06, 3F06, 3LL3

REQUIREMENTS

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

- 30 units from the Level I program completed prior to admission to the program. (See *Admission* above.)
- 18 units LABR ST 2A03, 2C03, 2E03, 3H03, 4A06 (See *Note 8* above.)
- 18 units from Course List 1, where at least nine units must be selected from Levels III or IV courses (See *Note 5* above.)
- 3 units from LABR ST 4C03, 4E03 (See *Note 6* above.)

- 3-6 units from Course List 2 (See *Notes 5 and 9* above.)
- 3 units from SOC SCI 2J03 or STATS 1CC3* or an equivalent Research Methods/Statistics course as prescribed by the other Social Sciences Programs. (See *Note 4* above.)

42-45 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

*If requirement completed in Level I, these units will be taken as electives.

Combined Honours in Labour Studies and Another Subject

ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units from LABR ST 1A03 and one of LABR ST 1C03 or 1Z03. Satisfaction of admission requirements for the Honours B.A. program in the other subject.

NOTES

1. Subject to meeting admission requirements, students may combine two subjects and be graduated with a combined honours B.A. degree. These combinations are available within the Faculty, with programs in the Faculty of Humanities and with the Arts and Science Program.
2. Application for admission must be made by **April 1**. See *Admission to Level II Programs* in *Academic Regulations* in this section of the Calendar.
3. Students are encouraged to consult the Labour Studies web site at: <http://socserv.mcmaster.ca/labourstudies/>.
4. Students may not transfer to another Labour Studies program except by the normal application process.
5. Students who complete a six unit Research Methods/Statistics course will reduce their elective component by three units.
6. Students combining Labour Studies with a Humanities subject or with Religious Studies must complete LABR ST 4A06 and SOC SCI 2J03 or STATS 1CC3. Students in other Combined Honours Programs may complete the Honours Seminar requirement as specified by the other Department and replace LABR ST 4A06 with six units Level III Labour Studies courses.
7. Students who entered the program prior to September 2003, and who completed LABR ST/SOCIOL 2I06, will use this course to satisfy six units of Course List 1 and not Course List 2.
8. Students who have completed LABR ST 4D03 need not complete LABR ST 4C03 or 4E03.
9. Students are encouraged to complete LABR ST 3H03 before registering in 4A06.
10. Students who have completed LABR ST 1Z03 may substitute three units Level II or III Labour Studies for LABR ST 2E03.

COURSE LIST 1

COMMERCE 2BA3, 4BC3, 4BD3
LABR ST 2B03, 2BB3, 2G03, 3A03, 3B03, 3C03, 3D03, 3E03, 3F03, 3G03, 3J03, 3W03

REQUIREMENTS

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

- 30 units from the Level I program completed prior to admission to the program. (See *Admission* above.)
- 18 units LABR ST 2A03, 2C03, 2E03, 3H03, 4A06 (See *Notes 6 and 10* above.)
- 15 units from Course List 1, where at least nine units must be selected from Levels III or IV (See *Note 7* above.)
- 3 units from LABR ST 4C03, 4E03 (See *Note 8* above.)
- 36 units courses specified for the other subject
- 3 units from SOC SCI 2J03 or STATS 1CC3* or an equivalent Research Methods/Statistics course specified by the other subject. (See *Note 5* above.)
- 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 {1640}**ADMISSION**

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 3.5 including an average of at least 4.0 in six units from LABR ST 1A03 and one of LABR ST 1C03 or 1Z03.

NOTES

1. Application for admission must be made by April 1. See *Admission to Level II Programs in Academic Regulations* in this section of the Calendar.
2. Students are encouraged to consult the Labour Studies web site at: <http://socserv.mcmaster.ca/labourstudies>.
3. Students may not transfer to another Labour Studies program except by the normal application process.
4. Students who entered the program prior to September 2003, and who completed LABR ST/SOCIOL 2I06 may use this course to satisfy six units from the Course List.
5. Students who have completed LABR ST 1Z03 may substitute three units Level II or III Labour Studies for LABR ST 2E03.

COURSE LIST

COMMERCE 2BA3, 4BD3
LABR ST 2B03, 2BB3, 2G03, 3A03, 3B03, 3C03, 3D03, 3E03, 3F03, 3G03, 3J03, 3W03

REQUIREMENTS

90 units total (Levels I to III), of which 42 units may be Level I

- 30 units from the Level I program completed prior to admission to the program. (See *Admission* above.)
- 12 units LABR ST 2A03, 2C03, 2E03, COMMERCE 4BC3 (See Note 5 above.)
- 18 units from Course List, where at least nine units must be selected from Levels III or IV courses. (See Note 4 above.)
- 30 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

*If requirement completed in Level I, these units will be taken as electives.

Minor in Labour Studies**ENROLMENT IS LIMITED.**

Labour Studies will admit a maximum of 10 students to the Minor each year.

NOTES

1. Application for admission (forms available from Labour Studies Office), must be made to the Chair, Admissions Committee, by April 1.
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 site at: <http://socserv.mcmaster.ca/labourstudies>.
4. Students may not transfer from the Minor in Labour Studies to another Labour Studies program except by the normal application process.
5. Students who have completed LABR ST 2A06 may take nine units Levels II, III, IV Labour Studies instead of 12 units.

REQUIREMENTS

24 units total

- 6 units LABR ST 1A03 and 1C03 (or 1Z03)
- 6 units LABR ST 2A03, (See Note 5 above.) 2C03
- 12 units Levels II, III or IV Labour Studies (See Note 2 and 5 above.)

DEPARTMENT OF POLITICAL SCIENCE

WEB ADDRESS: <http://www.socsci.mcmaster.ca/polisci/>

Honours Arts & Science and Political Science (B.Arts.Sc.; See Arts & Science Program)**Honours Political Science {2450}****ADMISSION**

Completion of any Level I program with a Cumulative Average of at least 6.0 including a grade of at least B- in POL SCI 1G06.

NOTES

1. Students should be alerted to those Levels II and III courses that are required to qualify for a number of Level IV courses. Students who wish to enter courses but who lack the necessary prerequisites must obtain the permission of the instructor.
2. POL SCI 3N06 and 2O06 are required for students enrolled in Honours Political Science programs and they are recommended for students in the B.A. program.

REQUIREMENTS

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

- 30 units from the Level I program completed prior to admission to the program. (See *Admission* above.)
- 6 units POL SCI 2O06
- 24 units Levels 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
- 42 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies. (The maximum Political Science courses to be taken is 60 units.)

Combined Honours in Political Science and Another Subject**ADMISSION**

Completion of any Level I program with a Cumulative Average of at least 6.0 including a grade of at least B- in POL SCI 1G06. Satisfaction of the admission requirements for the Honours program in the other subject.

NOTES

1. Subject to meeting admission requirements, students may combine two subjects and be graduated with a combined honours B.A. degree. These combinations are available within the Faculty, with programs in the Faculty of Humanities and with the Arts and Science Program.
2. Students should be alerted to those Levels II and III courses that are required to qualify for a number of Level IV courses. Students who wish to enter courses but who lack the necessary prerequisites must obtain the permission of the instructor.
3. POL SCI 2O06 and 3N06 are required for students enrolled in Honours Political Science programs and they are recommended for students in the B.A. program.

REQUIREMENTS

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

- 30 units from the Level I program completed prior to admission to the program. (See *Admission* above.)
- 6 units POL SCI 2O06
- 9 units Level III Political Science
- 9 units Levels II, III, IV Political Science
- 6 units Level IV Political Science
- 36 units courses specified for the other subject
- 6 units POL SCI 3N06 or in combined programs within the Faculty of Social Sciences, the Research Methods/Statistics course specified for the other subject.
- 18 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or 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 program, with a Cumulative Average of at least 3.5 including a grade of at least C- in POL SCI 1G06.

NOTES

1. Students should be alerted to those Levels II and III courses that are required to qualify for a number of Level IV courses. Students who wish to enter courses but who lack the necessary prerequisites must obtain the permission of the instructor.
2. POL SCI 2O06 and 3N06 are required for students enrolled in Honours Political Science programs and they are recommended for students in B.A. programs.

REQUIREMENTS

90 units total (Levels I to III), of which 42 units may be Level I
 30 units from the Level I program completed prior to admission to the program. (See *Admission* above.)
 12 units Level II Political Science
 12 units Level III Political Science
 36 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies. (The maximum Political Science courses to be taken is 36 units.)

Minor in Political Science**NOTE**

Level IV courses have limited enrolment with preference given to Honours Political Science students. Students must apply by ballot through the Department.

REQUIREMENTS

24 units total

6 units Level I Political Science
 18 units Levels II, III, IV Political Science of which up to 12 units may be Level II

DEPARTMENT OF PSYCHOLOGY, NEUROSCIENCE AND BEHAVIOUR

WEB ADDRESS: <http://www.mcmaster.ca/psychology>

Honours Arts & Science and Psychology

(B.Arts.Sc.; See Arts & Science Program)

Honours Biology and Psychology (B.Sc.)

(See B.Sc. programs in Biology, Faculty of Science, Department of Biology)

Honours Psychology (B.Sc.)

(See B.Sc. programs in Psychology, Faculty of Science, Department of Psychology, Neuroscience and Behaviour)

Honours Linguistic Cognitive Science (B.A.)

(See Faculty of Humanities, Department of Linguistics and Languages)

Honours Psychology (B.A.)

{2460}

ADMISSION

2007-2008 ONLY: Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0; a grade of at least B- in each of PSYCH 1A03 and 1AA3 (or PSYCH 1A06); and credit in MATH 1A03 or a grade of at least C- in MATH 1M03.

EFFECTIVE 2008-2009: Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0; a grade of at least B- in each of PSYCH 1A03 and 1AA3 (or 1A06); credit in one of BIOLOGY 1A03, 1AA3 or 1K03; and credit in MATH 1A03 or a grade of at least C- in MATH 1M03.

NOTES

1. Application for admission must be made by April 1. See *Admission to Level II Programs* in *Academic Regulations* in this section of the Calendar.
2. Students who entered the program prior to September 2008 but after September 2002, must have successfully completed BIOLOGY 1A03, 1AA3 or 1K03 by the end of Level II.
3. Credit in MATH 1A03 or 1M03 with a grade of at least C- must be completed before entrance into Level II.
4. Students with credit in PSYCH 2RR3, do not need to complete PSYCH 2RA3 and 2RB3. Beginning September 2006, students with credit in STATS 1CC3 but not PSYCH 2RR3 must complete both PSYCH 2RA3 and 2RB3 for any Honours B.A. Psychology program.
5. PSYCH 2RA3 and 2RB3 must be completed before entrance into Level III of the program. Students wishing to have more mathematical statistics may replace PSYCH 2RA3 and 2RB3 with STATS 2D03 and 2MB3. In this case, students are advised to take MATH 1B03 or 1D03 in Level I and consult a departmental advisor.

6. Students considering applying to graduate school should complete a course with a strong research component such as PSYCH 3QQ3, 4QQ3, 4D06, 4D09.
7. Students who completed PSYCH 3QQ3 or 4QQ3 prior to September 2007, may use this credit toward the Level III lab requirement. Beginning September 2007, PSYCH 3QQ3 and 4QQ3 will no longer fulfill this requirement.
8. Students intending to complete a thesis (PSYCH 4D06, 4D09) are advised to complete the lab requirement prior to registering in a thesis. Beginning September 2008, completing a lab prior to registering in a thesis will become a requirement.
9. Students who previously completed NEURCOMP 3W03 (Neural Computation) may use these units as three units of Course List 1.
10. MATH 1B03 (Linear Algebra I) or 1D03 (Algebra & Geometry) is strongly recommended for students intending to pursue graduate work in Psychology. COMP SCI 1MA3 (Computer Based Problem Solving) or 1SA3 (Computing Fundamentals) is strongly recommended for students interested in Behavioural Neuroscience and Cognition and Perception, and for students intending to pursue graduate work in Psychology.
11. Students who entered the program prior to September 2002, may replace six units of courses chosen from the Course List 2 (Capstone Courses) with any six units of Levels III or IV Psychology.
12. The Department of Psychology, Neuroscience and Behaviour pre-registration ballot will be done in two phases. The first phase will include the thesis courses (PSYCH 4D06, 4D09) and the Individual Study courses (PSYCH 2QQ3, 3Q03, 3QQ3, 4Q03, 4QQ3). Students wishing to take these courses must complete and submit a ballot by mid February. Students will be informed of the outcome of the first phase by mid March. The second phase will include lab courses (PSYCH 3EE3, 3L03, 3LL3, 3MM3, 3S03, 3V03) and limited enrolment courses (PSYCH 3BN3, 4B03, 4BN3, 4C03, 4F03, 4J03, 4R03). Students wishing to take these courses must complete and submit a ballot by mid April. Specific dates will be announced during the fall term. Ballots can be obtained on the Department of Psychology, Neuroscience and Behaviour web site at: <http://www.mcmaster.ca/psychology>. Priority will be given to students in Honours Psychology programs.

COURSE LIST 1 (LAB COURSES)

PSYCH 3BL3, 3EE3, 3LL3, 3L03, 3MM3, 3S03, 3V03

COURSE LIST 2 (CAPSTONE COURSES)

PSYCH 3I06, 4BN3, 4B03, 4C03, 4D06, 4D09, 4F03, 4J03, 4Q03, 4QQ3, 4R03, 4Y03

COURSE LIST 3 (PSYCHOLOGY COURSE LIST)

BIOLOGY 4T03

HTH SCI 4BB3

KINESIOL 3E03, 4P03

All Levels III and IV Psychology courses (except PSYCH 3PP3, 3SS3)

REQUIREMENTS

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

LEVEL I: 30 UNITS

30 units from the Level I program completed prior to admission to the program. (See *Admission* above.)

REQUIREMENTS FOR STUDENTS WHO ENTER**LEVEL II IN 2007-2008****LEVEL II: 30 UNITS**

6 units PSYCH 2RA3, 2RB3 (See Notes 4 and 5 above.)

9 units PSYCH 2E03, 2H03, 2TT3

3 units PSYCH 2D03 or 2F03

3 units from BIOLOGY 1A03, 1AA3, 1K03 (See Note 2 above.)

9 units Electives

LEVEL III: 30 UNITS

12 units from Course List 3

3 units Course List 1 (See Notes 7 and 8 above.)

15 units Elective

LEVEL IV: 30 UNITS

15 units nine units from Course List 3 and six units from Course List 2; or six units from Course List 3 and PSYCH 4D09

15 units Electives

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REQUIREMENTS FOR STUDENTS WHO ENTERED

LEVEL II PRIOR TO 2007-2008

LEVEL II: 30 UNITS

- 6 units PSYCH 2RA3, 2RB3 (See Notes 4 and 5 above.)
9 units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3 (Students interested in completing a specialization should review admission requirements below.)
3 units* from BIOLOGY 1A03, 1AA3, 1K03
12 units Electives

*If requirement completed in Level I, these units will be taken as electives.

LEVEL III: 30 UNITS

- 12 units from Course List 3; or three additional units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3 and nine units from Course List 3
3 units from Course List 1 (See Notes 7 and 8 above.)
15 units Elective

LEVEL IV: 30 UNITS

- 15 units nine units from Course List 3 and six units from Course List 2; or six units from Course List 3 and PSYCH 4D09
15 units Electives

Honours Psychology Specializations

THE HONOURS SPECIALIZATION PROGRAMS ARE BEING PHASED OUT. REGISTRATION IN LEVEL III OF EACH OF THESE PROGRAMS WILL BE LAST AVAILABLE IN 2008-2009.

Upon satisfactory completion of Level II Honours Psychology, and subject to meeting the admission requirements, students may choose to register in one of the following four specializations. Students who choose not to specialize will remain registered in the Honours Psychology program.

Behavioural Neuroscience Specialization {2460874}

ADMISSION

Completion of Level II Honours Psychology, including PSYCH 2F03.

REQUIREMENTS

LEVELS III: 30 UNITS

- 9 units from PSYCH 2D03, 3A03, 3AA3, 3BN3, 3FA3, 3HH3, 3J03, 3M03, 3Y03
6 units from Course List 3; or three additional units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3 and three units from Course List 3
3 units from Course List 1. PSYCH 3EE3, 3L03, 3MM3 or 3V03 is recommended. (See Notes 7 and 8 above.)
12 units Electives

LEVEL IV: 30 UNITS

- 6 units from PSYCH 2D03, 3A03, 3AA3, 3BN3, 3FA3, 3HH3, 3J03, 3M03, 3Y03, 4BN3, 4F03, 4Y03, BIOLOGY 4T03
12 units six units from Course List 3 and six units from Course List 2
or
three units from Course List 3 and PSYCH 4D09
12 units Electives

Cognition and Perception Specialization {2460882}

ADMISSION

Completion of Level II Honours Psychology, including PSYCH 2E03, 2H03.

REQUIREMENTS

LEVEL III: 30 UNITS

- 12 units from PSYCH 3A03, 3AA3, 3BB3, 3BN3, 3FA3, 3HH3, 3II3, 3J03, 3U03, 3UU3, 3VV3
3 units from Course List 3; or three additional units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3
3 units from Course List 1. PSYCH 3EE3, 3LL3, 3MM3 or 3V03 is recommended. (See Notes 7 and 8 above.)
12 units Electives

LEVEL IV: 30 UNITS

- 6 units from PSYCH 3A03, 3AA3, 3BB3, 3BN3, 3FA3, 3HH3, 3II3, 3J03, 3U03, 3UU3, 3VV3, 4BN3, 4C03, 4Z03
12 units six units from Course List 3 and six units from Course List 2
or
three units from Course List 3 and PSYCH 4D09
12 units Electives

Developmental Specialization {2460878}

ADMISSION

Completion of Level II Honours Psychology.

REQUIREMENTS

LEVEL III: 30 UNITS

- 3 units PSYCH 3GG3
6 units from PSYCH 3HH3, 3II3, 3JJ3
6 units from Course List 3; or three additional units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3 and three units from Course List 3
3 units from Course List 1. PSYCH 3EE3, 3LL3 or 3V03 is recommended. (See Notes 7 and 8 above.)
12 units Electives

LEVEL IV: 30 UNITS

- 6 units from PSYCH 3HH3, 3II3, 3JJ3, (if not already taken) 3B03, 3C03, 3Z03, 3ZZ3, 4C03
12 units six units from Course List 3 and six units from Course List 2
or
three units from Course List 3 and PSYCH 4D09
12 units Electives

Evolution and Social Behaviour Specialization {2460880}

ADMISSION

Completion of Level II Honours Psychology, including PSYCH 2TT3.

REQUIREMENTS

LEVEL III: 30 UNITS

- 9 units PSYCH 2C03, 3A03, 3F03, 3JJ3, 3M03, 3T03, 3Y03
6 units from Course List 3; or three additional units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3 and three units from Course List 3
3 units from Course List 1. PSYCH 3LL3 or 3S03 is recommended. (See Notes 7 and 8 above.)
12 units Electives

LEVEL IV: 30 UNITS

- 6 units PSYCH 2C03, 3A03, 3F03, 3JJ3, 3M03, 3T03, 3Y03, 4R03, 4Y03
12 units six units from Course List 3 and six units from Course List 2
or
three units from Course List 3 and PSYCH 4D09
12 units Electives

Combined Honours in Psychology and Another Subject (B.A.)

ADMISSION

2007-2008 ONLY: Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0; a grade of at least B- in each of PSYCH 1A03 and 1AA3 (or PSYCH 1A06); and credit in MATH 1A03 or a grade of at least C- in MATH 1M03.

EFFECTIVE 2008-2009: Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0; a grade of at least B- in each of PSYCH 1A03 and 1AA3 (or 1A06); credit in one of BIOLOGY 1A03, 1AA3 or 1K03; and credit in MATH 1A03 or a grade of at least C- in MATH 1M03.

NOTES

1. Application for admission must be made by **April 1**. See *Admission to Level II Programs in Academic Regulations* in this section of the Calendar.
2. Students who entered the program prior to September 2008 but after September 2002, must have successfully completed BIOLOGY 1A03, 1AA3 or 1K03 by the end of Level II.
3. Subject to meeting admission requirements, students may combine two subjects and be graduated with a combined honours B.A. degree. These combinations are available within the Faculty, with programs in the Faculty of Humanities and with Arts and Science Programs.
4. Credit in MATH 1A03 or 1M03 with a grade of at least C- must be completed before entrance into Level II.
5. Students with credit in PSYCH 2RR3, do not need to complete PSYCH 2RA3 and 2RB3. Beginning September 2006, students with credit in STATS 1CC3 but not PSYCH 2RR3 must complete both PSYCH 2RA3 and 2RB3 for any Honours B.A. Psychology program.
6. PSYCH 2RA3 and 2RB3 must be completed before entrance into Level III of the program. Students wishing to have more mathematical statistics may replace PSYCH 2RA3 and 2RB3 with STATS 2D03 and 2MB3. In this case, students are advised to take MATH 1B03 or 1D03 in Level I and consult with a departmental advisor.
7. Students considering applying to graduate school should complete a course with a strong research component such as PSYCH 3QQ3, 4QQ3, 4D06, 4D09.
8. Students who completed PSYCH 3QQ3 or 4QQ3 prior to September 2007, may use this credit toward the Level III lab requirement. Beginning September 2007, PSYCH 3QQ3 and 4QQ3 will no longer fulfill this requirement.
9. Students intending to complete a thesis (PSYCH 4D06, 4D09) are advised to complete the lab requirement prior to registering in a thesis. Beginning September 2008, completing a lab prior to registering in a thesis will become a requirement.
10. Students who previously completed NEURCOMP 3W03 (Neural Computation) may use these units as three units of Course List 1.
11. MATH 1B03 (Linear Algebra I) or 1D03 (Algebra and Geometry) is strongly recommended for students intending to pursue graduate work in Psychology. COMP SCI 1MA3 (Computer Based Problem Solving) or 1SA3 (Computing Fundamentals) is strongly recommended for students interested in Behavioural Neuroscience and Cognition and Perception, and for students intending to pursue graduate work in Psychology.
12. The Department of Psychology, Neuroscience and Behaviour. pre-registration ballot will be done in two phases. The first phase will include the thesis courses (PSYCH 4D06, 4D09), and the Individual Study courses (PSYCH 2QQ3, 3Q03, 3QQ3, 4Q03, 4QQ3). Students wishing to take these courses must complete and submit a ballot by **mid February**. Students will be informed of the outcome of the first phase by **mid March**. The second phase will include lab courses (PSYCH 3EE3, 3L03, 3LL3, 3MM3, 3S03, 3V03) and limited enrolment courses (PSYCH 3BN3, 4B03, 4BN3, 4C03, 4F03, 4J03, 4R03). Students wishing to take these courses must complete and submit a ballot by **mid April**. Specific dates will be announced during the fall term. Ballots can be obtained on The Department of Psychology, Neuroscience and Behaviour web site at: <http://www.mcmaster.ca/psychology>. Priority will be given to students in Honours Psychology programs.

COURSE LIST 1 (LAB COURSES)

PSYCH 3BL3, 3EE3, 3L03, 3LL3, 3MM3, 3S03, 3V03

COURSE LIST 2 (PSYCHOLOGY COURSE LIST)

BIOLOGY 4T03
HTH SCI 4BB3
KINESIOL 3E03, 4P03

All Levels III and IV Psychology courses (except PSYCH 3PP3, 3SS3)

REQUIREMENTS

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

REQUIREMENTS FOR STUDENTS WHO ENTER

LEVEL II IN 2007-2008

LEVEL II: 30 UNITS

- 6 units PSYCH 2RA3, 2RB3 (See Notes 5 and 6 above.)
- 3 units PSYCH 2D03 or 2F03
- 3 units PSYCH 2E03, 2H03, 2TT3
- 12 units courses as specified for the other subject
- 3 units from BIOLOGY 1A03, 1AA3, 1K03 (See Note 2 above.)
- 3 units Electives (See Note 2 above.)

LEVEL III: 30 UNITS

- 3 units Course List I (See Notes 8 and 9 above.)
- 3 units from PSYCH 2E03, 2H03, 2TT3
- 6 units from Course List 2
- 12 units courses as specified for the other subject
- 6 units Electives

LEVEL IV: 30 UNITS

- 12 units from Course List 2
- 12 units courses as specified for the other subject
- 6 units Electives

REQUIREMENTS FOR STUDENTS WHO ENTERED

LEVEL II PRIOR TO 2007-2008

LEVEL II: 30 UNITS

- 6 units PSYCH 2RA3, 2RB3 (See Notes 5 and 6 above.)
- 6 units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3
- 3 units* from BIOLOGY 1A03, 1AA3, 1K03
- 12 units courses as specified for the other subject
- 3 units Electives

*If requirement completed in Level I, these units will be taken as electives.

LEVEL III: 30 UNITS

- 3 units from Course List 1 (See Notes 8 and 9 above.)
- 9 units from Course List 2, or three additional units from 2D03, 2E03, 2F03, 2H03, 2TT3 and six units from Course List 2
- 12 units courses as specified for the other subject
- 6 units Electives

LEVEL IV: 30 UNITS

- 12 units Course List 2
- 12 units courses as specified for the other subject
- 6 units Electives

B.A. in Psychology

{1460}

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 3.5 and an average of at least 4.0 in PSYCH 1A03 and 1AA3 or a grade of at least C- in PSYCH 1A06.

NOTES

1. One of MATH 1A03, 1K03 or 1M03 must be completed by the end of Level II. Completion in Level I is strongly recommended.
2. One of STATS 1A03, 1CC3, or SOC SCI 2J03 must be completed by the end of Level II.
3. One of BIOLOGY 1A03, 1AA3 or 1K03 serves as the prerequisite for some Level II Psychology courses. Students are strongly encouraged to check requisites carefully.
4. Students wishing to take PSYCH 3Q03 and 3QQ3 must complete and submit a pre-registration ballot by **mid February**. Students will be informed of the outcome by **mid March**. Specific dates will be announced during the fall term. Ballots can be obtained on the Department of Psychology, Neuroscience and Behaviour web site at: <http://www.mcmaster.ca/psychology>. Priority will be given to students in Honours Psychology programs.

COURSE LIST 1 (PSYCHOLOGY COURSE LIST)

PSYCH 2AA3, 2B03, 2C03, 2I03, 2S03, 3BB3, 3C03, 3CC3, 3K03, 3N03, 3PP3, 3Q03, 3QQ3, 3SS3, 3U03, 3UU3, 3VV3

REQUIREMENTS

90 units total (Levels I to III), of which 42 units may be Level I

REQUIREMENTS FOR STUDENTS WHO ENTER

LEVEL II IN 2007-2008

LEVEL II: 30 UNITS

- 3 units from STATS 1A03, 1CC3*, SOC SCI 2J03 (See Note 2 above.)
- 9 units Level II Psychology where at least six units must be from PSYCH 2AA3, 2B03, 2C03, 2I03, 2S03
- 3 units* from MATH 1A03, 1K03 or 1M03 (See Note 1 above.)
- 15 units Electives, excluding Psychology (See Note 3 above.)

*If requirement completed in Level I, these units will be taken as non-psychology electives.

LEVEL III: 30 UNITS

- 12 units from Course List I, of which at least six units must be from Level III
- 18 units Electives, excluding Psychology

**REQUIREMENTS FOR STUDENTS WHO ENTERED
LEVEL II PRIOR TO 2007-2008****LEVEL II: 30 UNITS**

- 3 units from STATS 1A03, 1CC3*, SOC SCI 2J03 (See Note 2 above.)
- 9 units Level II Psychology where up to six units may be from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3
- 3 units* from MATH 1A03, 1K03 or 1M03 (See Note 1 above.)
- 6 units Humanities or Science, excluding Psychology
- 6 units Electives, excluding Psychology
- 3 units Electives

*If requirement completed in Level I, these units will taken as electives.

LEVEL III: 30 UNITS

- 12 units Level II or III Psychology, including at least nine units from Level III Psychology
- 6 units Humanities or Science, excluding Psychology
- 6 units Electives, excluding Psychology
- 6 units Electives

Minor in Psychology**NOTES**

- As all courses have enrolment capacities, the Faculty cannot guarantee registration in courses, even when prerequisites have been met. Therefore, completion of the Minor in Psychology may not be possible.
- When choosing Level II Psychology courses, students should consider the prerequisites for Level III courses.

REQUIREMENTS**24 units total**

- 6 units PSYCH 1A03 and 1AA3 or 1A06
- 12 units Levels II or III Psychology
- 6 units Level III Psychology

DEPARTMENT OF RELIGIOUS STUDIES

WEB ADDRESS: www.socsci.mcmaster.ca/relstud/

Honours Arts & Science and Religious Studies

(B.Arts.Sc.; See Arts & Science Program)

FIELDS OF STUDY

The Department offers courses in four fields of study. Students are encouraged to specialize in any one of these fields. Levels II, III and IV courses are allocated to the fields as follows:

I. ASIAN RELIGIONS

RELIG ST 2E03, 2F03, 2I03, 2K03, 2L03, 2P06, 2TT3, 3AA3, 3E03, 3L03, 3P03, 3RR3, 3S03, 3U03, 3UU3, 3V03, 4H03

SANSKRIT 3A06, 4B06

II. BIBLICAL STUDIES

RELIG ST 2B03, 2DD3, 2EE3, 2GG3, 2HH3, 2VV3, 2YY3, 2Z03, 3DD3, 3GG3, 3J03, 3K03, 3M03, 3N03, 3R03, 3T03, 4I03

HEBREW 2A03, 2B03, 3A03, 3B03

III. WESTERN RELIGIOUS THOUGHT

RELIG ST 2C03, 2EA3, 2EB3, 2FF3, 2II3, 2JJ3, 2KK3, 2MM3, 2Q03, 2U03, 2V03, 2ZZ3, 3A03, 3B03, 3CC3, 3D03, 3GG3, 3KK3, 3LL3, 3MM3, 3NN3, 3W03, 3X03, 3Z03, 3ZZ3, 4N03

IV. CONTEMPORARY AND COMPARATIVE RELIGIONS

RELIG ST 2BB3, 2H03, 2M03, 2N03, 2QQ3, 2SS3, 2TT3, 2W03, 2WW3, 3EE3, 4P03

NOTE

Students wishing to specialize in Asian Religions should consider beginning language training in Sanskrit or Japanese or both early in their program (see the calendar offerings listed under these headings in the *Course Listings* section of this Calendar). Students wishing to specialize in Biblical Studies should consider work in Greek (see offerings under *Classics, Greek* in the *Course Listings* section of this Calendar) or Hebrew or both.

Honours Religious Studies**{2475}****ADMISSION**

Completion of any Level I program with a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units of Religious Studies courses, preferably including one Level I Religious Studies course.

NOTES

- All honours students are encouraged to consult a departmental undergraduate advisor in the selection of their Levels III and IV courses.
- Part-time students should note that RELIG ST 3F03 is regularly offered in the evening. Other courses required for completion of the degree are offered in the evening whenever possible. Students who anticipate difficulty in fulfilling program requirements should consult a departmental undergraduate advisor as early as possible in their program.
- With the written approval of a departmental undergraduate advisor, courses from other departments may be substituted for Religious Studies.
- Students who entered the program prior to September 2004 may use RELIG ST 2EA3, 2EB3, 2Q03 or 2V03 toward the Contemporary and Comparative Fields of Study.
- RELIG ST 4R06 is strongly recommended for students considering graduate work in Religious Studies.
- Since not all Level IV seminars are offered each year, students in the Honours program are encouraged to take at least three units Level IV seminar in Level III.

REQUIREMENTS

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

- 30 units from the Level I program completed prior to admission to the program. (See *Admission* above.)
- 6 units from Asian Religions
- 3 units from Biblical Studies
- 3 units from Western Religious Thought
- 3 units from Contemporary and Comparative Religions (See Note 4 above.)
- 3 units RELIG ST 3F03
- 21 units Levels II, III Religious Studies of which at least six units must be from Level III. Level III courses which have been taken to satisfy the above fields of study requirements may be subtracted from these six units of Level III. (See *Notes 5 and 6* above.)
- 9 units Level IV Religious Studies (See *Notes 5 and 6* above.)
- 6 units* from Linguistics, a language other than English or Statistics
- 36-39 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities.

*If requirement completed in Level I, these units will be taken as electives.

Combined Honours in**Religious Studies and Another Subject****ADMISSION**

Completion of any Level I program with a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units of Religious Studies courses, preferably including one Level I Religious Studies course. Satisfaction of the admission requirements for the honours program in the other subject.

NOTES

- Subject to meeting admission requirements, students may combine two subjects and be graduated with a combined honours B.A. degree. These combinations are available within the Faculty, with programs in the Faculty of Humanities and with the Arts and Science Program.
- All honours students are encouraged to consult a departmental undergraduate advisor in the selection of their Levels III and IV courses.
- Part-time students should note that RELIG ST 3F03 is regularly offered in the evening. Other courses required for completion of the degree are offered in the evening whenever possible. Students who anticipate difficulty in fulfilling program requirements should consult a departmental undergraduate advisor as early as possible in their program.

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 who entered the program prior to September 2004 may use RELIG ST 2EA3, 2EB3, 2Q03 or 2V03 toward the Contemporary and Comparative Fields of Study.
7. RELIG ST 4R06 is strongly recommended for students considering graduate work in Religious Studies.
8. Since not all Level IV seminars are offered each year, students in the Honours program are encouraged to take at least three units Level IV seminar in Level III.

REQUIREMENTS

- 120 units total (Levels I to IV), of which 48 units may be Level I**
- 30 units** from the Level I program completed prior to admission to the program. (See *Admission* above.)
- 3 units** from Asian Religions
- 6 units** three units each from two of Biblical Studies, Western Religious Thought and Contemporary and Comparative Religions (See *Note 6* above.)
- 3 units** RELIG ST 3F03
- 18 units** Levels II, III 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.
- 6 units** Level IV Religious Studies
- 36 units** courses specified for the other subject
- 6 units*** from Linguistics, a language other than English, Statistics or in combined programs within the Faculty of Social Sciences, the Research Methods/Statistics course specified for the other subject. (See *Note 5* above.)
- 12 units** Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities. Students combining Religious Studies with Arts&Science, or with a Humanities subject are exempt from this requirement.

*If requirement completed in Level I, these units will be taken as electives.

B.A. in Religious Studies**{1475}****ADMISSION**

Completion of any Level I program with a Cumulative Average of at least 3.5 and an average of at least 4.0 in six units of Religious Studies courses, preferably including one Level I Religious Studies course.

NOTES

1. All students are encouraged to consult a departmental undergraduate advisor at least once each year.
2. Part-time students should note that RELIG ST 3F03 is regularly offered in the evening. Other courses required for completion of the degree are offered in the evening whenever possible. Students who anticipate difficulty in fulfilling program requirements should consult a departmental undergraduate advisor as early as possible in their program.
3. With the written approval of a departmental undergraduate advisor, courses from other departments may be substituted for Religious Studies.
4. Students who entered the program prior to September 2004 may use RELIG ST 2EA3, 2EB3, 2Q03 or 2V03 toward the Contemporary and Comparative requirement Fields of Study.

REQUIREMENTS

- 90 units total (Levels I to III), of which 42 units may be Level I**
- 30 units** from the Level I program completed prior to admission to the program. (See *Admission* above.)
- 3 units** from Asian Religions
- 6 units** three units each from two of Biblical Studies, Western Religious Thought and Contemporary and Comparative Religions (See *Note 4* above.)
- 3 units** RELIG ST 3F03
- 12 units** Levels II, III or IV Religious Studies of which at least six units must be Level III. Level III courses which have been taken to satisfy the above fields of study requirements may be subtracted from these six units of Level III.
- 36 units** Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities. (The maximum Religious Studies courses to be taken is 48 units.)

Minor in Religious Studies**REQUIREMENTS****24 units total**

24 units Religious Studies courses with no more than six units from Level I

SCHOOL OF SOCIAL WORK

WEB ADDRESS: <http://www.socsci.mcmaster.ca/socwork/>

**Combined Bachelor of Arts/
Bachelor of Social Work (B.A./B.S.W.)****ADMISSION**

Enrolment in this program is limited. Eligibility is dependent upon completion of any Level I program (a minimum of 30 units), including six units from SOC WORK 1A06 or SOCIOL 1A06 and six additional units of introductory level courses from the Course List (see below), normally with a minimum average of 6.0 on the most recent 30 units of university-level courses completed (five full credits) and evidence of personal suitability which may be evaluated by one or a combination of written statements, tests or interviews.

COURSE LIST

ANTHROP	1A03, 1B03, 1Z03
CMST	1A03, 1B03
ECON	1B03, 1BB3
GEO	1HS3, 1HU3
GERONTOL	1A03
HEALTHST	1A03
INDIG ST	1A03, 1AA3
INQUIRY	1SS3
LABR ST	1A03, 1C03, 1Z03
PEACE ST	1A03, 1B03
POL SCI	1G06
PSYCH	1A03, 1AA3
RELIG ST	1B06, 1D06, 1E03, 1I03
SOC WORK	1A06
SOCIOL	1A06
WOMEN ST	1A03, 1AA3 (or 1A06)

ADMISSION NOTES

1. Students who have successfully completed the two-year College of Applied Arts and Technology Social Services Diploma with a minimum Grade Point Average of 3.0 on a 4.0 scale (75%) are considered to have completed the equivalent of SOC WORK 1A06 and, therefore, are required to complete six additional units of introductory level courses from the Course List. (See *Admission* above.)
2. An applicant must complete Level I (a minimum of 30 units) by April of the year in which application is made.
3. In choosing Level I courses, the student should take care to include those courses that will allow entry to the B.A. program. Students should consult the relevant sections of the Calendar and/or the Office of the Associate Dean.
4. Students who intend to apply for the combined B.A. and B.S.W. program must follow the application instructions as found on the School of Social Work web site: http://www.socsci.mcmaster.ca/socwork/ugrdprog/admissions_app_instructions.cfm. Students who are unable to access this web site must consult the School of Social Work prior to the application deadline.
5. All applications for admission to the School of Social Work are considered annually and must be made **directly to the School well before March 1** for the Fall/Winter term. Aboriginal students (includes First Nations and Métis) may select an alternate application process. Those who wish to do so should consult the School of Social Work for details. Applicants transferring from other universities (see *Two-Tier Applications* below) **must also apply** through the Ontario Universities' Application Centre (OUAC) and must complete Introductory Sociology or Social Work and six additional units from the Course List. (See *Admission* above.)

6. TWO-TIER APPLICATIONS

If you are transferring from a university other than McMaster, or a college, you must complete two application forms as follows:

a) General Application (December 1)

If you wish to study *full-time*, complete the OUAC 105D on-line application at <http://compass.ouac.on.ca> showing *both* your interest in the B.A./B.S.W. program, and the subject you wish to take for the B.A. component.

If you wish to study *part-time*, complete a *Part-time Degree Studies* application online at <http://registrar.mcmaster.ca/EXTERNAL/chs-PARTT.HTM>

To allow adequate time for the processing of the General Application, applicants are advised to submit their applications **by December 1**.

b) Supplementary Application (March 1)

Students must follow the application instructions as found on the School of Social Work web site: http://www.socsci.mcmaster.ca/socwork/ugrdprog/admissions_app_instructions.cfm. Students who are unable to access this web site must contact the School of Social Work prior to **March 1**. This form is used to decide when applicants are able to write an admissions test, which is scheduled for two dates in March of each year, both on site and at alternative testing centres outside Hamilton.

Adequate time is needed to make these arrangements and to complete the admissions process. Therefore, it is **impossible** to consider applicants whose Supplementary Application arrives after the March 1 deadline. Questions or concerns may be directed to the School of Social Work.

7. Students admitted to the combined program who have completed B.A. work beyond Level I normally will require three years after admission to complete the program.

PROGRAM NOTES

1. **Course Groupings:** There are two groups of courses in the Social Work program:

- Foundation for Social Work includes core courses which are required.
- Social and Political Context of Social Work. Only Social and Political Context of Social Work courses may be taken for elective credit by undergraduates in Level III or above of a non-Social Work program. Social Work students must take 12 units from Social and Political Context of Social Work courses including SOC WORK 4J03 for elective credit. All Social and Political Context of Social Work courses are limited enrolment.

FOUNDATION FOR SOCIAL WORK

SOC WORK 2A06, 2B03, 2BB3, 2E03, 3A03, 3D06, 3DD6, 4D06, 4DD6, 4O03, 4X03

SOCIAL AND POLITICAL CONTEXT OF SOCIAL WORK

SOC WORK 3C03, 3H03, 3O03, 4B03, 4C03, 4F03, 4G03, 4I03, 4J03, 4L03, 4Q03, 4R03, 4U03, 4W03, 4Y03

2. **Progression Within Program:** Students must achieve a minimum grade of C+ in each of SOC WORK 2A06, 2B03, 2BB3, 2E03, 3A03, 3D06, 4D06, 4J03, 4O03, and 4X03, a Pass in SOC WORK 3DD6 and 4DD6 and a CA of at least 6.0.

3. Students must complete three units of Social Sciences Research Methods (e.g., SOCIOL 2Z03, or GERONTOL 2C03). A statistics course may not substitute for a research methods course.

4. **Graduation:** To qualify for the B.A./B.S.W. degrees, students must complete a total of at least 60 units of Social Work: 48 units towards the B.S.W. degree and 12 units Social and Political Context of Social Work courses including SOC WORK 4J03 as elective for the B.A. program.

The B.S.W. degree component will be granted only if the student has achieved a minimum grade of C+ in each of SOC WORK 2A06, 2B03, 2BB3, 2E03, 3A03, 3D06, 4D06, 4J03, 4O03, and 4X03, a Pass in SOC WORK 3DD6 and 4DD6 and a CA of at least 6.0.

5. Students are expected to assume the cost of travelling to and from field practice agencies.

REQUIREMENTS

138 units total (Levels I to IV), of which 48 units may be Level I

- 30 units from the Level I program completed prior to admission to the program. (See *Admission* above.)
- 15 units SOC WORK 2A06, 2B03, 2BB3, 2E03, (which must be completed prior to enrolling in SOC WORK 3D06 and 3DD6)
- 12 units SOC WORK 3D06, 3DD6 (which must be completed prior to enrolling in SOC WORK 4D06 and 4DD6)
- 12 units SOC WORK 4D06, 4DD6
- 9 units SOC WORK 3A03, 4O03, 4X03
- 12 units SOC WORK 4J03 and nine additional units selected from the Social and Political Context of Social Work courses (See Program Note 1 above.)
- 3 units Social Sciences Research Methods. (These units will be taken as electives for the B.A. (See Program Note 3 above.)
- 24 units courses specified for the B.A. (This may vary according to the B.A. program.)
- 21 units Electives. (Other requirements may be specified by the B.A. program.)

Bachelor of Social Work (B.S.W.)**{1620}****ADMISSION**

Enrolment in this program is limited. Eligibility is dependent upon completion of an undergraduate degree from a recognized university, including six units from SOCIOL 1A06 or SOC WORK 1A06 and six additional units of introductory level courses from the Course List (see below), normally with a minimum average of 6.0 on the most recent 30 units of university-level courses completed (five full credits) and evidence of personal suitability which may be evaluated by one or a combination of written statements, tests or interviews.

COURSE LIST

ANTHROP	1A03, 1B03, 1Z03
CMST	1A03, 1B03
ECON	1B03, 1BB3
GEO	1HS3, 1HU3
GERONTOL	1A03
HEALTHST	1A03
INDIG ST	1A03, 1AA3
INQUIRY	1SS3
LABR ST	1A03, 1C03, 1Z03
PEACE ST	1A03, 1B03
POL SCI	1G06
PSYCH	1A03, 1AA3
RELIG ST	1B06, 1D06, 1E03, 1I03
SOC WORK	1A06
SOCIOL	1A06
WOMEN ST	1A03, 1AA3 (or 1A06)

Students who have successfully completed the two-year College of Applied Arts and Technology Social Services Diploma with a minimum Grade Point Average of 3.0 on a 4.0 scale (75%) are considered to have completed the equivalent of SOC WORK 1A06 and, therefore, are required to complete six additional units from the Course List above. (See *Admission* above.)

An applicant is required to complete the prerequisite undergraduate degree work by April of the year in which application is made.

Aboriginal students (includes First Nations and Métis) may select an alternate application process. Those who wish to do so should consult the School of Social Work for details.

Enrolment in the B.S.W. program is limited. Students who intend to apply to the B.S.W. program must follow the application instructions as found on the School of Social Work web site: http://www.socsci.mcmaster.ca/socwork/ugrdprog/admissions_app_instructions.cfm. Students who are unable to access this web site must contact the School of Social Work well before the **March 1** deadline for the Fall/Winter term. Applicants **must also** apply to the University.

All applications for admission to the School of Social Work are considered annually and must be made **directly to the School well before March 1** for the Fall/Winter term.

TWO-TIER APPLICATIONS

Individuals interested in the B.S.W. program must complete two application forms as follows:

1. General Application (December 1)

If you wish to study *full-time*, you must complete the 105D online application form <http://compass.ouac.on.ca> or, if you are a McMaster graduate, obtain the *McMaster Returning Student Application* at <http://registrar.mcmaster.ca/EXTERNAL/APPLI/RETUR.HTM>.

If you wish to study *part-time*, complete the Part-Time Degree Studies Application at <http://www.mcmaster.ca/part-time/application-procedure/index.html> *McMaster University Part-time Application* form or, if you are a McMaster graduate, a *McMaster Returning Student Application* form at <http://registrar.mcmaster.ca/EXTERNAL/APPLI/RETUR.HTM>.

In order to allow adequate time for the processing of the General Application, applicants are advised to submit their applications by December 1.

2. Supplementary Application (March 1)

Students must follow the application instructions as found on the School of Social Work web site: http://www.socsci.mcmaster.ca/socwork/ugrdprog/admissions_app_instructions.cfm. Students who are unable to access this web site must contact the School of Social Work well before the March 1 deadline for the Fall/Winter term. This form is used to decide when applicants are able to write an admissions test, which is scheduled for two dates in March of each year, both on site and at alternative testing centres outside Hamilton.

Adequate time is needed to make these arrangements and to complete the admissions process. Therefore, it is **impossible** to consider applicants whose Supplementary Application arrives after the March 1 deadline. Questions or concerns may be directed to the School of Social Work.

NOTES**1. Course Groupings:** There are two groups of courses in the Social Work program:

- Foundation of Social Work includes core courses which are required;
- Social and Political Context of Social Work. Only Social and Political Context of Social Work courses may be taken for elective credit by undergraduates in Level III or above of a non-Social Work program. Social Work students must take 12 units from Social and Political Context of Social Work courses, including SOC WORK 4J03. All Social and Political Context of Social Work courses have limited enrolment.

FOUNDATION OF SOCIAL WORK

SOC WORK 2A06, 2B03, 2BB3, 2E03, 3A03, 3D06, 3DD6, 4D06, 4DD6, 4O03, 4X03

SOCIAL AND POLITICAL CONTEXT OF SOCIAL WORK

SOC WORK 3C03, 3H03, 3O03, 4B03, 4C03, 4F03, 4G03, 4I03, 4J03, 4L03, 4Q03, 4R03, 4U03, 4W03, 4Y03

2. Progression Within Program: Students must achieve a minimum grade of C+ in each of SOC WORK 2A06, 2B03, 2BB3, 2E03, 3A03, 3D06, 4D06, 4J03, 4O03 and 4X03, a Pass in SOC WORK 3DD6 and 4DD6, and a CA of at least 6.0.**3. Students must complete three units of Social Sciences research Methods (e.g. SOCIOL 2Z03 or GERONTOL 2C03).** If this requirement was completed prior to admission to the B.S.W. program, three additional units from the Social and Political Context of Social Work courses will be taken. A statistics course may not substitute for a research methods course.**4. Graduation:** To qualify for the B.S.W. students must complete a total of 60 units. The B.S.W. will be granted only if the student has achieved a grade of at least C+ in each of SOC WORK 2A06, 2B03, 2BB3, 2E03, 3A03, 3D06, 4D06, 4J03, 4O03 and 4X03, a Pass in SOC WORK 3DD6 and 4DD6, and a CA of at least 6.0.**5. Students are expected to assume the cost of travelling to and from field practice agencies.****REQUIREMENTS**

60 units total

- 15 units SOC WORK 2A06, 2B03, 2BB3, 2E03 (which must be completed prior to enrolling in SOC WORK 3D06 and 3DD6)
- 12 units SOC WORK 3D06, 3DD6 (which must be completed prior to enrolling in SOC WORK 4D06 and 4DD6)
- 12 units SOC WORK 4D06, 4DD6
- 9 units SOC WORK 3A03, 4O03, 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.socsci.mcmaster.ca/sociology/>

Honours Arts & Science and Sociology

(B.Arts.Sc.; See Arts & Science Program)

Honours Sociology (Specialist Option) {2522}

Students who registered in this program prior to 2001 may see an Academic Advisor in the Office of the Associate Dean for program requirements.

Honours Sociology {2520}**ADMISSION**

Completion of any Level I program with a Cumulative Average of at least 6.0 including a grade of at least B- in SOCIOL 1A06.

NOTES

1. Students may take a maximum of six units of Level IV independent research (SOCIOL 4M03, 4MM6 or 4N03).
2. Students should check both this Calendar and the Departmental web-site for prerequisites and course descriptions.
3. Students may take a maximum of nine combined units of SOCIOL 3GG3 and 4GG3.
4. Students who previously completed SOCIOL 3I03 may substitute this course with SOCIOL 3O03 or 3W03 to satisfy the Advanced Sociological Methods requirement.

REQUIREMENTS

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

- 30 units from the Level I program completed prior to admission to the program. (See Admission above.)
- 6 units SOCIOL 2S06
- 3 units from SOCIOL 3A03, 3P03, 3PP3
- 3 units from SOCIOL 3O03, 3W03 (See Note 4 above.)
- 12 units Level IV Sociology
- 18 units Levels II or III Sociology
- 3 units SOCIOL 2Z03 which must be completed by the end of 60 units
- 6 units SOCIOL 3H06
- 39 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

Combined Honours in**Sociology and Another Subject****ADMISSION**

Completion of any Level I program with a Cumulative Average of at least 6.0 including a grade of at least B- in SOCIOL 1A06. Satisfaction of admission requirements for the Honours program in the other B.A. subject.

NOTES

1. Subject to meeting admission requirements, students may combine two subjects and be graduated with a combined honours B.A. degree. These combinations are available within the Faculty, with programs in the Faculty of Humanities and with the Arts and Science Program.

2. Students who choose to complete a thesis (or independent research) in the other subject may replace six units of Level IV Sociology with Level III Sociology. This substitution must be approved in writing by a departmental undergraduate advisor.
3. Students may take a maximum of six units of Level IV independent research (SOCIOL 4M03, 4MM6 or 4N03).
4. Students should check both this Calendar and the Departmental web-site for prerequisites and course descriptions.
5. Students may take a maximum of nine combined units of SOCIOL 3GG3 and 4GG3.
6. Students who previously completed SOCIOL 3I03 may substitute this course with SOCIOL 3O03 or 3W03 to satisfy the Advanced Sociological Methods requirement.

REQUIREMENTS

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

30 units from the Level I program completed prior to admission to the program. (See *Admission* above.)

6 units SOCIOL 2S06

3 units from SOCIOL 3A03, 3P03, 3PP3

3 units from SOCIOL 3O03, 3W03 (See *Note 6* above.)

12 units Level IV Sociology (See *Note 2* above.)

12 units Levels 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 programs within the Faculty of Social Sciences, the six units Research Methods/Statistics course specified for the other subject.

9-12 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies. Students combining Sociology with Arts & Science, or with a Humanities subject, are exempt from this requirement.

B.A. in Sociology

{1520}

ADMISSION

Completion of any Level I program, with a Cumulative Average of at least 3.5 including a grade of at least C- in SOCIOL 1A06.

NOTE

Students should check both this Calendar and the Departmental web-site for prerequisites and course descriptions.

REQUIREMENTS

90 units total (Levels I to III), of which 42 units may be Level I

30 units from the Level I program completed prior to admission to the program. (See *Admission* above.)

6 units SOCIOL 2S06

3 units SOCIOL 2Z03

15 units Levels II or III Sociology

36 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

Minor in Sociology**NOTES**

1. Students who have already completed SOCIOL 2O06 or 2S06 may use these units towards this requirement of the Minor.

2. Students should check both this Calendar and the Departmental web-site for prerequisites and course descriptions.

REQUIREMENTS

24 units total

6 units SOCIOL 1A06

6 units from SOCIOL 2C06, 2D06, 2R03 and 2RR3, 2V06 (See *Note 1* above.)

12 units Levels II or III Sociology

COMBINED B.A. IN INDIGENOUS STUDIES AND ANOTHER SUBJECT

WEB ADDRESS: <http://www.mcmaster.ca/indigenous/default.htm>

Hamilton Hall, Room 103

Ext. 27426

Director

D.J. Martin-Hill/B.A., M.A., Ph.D.

Aboriginal Student Counsellor

R. McLester/B.A.

ACADEMIC REGULATIONS

STUDENT ACADEMIC RESPONSIBILITY

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

ACCESS TO COURSES

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases priority is given to students from particular programs or Faculties.

All students are encouraged to register as soon as MUGSI/SOLAR is available to them.

The Combined B.A. Program in Indigenous Studies is governed by the general Academic Regulations of the University and the regulations described below.

Combined B.A. Program in Indigenous Studies and Another Subject

ADMISSION

Completion of any Level I program, with a Cumulative Average of at least 3.5 including an average of at least 4.0 in six units from CAYUGA 1Z03, INDIG ST 1A03, 1AA3, MOHAWK 1Z03, OJIBWE 1Z03 or a grade of at least C- in one of CAYUGA 1Z06, INDIG ST 1A06, MOHAWK 1Z06 or OJIBWE 1Z06 and satisfaction of admission requirements for the B.A. program in the other subject.

NOTES

- Those students who entered the program prior to September 2005 should follow the requirements as specified in the Calendar which was in effect the year they entered the program.
- Three units of work in the other subject of the combined program which are also in the Course List may be used to fulfill the requirements of both program components.
- Students who previously completed ANTHROP 3F03 or POL SCI 3C03 may use these units toward the Course List requirement.

COURSE LIST

ANTHROP	2B03, 2H03, 2VV3, 2W03, 3Y03
SOC WORK	4I03

REQUIREMENTS

90 units total (Levels I to III), of which 42 may be Level I

30 units	from the Level I program completed prior to admission to the program. (See <i>Admission</i> above.)
6 units	from CAYUGA 2Z03, INDIG ST 2AA3, MOHAWK 2Z03, OJIBWE 2Z03
3 units	from INDIG ST 2C03, 2D03
15 units	from Level II, III Indigenous Studies, CAYUGA 2Z03, MOHAWK 2Z03, OJIBWE 2Z03 (if not taken to satisfy requirement above), courses from the Course List of which at least three units must be Level III. (See <i>Notes 2 and 3</i> above.)
24 units	courses specified for the other subject
12 units	Electives

Minor in Indigenous Studies

NOTES

- No more than six of the 18 units from Course List may be Level I courses.
- At least 12 of the 18 units required for the Minor must be Indigenous Studies or Indigenous language courses.
- Students who previously completed ANTHROP 3F03, INDIG ST 3I03, 3J03 or POL SCI 3C03 may use these units toward the Course List requirement.

COURSE LIST

INDIG ST 1A03	Introduction to Indigenous Studies
INDIG ST 1AA3	Introduction to Contemporary Indigenous Studies
INDIG ST 2A03	Indigenous Peoples' Spirituality
INDIG ST 2AA3	Indigenous Knowledge and Methodology
INDIG ST 2B03	History of Indigenous Peoples' Sovereignty
INDIG ST 2C03	Contemporary Indigenous Societies and Issues: Selected Topics
	Topic 2007-2008: TBA
INDIG ST 2D03	Traditional Indigenous Ecological Knowledge
INDIG ST 3C03	Study of Iroquois First Nations in Contemporary Times
INDIG ST 3CC3	Contemporary Indigenous Societies: Selected Topics
	Topic 2007-2008: TBA
INDIG ST 3D03	Contemporary Native Literature in Canada
INDIG ST 3E03	Contemporary Native Literature in the United States
INDIG ST 3G03	Indigenous Creative Arts and Drama: Selected Topics
	Topic 2007-2008: TBA
INDIG ST 3H03	Indigenous Medicine I - Philosophy
INDIG ST 3HH3	Indigenous Medicine II - Practical
INDIG ST 3K03	Indigenous Human Rights
INDIG ST 3L03	Indigenous Independent Study
CAYUGA 1Z03	Introduction to Cayuga Language and Culture
CAYUGA 2Z03	Intermediate Cayuga
MOHAWK 1Z03	Introduction to Mohawk Language and Culture
MOHAWK 2Z03	Intermediate Mohawk
OJIBWE 1Z03	Introduction to Ojibwe Language and Culture
OJIBWE 2Z03	Intermediate Ojibwe
ANTHROP 2B03	Indigenous Peoples of North America
ANTHROP 2H03	Environment and Culture
ANTHROP 2VV3	The Ancient Maya
ANTHROP 2W03	The Aztecs and Incas
ANTHROP 3Y03	Aboriginal Community Health and Well-Being
SOC WORK 4I03	Social Work and Indigenous Peoples

REQUIREMENTS

6 units	from INDIG ST 1A03, 1AA3, CAYUGA 1Z03, MOHAWK 1Z03, OJIBWE 1Z03
18 units	from the Course List (See <i>Notes 2 and 3</i> 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 programs of study, but students registered in four- or five-level programs can receive a Minor designation on their transcripts following graduation if their chosen Minor program is successfully completed. Please see the *Minor* subsection in the *General Academic Regulations* section of this Calendar for further information.

Note: Students should note that not all courses listed are available each year. As well, it is the student's responsibility to check carefully for prerequisites, corequisites and enrolment restrictions.

Archaeology

Coordinator

Eduard Reinhardt (*Geography and Earth Sciences*)

Committee of Instruction

Joe Boyce (*Geography and Earth Sciences*)

Aubrey Cannon (*Anthropology*)

Laura Finsten (*Anthropology*)

Michele George (*Classics*)

Darren Gröcke (*Geography and Earth Sciences*)

Celina Gray (*Classics*)

Alexandra Retzlaff (*Classics*)

Kostalena Michelaki (*Anthropology*)

Hendrik Poinar (*Anthropology*)

W. Jack Rink (*Geography and Earth Sciences*)

Shelley Saunders (*Anthropology*)

Henry Schwarcz (*Geography and Earth Sciences*)

The Interdisciplinary Minor in Archaeology is based on archaeology and archaeology-related courses offered in the School of Geography and Earth Sciences, and in the Departments of Classics and Anthropology. It requires students to gain knowledge and understanding of a broad range of arts and sciences relevant to the practice of archaeology, but also permits students the flexibility to specialize in topics of particular interest within related disciplines. Students planning a minor in Archaeology may wish to take CLASSICS 1M03 (History of Greece and Rome).

COURSE LIST

ANTHROP 2C03	Environmental Crises in Archaeological Perspectives
ANTHROP 2FF3	Human Skeletal Biology and Bioarchaeology
ANTHROP 2O03	North American Prehistory
ANTHROP 2VV3	The Ancient Maya
ANTHROP 2W03	The Aztecs and Incas
ANTHROP 3AS3	Archaeology and Society
ANTHROP 3CA3	Ceramic Analysis
ANTHROP 3CC6	Archaeological Field School
ANTHROP 3DD3	Archaeology of Death
ANTHROP 3E03	Special Topics in Archaeology I
ANTHROP 3EE3	Special Topics in Archaeology II
ANTHROP 3K03	Archaeological Interpretation
ANTHROP 3N03	Primate Evolution
ANTHROP 3PP3	Paleopathology
ANTHROP 3X03	Zooarchaeology
ANTHROP 4E03	Advanced Topics in Archaeology I
ANTHROP 4F03	Archaeological Theory
ANTHROP 4HF3	Archaeology of Hunter-Fisher-Gatherers
ANTHROP 4R03	Skeletal Biology of Earlier Human Populations
CLASSICS 2B03	Greek Art
CLASSICS 2C03	Roman Art
CLASSICS 3Q03	Greek Sanctuaries
CLASSICS 3S03	The Archaeology of the Roman City

CLASSICS 4B03	Seminar in Classical Archaeology
ENVIR SC 1G03	Earth and the Environment
GEO 2B03	Soils and the Environment
GEO 2E03	Earth History
GEO 2G03	Earth Surface Processes
GEO 2GG3	Natural Disasters
GEO 2I03	GIS and Digital Cartography
GEO 3CC3	Earth's Changing Climate
GEO 3DD3	Geoarchaeology of the Underwater Realm
GEO 3E03	Sedimentary Environments
GEO 3G03	Glacial Sediments and Environments
GEO 3I03	Applied GIS (Geographic Information Systems)
GEO 3P03	Environmental Paleontology
GEO 3Q03	Environmental Reconstruction Using Stable Isotopes
GEO 3V03	Environmental Geophysics
GEO 4E03	Coastal Environments
GEO 4FF3	Topics of Field Research
GEO 4G03	Glacial Sediments and Environments
GEO 4I03	Advanced Gis (Geographic Information Systems)

REQUIREMENTS

24 units total

12 units ANTHROP 1B03 (or 1Z03, if completed prior to 1999), 2PA3, CLASSICS 1A03, ENVIR SC 1G03

12 units from Course List (see above). At least nine of the 12 units must be selected from outside the student's own department

Please see the Course Listings section for a detailed description of the above courses.

Jewish Studies

Jewish Studies is an international, multidisciplinary field devoted to the study of Judaism, Jewish history, thought, culture and community. The Minor in Jewish Studies is open to all students registered in a four- or five-level program in any Faculty. Students will be required to complete a minimum of 24 units from the lists below. At least 12 of these units will be taken from List A, comprised of courses focusing directly on an area of Jewish Studies. Students are urged to take at least six units of Hebrew language as part of their List A requirements. A minimum of six units will be taken from List B, comprised of courses which provide crucial background for understanding important issues in Jewish Studies.

Students are also encouraged to engage in a year of study in Israel, normally done in the third year of a four-year program. Details are available through the Department of Religious Studies, University Hall, Room 104, ext. 24567, or the Office of International Affairs, Alumni Memorial Hall, Room 203.

Students wishing to pursue a Minor in Jewish Studies may obtain more information from the Jewish Studies Minor Area Coordinator in the Department of Religious Studies, University Hall, Room 104.

LIST A

COMP LIT 2G03	The Bible As Literature
COMP LIT 3MM3	The Literature of Israel and Palestine
HEBREW 2A03	Introduction to Biblical Hebrew I
HEBREW 2B03	Introduction to Biblical Hebrew II
HEBREW 3A03	Intermediate Hebrew I
HEBREW 3B03	Intermediate Hebrew II
HISTORY 3DD3	The Jewish World in New Testament Times
HISTORY 3Z03	Judaism, the Jewish People and the Birth of the Modern World
HISTORY 3ZZ3	Judaism and the Jewish People in the Twentieth Century
PHILOS 3J03	Modern Jewish Thought
RELIG ST 2B03	Women in the Biblical Tradition
RELIG ST 2DD3	The Five Books of Moses
RELIG ST 2EE3	Prophets of the Bible
RELIG ST 2VV3	The Bible As Literature
RELIG ST 2YY3	The Bible and Film
RELIG ST 3A03	Modern Jewish Thought
RELIG ST 3DD3	The Jewish World in New Testament Times
RELIG ST 3J03	Jews, Christians, and Others in Antiquity
RELIG ST 3K03	The Bible through the Ages

RELIG ST 3M03	Songs of David: Poetry in the Hebrew Bible
RELIG ST 3R03	Death and the Afterlife in Early Judaism and Christianity
RELIG ST 3Z03	Judaism, the Jewish People and the Birth of the Modern World
RELIG ST 3ZZ3	Judaism and the Jewish People in the Twentieth Century

LIST B

ANTHROP 3G03	Comparative Mythology
ANTHROP 3H03	Anthropological Demography
CLASSICS 2P06	Ancient Greek Philosophy
HISTORY 3AA3	The Modern Middle East
HISTORY 3I03	The International Relations of the European Powers, 1870-1945
PEACE ST 3F03	The Modern Middle East
PEACE ST 3I03	The International Relations of the European Powers, 1870-1945
PHILOS 2A06	Ancient Greek Philosophy
PHILOS 2D03	Moral Issues
PHILOS 3A06	From Kant to Hegel
PHILOS 3H03	Philosophy of Religion
POL SCI 3AA3	International Politics in the Postwar Period
POL SCI 4D06	Human Rights and International Politics
RELIG ST 2C03	Moral Issues
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 2E06	Racial and Ethnic Group Relations
SOCIOL 3Z03	Ethnic Relations

Please see the Course Listings section for a detailed description of the above courses.

THEMATIC AREAS

The following listing is designed to assist you in choosing courses in areas of study, in which there is currently no B.A. program.

Asian Studies

While there is no B.A. program in Asian Studies, students interested in concentrating in this area may choose from among the following courses offered by various departments. Those desiring further information on specific courses should consult the departmental listing in the Calendar.

Students wishing to pursue Asian Studies may obtain further information from Dr. D. Barrett, Chester New Hall, Room 625, ext. 24130.

COURSES DEALING STRICTLY WITH ASIAN MATERIAL

ART HIST 2Z03	Art and Visual Culture in East Asia
ART HIST 3Z03	Chinese Art and Visual Culture 200-750
COMMERCE 4SF3	Japanese Business
GEO 3HJ3	Geography of Japan
HISTORY 3A03	The Ottomans and the World around Them
HISTORY 3AA3	The Modern Middle East
HISTORY 3B03	Modern Japan
HISTORY 3GG3	China: the Revolutionary Century, 1895-1995
HISTORY 4BB6	Modern Japan
HISTORY 4GG6	Middle Eastern and Islamic History
JAPAN ST 2A03	Japanese Communication
POL SCI 2N03	Politics of India and South Asia
RELIG ST 2F03	Storytelling in East Asian Religions
RELIG ST 2I03	Storytelling in Indian Religion
RELIG ST 2K03	Introduction to Buddhism
RELIG ST 2L03	Life, Work and Teachings of Mahatma Gandhi
RELIG ST 2P06	Japanese Civilization
RELIG ST 2TT3	Religion and Popular Culture in Contemporary Japan
RELIG ST 3AA3	Popular Religion in the Indian Tradition
RELIG ST 3E03	Japanese Religion
RELIG ST 3L03	The Indian Religious Tradition
RELIG ST 3RR3	Taoism
RELIG ST 3S03	The East Asian Religious Tradition

RELIG ST 3U03	The Buddhist Tradition in India
RELIG ST 3UU3	Buddhism in East Asia
RELIG ST 4H03	Topics in Asian Religions
THTR&FLM 2H03	The Contemporary Japanese Film

COURSES WITH SIGNIFICANT ASIAN CONTENT

HISTORY 2HH3	Mediterranean Encounters 1500-1800
POL SCI 4MM6	Topics in International Political Economy
RELIG ST 1B06	World Religions
RELIG ST 2BB3	Images of the Divine Feminine
RELIG ST 2H03	Theory and Practice of Non-Violence
RELIG ST 2QQ3	Cults in North America
RELIG ST 2SS3	Women and Religion
RELIG ST 2WW3	Health, Healing and Religion

LANGUAGE COURSES

JAPANESE 1Z06	Beginner's Intensive Japanese
JAPANESE 2Z03	Intermediate Intensive Japanese I
JAPANESE 2ZZ3	Intermediate Intensive Japanese II
JAPANESE 3A03	Advanced Intensive Japanese I
JAPANESE 3AA3	Advanced Intensive Japanese II
JAPANESE 3B03	Business Japanese I
JAPANESE 3CC3	Business Japanese II
JAPANESE 4A03	Advanced Readings in Current Affairs in Japanese
JAPANESE 4Z03	Advanced Oral 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 3NN3	Canada's Revolutions: 1939-1982
HISTORY 3P03	Religion and Society in Canada
HISTORY 3W03	Women in Canada and the U.S. to 1920
HISTORY 3WW3	Women in Canada and the U.S. from 1920
HISTORY 3Y03	Death, Disease and Degeneration: a History of Health and Health Care in Canada
MUSIC 3T03	Canadian Music

SOCIAL SCIENCES

ANTHROP 3Y03	Aboriginal Community Health and Well-Being
ECON 2K03	Economic History of Canada
GEO 2HC3	Canada
GEO 3HT3	Geography of Planning
GEO 4HZ3	Urban Housing
POL SCI 1G06	Politics and Government
POL SCI 2D03	Canadian Citizenship: Institutional Foundations
POL SCI 2F03	Politics, Power and Influence in Canada
POL SCI 3FF3	Canadian Foreign Policy
POL SCI 3GG3	Federalism: Theoretical, Constitutional and Institutional Issues
POL SCI 3HH3	Intergovernmental Policy Issues in Canada
POL SCI 3JJ3	Provincial Politics in Canada
POL SCI 4O06	Canadian Public Policy

Please see the Course Listings section for a detailed description of the above courses.

PART-TIME DEGREE STUDIES

The University offers a broad range of educational opportunities if you wish to take degree studies on a part-time basis. In addition to the daytime offerings in the Fall/Winter there is a wide selection of evening classes available in the Fall/Winter and Spring/Summer sessions. There is a limited number of daytime classes scheduled for the Spring/Summer session.

If you take degree courses on a part-time basis, you will associate with one of the undergraduate Faculties (Business, Engineering, Health Sciences, Humanities, Science or Social Sciences). By so doing, you will have the opportunity to consult with the academic counsellors of your Faculty, and with the departments whose courses are of interest to you. If your interests change, it is often possible to transfer to another department or Faculty.

The courses which you take in the early stages of your education will form the basis for choosing your program of study. The Level I courses will give you the information you need for this purpose, as well as provide the prerequisites for more advanced courses and admission to programs of study. You should familiarize yourself with the requirements and information found in the following sections: *Admission Requirements*, *General Academic Regulations* and *Sessional Dates*, as well as the program descriptions found in the specific Faculty sections.

ADMISSION

Before you register for any degree course or program, you must apply for admission.

- If you have already completed some university, college, or other post-secondary education, you will be re-quired to submit official transcripts of this work in order to be considered for admission and possible credit towards your McMaster program. High school transcripts are also required for consideration.
- If you satisfy the University's normal admission requirements for full-time study, you may choose to register for part-time study in most programs.
- If you do not satisfy these requirements, you may be admissible as a **Mature Student** and given the opportunity to show that you can deal successfully with university work. (Note: Mature Admission is not available to some faculties and/or programs).

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.

INFORMATION AND COUNSELLING

WEB ADDRESS: <http://www.mcmaster.ca/parttime>

Interested students may telephone the Office of the Registrar, Admissions, at (905) 525-4600 for information about application procedures and admission regulations. The Office is located in Gilmour Hall, Room 108, and is open Monday through Friday until 4:00 p.m.

More detailed information and advice concerning programs and courses is provided by the Academic Counsellors within each Faculty as follows:

- Business: ext. 23941
- Engineering: ext. 24646
- Humanities: ext. 27532
- Science: ext. 27590
- Social Sciences: ext. 23772

Information about non-degree courses and programs is available through the Centre for Continuing Education (905) 525-9140, ext. 24321 or at the following url: <http://www.mcmaster.ca/conted/> or in the *Certificate and Diploma Programs* section in this Calendar.

MAPS

The McMaster Association of Part-time Students (MAPS) maintains an office and student lounge in the McMaster University Student Centre, Room 234, telephone (905) 525-9140, ext. 22021. MAPS also publishes a newsletter, *The Link*, which is sent to all part-time students. The office and lounge are open from Monday to Thursday, day and evening, and Friday during the day.

MAPS staff is available during these hours to help students. All part-time students are invited to use these facilities and to assist their Association in its efforts to improve the quality and range of educational opportunities available to students who can only attend university on a part-time basis.

CERTIFICATE AND DIPLOMA PROGRAMS

CENTRE FOR CONTINUING EDUCATION

Located at The Downtown Centre, 50 Main Street East, Hamilton, 2nd Floor, the Centre for Continuing Education offers Certificate and Diploma programs. Short courses and workshops for personal and professional development are also available. The Centre offers registration in degree courses as a *Listener*. For details, please contact the Centre for Continuing Education at extension 24321 or <http://www.mcmastercce.com>

CERTIFICATE AND DIPLOMA PROGRAMS APPROVED FOR ADVANCED CREDIT

All CCE Certificate and Diploma programs have been approved by the Senate of McMaster University for advanced credit, as shown below. Information regarding advanced credit for degree study is outlined in *Graduates of McMaster Certificate/Diploma Programs* in the *Admission Requirements* section of this Calendar.

ACCOUNTING DIPLOMA IN {8956}

Maximum Credit Toward Degree Studies - 24 units

This eleven-course program is designed for individuals planning a career in managerial or financial accounting. All courses satisfy program requirements for both the Certified Management Accountants of Ontario (CMA) and the Certified General Accountants Association (CGA).

ADDICTION CAREWORKER, DIPLOMA IN {8951}

Maximum Credit Toward Degree Studies - 24 units

The diploma requirements consist of 24 units of study organized in compulsory courses and skill and knowledge electives. The program meets the core education hours required by The Canadian Addiction Counsellors Certification Federation (CACCF) for professional certification.

ADDICTION STUDIES, CERTIFICATE IN {8922}

Maximum Credit Toward Degree Studies - 15 units

This 15 unit program 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 program, is designed to develop and/or enhance the ability of health and social service professionals to perform case management functions in a variety of practice settings. Available in-class or on-line.

CERTIFIED CLINICAL RESEARCH ASSOCIATE, CERTIFICATE IN {8924}

Maximum Credit Toward Degree Studies - 15 units

This five-course program is designed to develop the concepts, skills, strategies, attitudes and knowledge required to perform clinical trials.

CREATIVE WRITING, CERTIFICATE IN {8941}

Maximum Credit Toward Degree Studies - 15 units

This program covers the fundamentals and advanced study of writing and publishing across many different genres. It has been developed in collaboration with the Faculty of Humanities and members of the local writing community.

FAMILY MEDIATION, CERTIFICATE/DIPLOMA IN {8938/8948}

Maximum Credit Toward Degree Studies

- 15 units (Certificate)
- 24 units (Diploma)

This five-course (Certificate)/eight-course (Diploma) program offers a rewarding career opportunity for people in a variety of professions to either gain new experience or expand their skills and knowledge in the fields of alternative dispute resolution and family mediation.

HUMAN RESOURCES MANAGEMENT, DIPLOMA IN {8958}

Maximum Credit Toward Degree Studies - 24 units

The Diploma in Human Resources Management will provide the knowledge and skills essential to succeed as a practitioner in Human Resources Management. This program offers all courses required to fulfill the academic requirement of HRPAO to become eligible to write the certification exam for the Certified Human Resources Professional (CHRP) designation.

MANAGEMENT STUDIES (GENERAL), DIPLOMA IN {8929}

Maximum Credit Toward Degree Studies - 24 units

This eight course program offered in association with the Michael G. DeGroote School of Business at McMaster is designed to develop and/or enhance the business management skills needed to function within a management position.

MANAGEMENT STUDIES (CONCENTRATION IN PROJECT MANAGEMENT, IT PROJECT MANAGEMENT, BUSINESS ANALYSIS OR SOURCING MANAGEMENT), DIPLOMA IN {8929}

Maximum Credit Toward Degree Studies - 24 units

Offered in association with Nexient Learning, this program combines technical skills in a selected area of concentration with essential management topics.

METALLURGY OF IRON AND STEEL CERTIFICATE {8991}

Maximum Credit Toward Degree Studies - 15 units

This six-course program comprehensively covers metallurgical principles involved in the extraction, refining and manufacturing of ferrous products.

POLICE STUDIES, DIPLOMA IN {8921}

Maximum Credit Toward Degree Studies - 24 units

This program is designed to develop a capacity for critical inquiry at the university level, while augmenting the training received by police and security personnel.

WEB DESIGN AND DEVELOPMENT, CERTIFICATE/DIPLOMA IN {8932/8930}

Maximum Credit Toward Degree Studies

- 15 units (Certificate)
- 24 units (Diploma)

This program focuses on the development of technical, design and communication skills as they relate to development in the field of website management.

PROFESSIONAL ASSOCIATIONS AND INSTITUTES

Many McMaster Certificate and Diploma credit courses are recognized as course equivalencies by the following external associations and institutes:

- Addiction Intervention Association (AIA)
- Association of Administrative Assistants (QAA)
- Canadian Addiction Counsellors Certification Federation (CACCF)
- Canadian Institute of Certified Administrative Managers (CAM)
- Canadian Institute of Management (CIM)
- Certified General Accountants Association of Ontario (CGA)
- Certified Management Accountants of Ontario (CMA)
- Credit Institute of Canada
- Credit Union Institute of Canada (CUIC)
- Global Risk Management Institute (CRM and FRM)
- Human Resources Professionals Association of Ontario (HRPAO)
- Institute of Canadian Bankers (ICB)
- Insurance Institute of Canada-Fellowship (FCIP)
- International Personnel Management Association (IPMA)
- Purchasing Management Association of Canada (PMAC)

Please contact the Centre for Continuing Education or visit <http://www.mcmastercce.com> for details.

SCHOOL OF GEOGRAPHY AND EARTH SCIENCES

The part-time certificate program offered by the School of Geography and Earth Sciences can be completed in one or two years and is intended for students with basic academic or experiential training in GIS/Geomatics who wish to obtain a qualification in the theoretical and practical aspects of spatial analysis as well as in the more technical aspects of GIS. Further information can be obtained at <http://sciwebserver.science.mcmaster.ca/gislab/programs/certificate/index.html> or by contacting the GIS Laboratory, School of Geography and Earth Sciences at (905) 525-9140 ext. 22542.

CERTIFICATE IN GIS {8947} (GEOGRAPHIC INFORMATION SYSTEMS)

The six-course certificate program provides expertise and applied skills in desktop GIS tools, remote sensing and spatial statistics for multidisciplinary applications. This program provides an introduction to geographic information systems (GIS) for students or professionals with no prior GIS experience.

For information concerning other Diploma programs offered at the University, please see the *Post-Professional Health Sciences Education Programs* in the *Faculty of Health Sciences* section as well as the *Diploma in Music Performance* in the *Faculty of Humanities* section of this Calendar.

COURSE LISTINGS

The courses listed in this section include all courses approved for the undergraduate curriculum for the 2007-2008 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.

POLICY ON ACCESS TO UNDERGRADUATE COURSES

McMaster's policy on access to Undergraduate courses is designed to ensure that resources are properly managed while enabling students to register in required courses so that their program admission requirements and course requisites can be met, and that their program of study is not extended.

1. Enrolment capacities are set on all undergraduate courses taking into account enrolment projections along with resources, enrolment trends and type of course (required or elective).
2. If need exceeds approved capacity, enrolment capacities for courses will be reviewed and may be adjusted.
3. Faculties and Department Offices are responsible for determining which courses require seats held back. These holdback seats must be managed so that students are able to complete program admission requirements, meet course requisites and register in courses required to meet their program of studies in a timely manner.
4. Where students are selecting from a list of required courses, access to a specific course is not guaranteed when there is another course available to meet a specific degree requirement.

ANTHROPOLOGY

WEB ADDRESS: <http://www.socsci.mcmaster.ca/anthro/>

Chester New Hall, Room 524

Ext. 24423

Faculty as of January 15, 2007

Chair

Aubrey Cannon

Professors

Aubrey Cannon/B.A. (Simon Fraser), Ph.D. (Cambridge)
 John J. Colarusso/(Linguistics and Languages) B.A. (Cornell), M.A. (Northwestern), Ph.D. (Harvard)
 Matthew Cooper/B.A. (Brooklyn College), M.Phil., Ph.D. (Yale)
 Harvey Feit/B.A. (Queen's), M.A. Ph.D. (McGill) F.R.S.C.
 Laura Finsten/B.A. (Western Ontario), M.A. (Calgary), Ph.D. (Purdue)
 D. Ann Herring/B.A., M.A., Ph.D. (Toronto)
 William L. Rodman/B.A. (Sydney), M.A., Ph.D. (Chicago)
 Shelley Saunders/B.A., M.A., Ph.D. (Toronto) F.R.S.C./Canada Research Chair in Human Disease and Population Relationships

Adjunct Professors

Regna Darnell/(Western Ontario) B.A. (Bryn Mawr), M.A., Ph.D. (Pennsylvania)
 Christopher Ellis/(Western Ontario), B.A. (Waterloo), M.A. (McMaster), Ph.D. (Simon Fraser)
 Ronald G. V. Hancock/B.Sc., M.Sc. (New Zealand), Ph.D. (McMaster)

Associate Professors

Ellen Badone/(Religious Studies) B.A., M.A. (Toronto), Ph.D. (California-Berkeley)
 Eva Mackey/B.A. (Toronto), M.A., Ph.D. (Sussex)
 Christina Moffat/B.Sc. (Toronto), B.A., Ph.D. (McMaster)
 Hendrik Poinar/B.Sc., M.Sc. (California), Ph.D. (Germany)
 Petra Rethmann/B.A. (Vienna), M.A. (Munich), Ph.D. (McGill)
 Wayne Warry/B.A., M.A. (McMaster), Ph.D. (ANU)
 Dennis Wilms/B.A. (Waterloo), M.A. (McMaster), Ph.D. (British Columbia)

Adjunct Associate Professors

Trudy Nicks/(Royal Ontario Museum) B.A., M.A., Ph.D. (Alberta)
 Robert W. Park/(Waterloo) B.A. (Toronto), M.A. (McMaster), Ph.D. (Alberta)
 Larry Sawchuk/(Toronto) B.A., M.A. (Manitoba), Ph.D. (Toronto)

Assistant Professors

Maria-Ines Arratia/B.A., M.A. (Western Ontario), Ph.D. (York)
 Tracy Farmer/B.A., B.Sc. (McMaster), M.A. (Toronto), Ph.D. (McMaster)
 Scott Martin/B.A. (McMaster), M.A. (Durham), Ph.D. (Cambridge)
 Kostalena Michelaki/B.A. (Greece), M.A., Ph.D. (Michigan)
 Janet Padiak/B.Sc., Ph.D. (Toronto)

Associate Members

Darren Gröckel/(Geography and Earth Sciences) B.Sc. (Adelaide), M.Sc. (Monash), D.Phil. (Oxford)
 Eduard G. Reinhardt/(Geography and Earth Sciences) B.A., Ph.D. (Carleton)
 Celia Rothenberg/(Religious Studies) B.A. (Wellesley College), M.S. (Oxford), Ph.D. (Toronto)

Department Notes:

1. Not all Anthropology courses listed in this Calendar are taught every year. Students are advised to consult the department's webpage and the timetable which is published annually by the Registrar's Office to determine whether a course is offered.
2. Registration in all courses with a course code ending ** listed as selected topics and independent research require prior arrangement with the instructor; otherwise, no grade will be submitted for the course.
3. To identify Anthropology courses by subdiscipline, students should refer to the lists of courses under Anthropology Subfields in the section Faculty of Social Sciences, Department of Anthropology.

Courses 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 the world. The course discusses a broad range of societies in order to explore some fundamental issues involving human knowledge and behaviour. Two hours (lecture), one hour (tutorial); one term

ANTHROP 1B03 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 1Z03 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 2AN3 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

Prerequisite: Three units of Level I Anthropology or HEALTHST 1A03
 Cross-list: HEALTHST 2AN3

ANTHROP 2B03 INDIGENOUS PEOPLES OF NORTH AMERICA

A comparative study of selected cultures of this continent, dealing with traditional and modern situations. Three hours (lectures and discussion); one term

ANTHROP 2C03 ENVIRONMENTAL CRISES IN ARCHAEOLOGICAL PERSPECTIVES

Examination of the influence of natural and human-induced environmental crises on long-term culture histories. Three hours (lectures and discussion); one term
 Prerequisite: ANTHROP 1B03

ANTHROP 2D03 GENETICS IN ANTHROPOLOGY

An introduction to human genetics, microevolution and macroevolution. Three hours (one hour lecture, two hour lab); one term
 Prerequisite: ANTHROP 1Z03
 (There will be a supplementary fee for supplies used in labs.)

ANTHROP 2DD3 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 human and non-human primates.

Three hours (lectures and discussion); one term

Prerequisite: Six units of Level I Anthropology. ANTHROP 1Z03 is strongly recommended.

This course is required of all students registered in an Honours Program in Anthropology, and is a prerequisite for advanced courses in Physical Anthropology.

ANTHROP 2F03 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 Program in Anthropology.

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 program. Completion of ANTHROP 1Z03 is strongly recommended

ANTHROP 2G03 READINGS IN INDO-EUROPEAN MYTH

This course will acquaint students with the myths of Ancient Greece, Ancient India, the Celts, and the Norse. Other traditions may also be examined.

Three hours (lectures and discussion); one term

ANTHROP 2H03 ENVIRONMENT AND CULTURE

Relationships between human societies and their environments are examined. The 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 2L03 PHONETICS

A study of the sounds of language and human articulatory capabilities.

Three hours (lectures); one term

Prerequisite: LINGUIST 1A03 or permission of the instructor

Cross-list: LINGUIST 2L03

This course is administered by the Department of Linguistics and Languages.

ANTHROP 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 1A06); or permission of the Department

Cross-list: LINGUIST 2LL3

This course is administered by the Department of Linguistics and Languages.

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, labs, discussion); one term

Prerequisite: Three units of Level I Anthropology

This course is required of all students registered in an Honours Program in Anthropology.

ANTHROP 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 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

ANTHROP 2VV3 THE ANCIENT MAYA

An introduction to prehistoric Maya society and culture, with an emphasis on the Classic period civilization.

Three hours (lectures); one term

Not open to students with credit in ANTHROP 2V03, AZTECS, MAYA AND INCA prior to September 2001.

ANTHROP 2W03 THE AZTECS AND INCAS

An introduction to and comparison of the late pre-Columbian Aztec empire of Mexico and the Inca empire of Andean South America.

Three hours (lectures); one term

Antirequisite: ANTHROP 2V03

ANTHROP 2X03 VIOLENCE IN ANTHROPOLOGICAL PERSPECTIVE

The aim of the course is to assess the extent to which violence is both controlled by and an expression of society and culture.

Three hours (lectures and discussion); one term

ANTHROP 3A03 PHONOLOGY

A study of the patterns of distinctive sounds in the world's languages.

Three hours (lectures); one term

Prerequisite: ANTHROP 2L03 or LINGUIST 2L03

Antirequisite: ANTHROP 2M03, LINGUIST 3A03

Cross-list: LINGUIST 3A03

This course is administered by the Department of Linguistics and Languages.

ANTHROP 3AS3 ARCHAEOLOGY AND SOCIETY

A critical examination of the history of archaeology and the social and political implications of our understanding of the ancient human past.

Three hours (lectures and discussion); one term

Prerequisite: Three units of Level I Anthropology

ANTHROP 3C03 HEALTH AND ENVIRONMENT: ANTHROPOLOGICAL APPROACHES

Examination of the ways in which humans alter and cope with their environment. Topics include: health inequalities, nutrition, population, urbanization, resource utilization, and industrial pollution.

Three hours (lectures and discussion); one term

Prerequisite: Three units of Level I Anthropology or HEALTHST 1A03, and registration in Level III or IV of any program. ANTHROP 2E03 is strongly recommended.

Cross-list: HEALTHST 3CC3

ANTHROP 3CA3 CERAMIC ANALYSIS

Examination of theories and methods used by archaeologists to analyze ceramics and understand past ceramic technologies. The class will include strong hands-on and original-research components.

Three hours (lectures, labs, discussion); one term

Prerequisite: ANTHROP 2PA3

Not open to students with credit in ANTHROP 3EE3, if the topic was Ceramic Analysis.

ANTHROP 3CC6 ARCHAEOLOGICAL FIELD SCHOOL

Field instruction in the techniques used in the excavation of an archaeological site. The course includes hands-on instruction in manual excavation methods, mapping, field recording, and laboratory analysis.

Prerequisite: ANTHROP 2PA3 or an equivalent course in archaeological methods

Not open to students with credit in an equivalent field school from another university.

ANTHROP 3DD3 ARCHAEOLOGY OF DEATH

Archaeological analysis and interpretation of burial practices and other death-rituals.

Three hours (lectures and discussion); one term

Prerequisite: ANTHROP 2PA3

ANTHROP 3E03 SPECIAL TOPICS IN ARCHAEOLOGY I

2007-2008 Topic: Neolithic Europe

The topic varies with each instructor (e.g. one class may examine *Ancient Mesoamerican Cities* and another focus on *The Archaeology of Hierarchy*).

Three hours (lectures and discussion); one term

Prerequisite: ANTHROP 2PA3

ANTHROP 3EE3 SPECIAL TOPICS IN ARCHAEOLOGY II

As per ANTHROP 3E03.

Three hours (lectures and discussion); one term

Prerequisite: ANTHROP 2PA3

Not offered in 2007-2008.

ANTHROP 3G03 COMPARATIVE MYTHOLOGY

The reconstruction of lost mythic traditions by means of comparative techniques drawn from historical linguistics. The Indo-European traditions of Eurasia will be examined.

Three hours (lectures and discussion); one term

Prerequisite: ANTHROP 2G03 or permission of the instructor

ANTHROP 3H03 ANTHROPOLOGICAL DEMOGRAPHY

This course offers an introduction to the study of population dynamics (birth, death, migration) and population structure. It focuses on issues particularly pertinent to anthropological studies of past and present populations.

Three hours (lectures and discussion); one term

Prerequisite: ANTHROP 2E03

ANTHROP 3I03 SYNTAX

A study of how words are organized into sentences. The emphasis will be on the Functional approach in comparison with other syntactic theories.

Three hours (lectures); one term

Prerequisite: One of ANTHROP 2LL3, LINGUIST 2LL3 or permission of the Department

Cross-list: LINGUIST 3I03

Offered in alternate years.

This course is administered by the Department of Linguistics and Languages.

ANTHROP 3I13 SEMANTICS

A study of patterns of meaning in language; a critical survey of current theories and issues.

Three hours (lectures); one term

Prerequisite: One of ANTHROP 3I03, 3M03, LINGUIST 3I03, or 3M03, and six units of a language other than English; or permission of the Department

Cross-list: LINGUIST 3I13

Offered in alternate years.

This course is administered by the Department of Linguistics and Languages.

ANTHROP 3IS3 INDEPENDENT STUDY IN ANTHROPOLOGY

Independent study of a research problem through published materials and/or fieldwork. It is incumbent upon the student to secure arrangements with the supervising instructor prior to registration in this course; otherwise, no grade will be submitted.

One term

Prerequisite: Registration in any program in Anthropology and permission of the instructor

ANTHROP 3IS3 may be repeated, if on a different study, to a total of six units.

ANTHROP 3K03 ARCHAEOLOGICAL INTERPRETATION

Techniques and methodologies in the investigation of archaeological material.

Three hours (lectures, labs, discussion); one term

Prerequisite: ANTHROP 2PA3

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.

This course is administered by the Department of Linguistics and Languages.

ANTHROP 3N03 PRIMATE EVOLUTION

Comparative anatomy and evolutionary development of humans and our nearest living relatives, the other primates.

Three hours (lectures and discussion); one term

Prerequisite: ANTHROP 2E03

Antirequisite: ANTHROP 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 program in Anthropology

ANTHROP 3PP3 PALEOPATHOLOGY

The origins and evolution of human diseases and methods of identifying disease in ancient human remains.

Three hours (lectures, discussion and lab); one term

Prerequisite: ANTHROP 2FF3

ANTHROP 3R03 GENETICS AND MODERN HUMAN ORIGINS

This course surveys genetic studies in anthropology and considers key issues in the field, such as the human genome diversity project.

Three hours (one hour lecture, two hour lab), one term

Prerequisite: ANTHROP 2D03 or BIOLOGY 3J03

(There will be a supplementary fee for supplies used in labs.)

ANTHROP 3RR3 THE ANTHROPOLOGY OF GENDER

Selected topics relating to the construction and practice of gender in various cultural contexts.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level III or IV of any Anthropology program

ANTHROP 3T03 POWER AND RESISTANCE

A critical examination of power in post-colonial conflicts. Examines concepts and case studies of local resistance to economic globalization, the re-defining of nationalities, and the spread of universalizing cultures.

Three hours (lectures and discussion); one term

Prerequisite: Six units of Social/Cultural Anthropology

ANTHROP 3V03 ANTHROPOLOGY AND THE HISTORICAL IMAGINATION

This course is situated at the intersection of history and anthropology, and focuses especially on the ways in which social actors represent, give meaning to, and strategically employ constructions of the past.

Three hours (lectures and discussion); one term

Prerequisite: ANTHROP 2F03 and registration in any program in Anthropology

ANTHROP 3W03 SPECIAL TOPICS IN ANTHROPOLOGY I**

The topic varies with each instructor (e.g. one class may examine *Current Issues in Medical Anthropology* and other classes may focus on *Readings in Myth* or *Contemporary Issues in Archaeology*).

One term

Prerequisite: Registration in any program in Anthropology

ANTHROP 3X03 ZOOARCHAEOLOGY

Study of the long-term histories of human-environment interaction through analysis of archaeologically recovered animal remains.

Three hours (labs and discussion); one term

Prerequisite: ANTHROP 2PA3

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

Cross-list: HEALTHST 3YY3

**ANTHROP 3Z03 MEDICAL ANTHROPOLOGY:
THE BIOMEDICAL APPROACH**

Patterns of stress and disease with emphasis on the modern biomedical approach. Disease in the evolutionary context with emphasis on disease as a failure of adaptation and response.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level III or IV of any program. ANTHROP 2E03 or 2F03 is strongly recommended.

**ANTHROP 3ZZ3 MEDICAL ANTHROPOLOGY:
SYMBOLIC HEALING**

An interdisciplinary approach to traditional systems of healing such as Greek humeral medicine, Chinese, Shamanic, etc. Emphasis will be on cultural and psychological parameters of healing.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level III or IV of any program. ANTHROP 2E03 or 2F03 is strongly recommended.

ANTHROP 4AE3 ANTHROPOLOGY AND ENVIRONMENT

This course examines the different and rapidly changing ways in which anthropologists study relationships between humans and their environments. It also considers the contributions which anthropologists are making to environmentalism and knowledge about current ecological issues.

Three hours (seminar); one term

Prerequisite: ANTHROP 2F03 and registration in an honours program; or permission of the instructor

ANTHROP 4B03 CURRENT PROBLEMS IN ANTHROPOLOGY I

2007-2008 Topic: Ethics in Anthropological Research

The topic varies with each instructor.

Three hours (seminar); one term

Prerequisite: Registration in Level IV Honours Anthropology or permission of the instructor

ANTHROP 4B03 may be repeated, if on a different topic, to a total of six units.

ANTHROP 4BB3 CURRENT PROBLEMS IN ANTHROPOLOGY II

2007-2008 Topic: Museum Anthropology

As per ANTHROP 4B03.

Three hours (seminar); one term

Prerequisite: Registration in Level IV Honours Anthropology

ANTHROP 4BB3 may be repeated, if on a different topic, to a total of six units.

ANTHROP 4D03 APPLIED ANTHROPOLOGY

An examination of how anthropology is applied to solve human problems. Includes discussion of how students can use their anthropological training in non-academic occupations. Students may be involved in academic placements within the community.

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; but on a different topic.

Three hours (seminar); one term

Prerequisite: ANTHROP 2PA3

ANTHROP 4F03 ARCHAEOLOGICAL THEORY

A seminar in current topics and issues in archaeological theory.

Three hours (lectures and discussion); one term

Prerequisite: ANTHROP 2PA3 and registration in any honours program

ANTHROP 4G03 INDEPENDENT RESEARCH I**

Independent study of a research problem through published materials and/or fieldwork. Study may include museum internship, participation in faculty research, or student-initiated 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 grade will be submitted.

One term

Prerequisite: Registration in any program in Anthropology

ANTHROP 4GG3 INDEPENDENT RESEARCH II**

As per ANTHROP 4G03, but on a different topic.

One term

Prerequisite: Registration in Level IV Honours Anthropology

ANTHROP 4H03 HUMAN EVOLUTIONARY GENETICS

The use of population genetics for resolving the origins of modern humans.

Three hours (seminar); one term

Prerequisite: ANTHROP 3R03

Priority will be given to Level IV Honours Anthropology students.

ANTHROP 4HF3 ARCHAEOLOGY OF HUNTER-FISHER-GATHERERS

Study of the prehistoric technologies and organizational strategies used in making a living from the natural environment, and examination of the cultural contexts of foraging economies.

Three hours (seminar); one term

Prerequisite: ANTHROP 2PA3

ANTHROP 4I03 CONTEMPORARY ANTHROPOLOGICAL THEORY

Seminar on selected recent developments in anthropological theory.

Three hours (seminar); one term

Prerequisite: ANTHROP 3L03 and registration in Level IV Honours Anthropology

Access will be provided to all Level IV Honours Anthropology students.

ANTHROP 4J03 ADVANCED TOPICS IN PHYSICAL ANTHROPOLOGY I

Study at an advanced level of selected topics within the subdiscipline. Topics may change from year to year.

Three hours (seminar); one term

Prerequisite: ANTHROP 2E03

ANTHROP 4J03 may be repeated, if on a different topic, to a total of six units.

ANTHROP 4JJ3 ADVANCED TOPICS IN PHYSICAL ANTHROPOLOGY II

As per ANTHROP 4J03

Three hours (seminar); one term

Prerequisite: ANTHROP 2E03

ANTHROP 4JJ3 may be repeated, if on a different topic, to a total of six units.

ANTHROP 4LB3 ADVANCED PHONETICS, PHONOLOGY AND MORPHOLOGY

This course will examine advanced issues in phonetics, phonology and morphology, seeking to evaluate current theory and to address data that fall beyond the explanatory capacities of those paradigms. The course is strongly data oriented, with material taken from several languages of the Caucasus.

Three hours (lectures and discussion); one term

Prerequisite: Nine units of Linguistics or Linguistic Anthropology Courses above Level I. (See Department of Anthropology in the Faculty of Social Sciences section in this Calendar)

Cross-list: LINGUIST 4LB3

Antirequisite: ANTHROP 4LA3, LINGUIST 4LA3

This course is administered by the Department of Linguistics and Languages.

ANTHROP 4LC3 ADVANCED SYNTAX AND SEMANTICS

This course will examine advanced issues in syntax and semantics, seeking to evaluate current theory and to address data that fall beyond the explanatory capacities of those paradigms. The course is strongly data oriented, with material taken from several languages of the Caucasus.

Three hours (lectures and discussion); one term

Prerequisite: Nine units of Linguistics or Linguistic Anthropology Courses above Level I. (See Department of Anthropology in the Faculty of Social Sciences section in this Calendar)

Cross-list: LINGUIST 4LC3

Antirequisite: ANTHROP 4LA3, LINGUIST 4LA3

This course is administered by the Department of Linguistics and Languages.

ANTHROP 4M03 ADVANCED TOPICS IN MYTHOLOGY

A seminar in current topics and issues in comparative mythology.

Three hours (seminar); one term

Prerequisite: ANTHROP 2G03, 3G03 and registration in any Honours program

ANTHROP 4N03 ANTHROPOLOGY AND EDUCATION

A comparison of the formal and informal ways in which people learn within their cultural context, and a survey of the uses of anthropology in schools.

Three hours (seminar); one term

Prerequisite: Registration in any Honours program in the Faculty of Social Sciences

ANTHROP 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 any Honours program in the Faculty of Social Sciences

ANTHROP 4R03 SKELETAL BIOLOGY OF EARLIER HUMAN POPULATIONS

The analysis of human skeletal samples, including such topics as paleopathology, paleodemography, paleonutrition and biological distance analyses.

Three hours (lectures and discussion); one term

Prerequisite: ANTHROP 2FF3

Antirequisite: ANTHROP 3O06

ANTHROP 4S03 THE ANTHROPOLOGY OF INFECTIOUS DISEASE

The critical examination of the role of infectious diseases in the course of human history and contemporary society. Self-directed learning format.

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 4XX3 ADVANCED TOPICS IN LINGUISTIC THEORY
Issues in different aspects of Linguistic Theory and Advanced Philology. Consult the Department of Linguistics and Languages for the topic to be offered.

Two hours (seminar); one term

Prerequisite: One of ANTHROP 3I03, 3M03, LINGUIST 3I03, 3M03

Cross-list: LINGUIST 4XX3

ANTHROP 4XX3/LINGUIST 4XX3 may be repeated, if on a different topic, to a total of six units.

Offered in alternate years.

This course is administered by the Department of Linguistics and Languages.

ART

WEB ADDRESS: <http://www.humanities.mcmaster.ca/~sota/>

Togo Salmon Hall, Room 414

Ext. 27671

Courses and programs in Art are administered within the School of the Arts of the Faculty of Humanities.

Note:

Art courses are open only to students registered in a program in Honours Art.

Courses**ART 1F03 STUDIO FUNDAMENTALS I**

Module one: colour studies, theoretical and practical application of colour. Module two: Dimensional studies; an exploration of form and space. Lectures, critiques and studio practice (four hours); one term

Prerequisite: Portfolio interview (See below.)

Antirequisite: ART 1F06

ART 1FF3 STUDIO FUNDAMENTALS II

Module one: research studies, strategies inherent within visual practice. Module two: drawing studies, the development of drawing practice.

Lectures, critiques and studio practice (four hours); one term

Prerequisite: ART 1F03

Antirequisite: ART 1F06

Honours Art programs have limited enrolments. Entrance to any Honours Art program requires the permission of the School of the Arts as these programs and courses have limited enrolments and successful completion of ART 1F03 and 1FF3. Students who wish to enrol in ART 1F03 and 1FF3 in Level I must first complete a portfolio interview to be eligible for permission to register in these courses. The portfolio should contain a variety of works in different media that represent the applicant's creative abilities and interests. Aptitude in art, academic ability and demonstrated commitment to the discipline are considered in the selection process. In exceptional circumstances, where distance does not allow for an interview,

portfolios may be submitted in the form of colour slides or photographs. Portfolio interviews occur between January and April each year for entrance in September of the same calendar year. Only those students who call the Office of the School of the Arts (905-525-9140 ext. 27671) before March 1st to book appointments for portfolio interviews will be guaranteed consideration for entrance into ART 1F03 and 1FF3. (Late applicants will only be interviewed if space availability permits).

Permission to register in ART 1F03 and 1FF3 will be verified with written confirmation from the School of the Arts. School of the Arts verification and a Letter of Acceptance to Humanities I from the University will guarantee a space in the program as long as the student meets the minimum academic requirements as outlined under *School of the Arts* programs in the *Faculty of Humanities* section of the Calendar. **Applicants for Art should use the MHA OUAC code.** The portfolio should contain a variety of works in different media that represent the applicant's creative abilities and interests. Aptitude in art, academic ability and demonstrated commitment to the discipline are considered in the selection process. In exceptional circumstances, where distance does not allow for an interview, portfolios may be submitted in the form of colour slides or photographs. Corequisite: SCIENCE 1A00. Students registering in ART 1F03 must also register in SCIENCE 1A00 when completing their registration. Students who receive advanced credit for ART 1F03 must also register in SCIENCE 1A00 when registering in ART 1FF3.

ART 2A03 INTRODUCTORY PAINTING I

A series of studio projects designed to inform and expand the student's technical and conceptual abilities in painting.

Four hours; one term

Prerequisite: ART 1F03, 1FF3 (or 1F06)

Antirequisite: ART 2A06

ART 2AA3 INTRODUCTORY PAINTING II

A continuation of studio projects designed to provide technical and conceptual investigations in the field of painting.

Four hours; one term

Prerequisite: ART 1F03, 1FF3 (or 1F06)

Antirequisite: ART 2A06

ART 2B03 INTRODUCTORY SCULPTURE I

A series of three-dimensional studio projects designed to provide technical and conceptual abilities in the field of sculpture.

Four hours; one term

Prerequisite: ART 1F03, 1FF3 (or 1F06)

Antirequisite: ART 2B06

ART 2BB3 INTRODUCTORY SCULPTURE II

A continuation of three-dimensional studio projects designed to provide technical and conceptual investigations in the field of sculpture.

Four hours; one term

Prerequisite: ART 1F03, 1FF3 (or 1F06)

Antirequisite: ART 2B06

ART 2C03 INTRODUCTORY DRAWING I

A series of studio projects designed to inform and expand the student's technical and conceptual abilities in drawing.

Four hours; one term

Prerequisite: ART 1F03, 1FF3 (or 1F06)

Antirequisite: ART 2C06

ART 2CC3 INTRODUCTORY DRAWING II

A continuation of studio projects designed to provide technical and conceptual investigations in the field of drawing.

Four hours; one term

Prerequisite: ART 1F03, 1FF3 (or 1F06)

Antirequisite: ART 2C06

ART 2F03 INTRODUCTORY PRINTMAKING I

A series of studio projects designed to inform and expand the student's technical and conceptual abilities in printmaking.

Four hours; one term

Prerequisite: ART 1F03, 1FF3 (or 1F06)

Antirequisite: ART 2F06

ART 2FF3 INTRODUCTORY PRINTMAKING II

A continuation of studio projects designed to provide technical and conceptual investigations in the field of printmaking.

Four hours; one term

Prerequisite: ART 1F03, 1FF3 (or 1F06)

Antirequisite: ART 2F06

ART 3D03 PRACTICAL ISSUES IN STUDIO ART

This course is designed to familiarize students with a range of topics associated with the professional and practical aspects of producing art. This course utilizes the McMaster Museum of Art collections as a research base for studio production.

Three hours; one term

Prerequisite: Registration in Level III Honours Art or a Combined Program with Honours Art

ART 3E06 STUDIO PRACTICE AND CRITICISM

This course introduces self-directed studio study.

Weekly critiques, evening Visiting Artists' lectures; two terms

Prerequisite: Registration in Level III Honours Art or Combined Program with Honours Art and a grade of at least B- in a minimum of six units of Level II Art

ART 3F03 INTEGRATED DRAWING AND PRINT MEDIA

This course enables advanced level studio exploration via the interconnections between print media and drawing which may include production of an image in multiple states and integration of a diverse range of two dimensional processes.

Four hours; one term

Prerequisite: Registration in Level III Honours Art or a Combined Program with Honours Art

ART 3G03 INTERDIMENSIONAL STUDIES IN PAINTING AND SCULPTURE

This course enables advanced level studio exploration via the interconnections between sculpture and painting which may include the exchange between three dimensional and two dimensional concepts of colour in painted reliefs, polychrome works and installations.

Four hours; one term

Prerequisite: Registration in Level III Honours Art or a Combined Program with Honours Art

ART 3H03 INTEGRATED PAINTING AND PRINT MEDIA

This course enables advanced level studio exploration via the interconnections between print media and painting which may include: photo-based image making, cyanotypes, stencilling, hand-painted monotypes, etc.

Four hours; one term

Prerequisite: Registration in Level III Honours Art or a Combined Program with Honours Art

ART 3I03 INTERDIMENSIONAL STUDIES IN SCULPTURE AND DRAWING

This course enables advanced level studio exploration via the interconnections between sculpture and drawing and may include exploration in media such as two dimensional studies for three dimensional productions, installation designs, etc.

Four hours; one term

Prerequisite: Registration in Level III Honours Art or a Combined Program with Honours Art

ART 4C06 MINOR STUDIO PROJECT

This course combines advanced level, self-directed studio study with critique sessions and a visiting artist lecture series.

Weekly critiques, evening Visiting Artists' lectures; two terms

Prerequisite: Registration in Level IV of a Combined Honours Art and Another Subject program and a grade of at least B- in ART 3E06

Antirequisite: Credit or registration in ART 4E12

ART 4E12 ADVANCED STUDIO PRACTICE AND CRITICISM

This course combines an intensive block of advanced level, self-directed studio study with critique sessions and a visiting artist lecture series.

Weekly critiques, evening Visiting Artists' lectures; two terms

Prerequisite: Registration in Level IV of any Honours Art Program and a grade of at least B- in ART 3E06

Antirequisite: ART 4C06

ART HISTORY

Courses and programs in Art History are administered within the School of the Arts of the Faculty of Humanities.

Courses**ART HIST 1A03 INTRODUCTION TO THE STUDY OF ART**

A course that introduces students to the visual arts through a consideration of principles and elements of painting, sculpture and architecture and a discussion of various genres.

Two lectures, one tutorial; one term

ART HIST 1AA3 INTRODUCTION TO THE HISTORY OF ART

A brief overview of the Western artistic tradition as embodied in the history of painting, sculpture and architecture.

Two lectures, one tutorial; one term

ART HIST 2A03 VISUAL LITERACY

A course of lectures and discussions that explores the concept of visual literacy and examines the ways in which fine and popular arts structure our understanding through images.

One lecture (two hours), one tutorial/discussion; one term

Prerequisite: Registration in Level II or above

Cross-list: CMST 2I03

ART HIST 2B03 GREEK ART

The architecture, sculpture and painting of the Greek and Hellenistic worlds.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: CLASSICS 2B03

This course is administered by the Department of Classics.

ART HIST 2C03 ROMAN ART

The architecture, sculpture and painting of the Roman world.

Three lectures; one term

Prerequisite: ART HIST 2B03

Cross-list: CLASSICS 2C03

This course is administered by the Department of Classics.

ART HIST 2D03 19TH- AND 20TH-CENTURY ART AND VISUAL CULTURE

A study of art and visual culture from c. 1800 to c. 1970 and an examination of critical frameworks such as modernism and postmodernism.

Three lectures; one term

Prerequisite: Registration in Level II or above

ART HIST 2F03 THE HISTORY OF GRAPHIC DESIGN

An introduction to the history of graphic, two-dimensional design. The course demonstrates the admixture of high and popular culture that informs advertising, posters, book design and illustration, etc.

Three lectures; one term

Prerequisite: Registration in Level II or above. Prior completion of ART HIST 1A03 and 1AA3 is recommended

Cross-list: CMST 2N03, MMEDIA 2F03

This course is administered by the Department of Communication Studies & Multimedia.

ART HIST 2G03 FILM HISTORY TO THE SECOND WORLD WAR

An introduction to the history of narrative film from its beginnings to the Second World War. It focuses on narrative cinema's development from aesthetic, social, technological and economic perspectives while also touching on a selected number of issues in film theory.

Two lectures, plus one weekly film screening; one term

Prerequisite: Registration in Level II or above

Cross-list: THTR&FLM 2F03

Antirequisite: CMST 2X03, DRAMA 2X06

This course is administered by Theatre & Film.

ART HIST 2H03 AESTHETICS

An introduction to some main theories of the nature of art, criticism and the place of art in life and society.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: CMST 2O03, PHILOS 2H03

Offered in alternate years.

This course is administered by the Department of Philosophy.

ART HIST 2I03 RENAISSANCE AND BAROQUE ART

An introduction to the history of European art in the period 1400 to 1750.

Three lectures; one term

Prerequisite: Registration in Level II or above

ART HIST 2Z03 ART AND VISUAL CULTURE IN EAST ASIA

An introduction to the history of the arts in China, Korea and Japan from antiquity to modern times, highlighting the impact of cultural exchange and diversity.

Three lectures; one term

Prerequisite: Registration in Level II or above

ART HIST 3AA3 CONTEMPORARY ART AND VISUAL CULTURE

An examination of international art and visual culture applying theoretical approaches such as modernism, postmodernism, feminism, masculism, post-colonial and queer theories.

Three lectures; one term

Prerequisite: ART HIST 2D03 and registration in Level II or above
Alternates with ART HIST 3J03.

ART HIST 3B03 ASPECTS OF CANADIAN ART

A survey of the visual arts in Canada from the earliest explorations and settlements to the present.

Three lectures; one term

Prerequisite: Registration in Level III or IV of any program

Alternates with ART HIST 3D03.

ART HIST 3D03 17TH-CENTURY ART

An examination of art and architecture produced in the seventeenth century and global variations of Baroque Art.

Three lectures; one term.

Prerequisite: Registration in Level II or above. Prior completion of ART HIST 2I03 is recommended

Alternates with ART HIST 3B03.

ART HIST 3G03 LATE ANTIQUE AND EARLY CHRISTIAN ART

The art and architecture of the later Roman Empire and the birth of Christian Art (A.D. 200-600).

Three lectures; one term

Prerequisite: ART HIST 2C03

Cross-list: CLASSICS 3G03

Alternates with ART HIST 3H03.

This course is administered by the Department of Classics.

ART HIST 3H03 ARCHAIC GREEK ART

The formative period of Greek Art from its rebirth after the Dark Ages to the Persian Wars (c. 1000-480 B.C.) and its relationship to the art of the Near East.

Three lectures; one term

Prerequisite: ART HIST 2B03

Cross-list: CLASSICS 3H03

Alternates with ART HIST 3G03.

This course is administered by the Department of Classics.

ART HIST 3I03 ITALIAN PAINTING AND SCULPTURE 1400-1580

An advanced level lecture course dealing with selected artists and works from the Early Renaissance to Mannerism.

Three lectures; one term

Prerequisite: Registration in Level II or above. Prior completion of ART HIST 2I03 is recommended

Alternates with ART HIST 3S03.

ART HIST 3J03 ISSUES IN 19TH-CENTURY ART AND VISUAL CULTURE

An historical and critical investigation of selected issues and artists of the 19th Century.

Three lectures; one term

Prerequisite: ART HIST 2D03 and registration in Level II or above

Alternates with ART HIST 3AA3.

ART HIST 3L03 THEORIZING CULTURE THROUGH PERFORMANCE

Students will explore artists' practises in making performances and will analyze how artists work with theories, texts, spaces, bodies, audiences and produce challenges to artistic, social and political norms.

Three hours; one term

Prerequisite: One of ART HIST 2D03, 3AA3, CMST 2G03, 2P03, 2S03, THTR&FLM 2C03, 2D03, 2E03

Cross-list: CMST 3L03, THTR&FLM 3I03

Not open to students with credit in DRAMA 2B03, NEW MEDIA AND PERFORMANCE, if taken in 2001-2002 or credit in THTR&FLM 2E03 if taken in 2002-2003.

This course is administered by Theatre & Film.

Offered in alternate years.

ART HIST 3P03 ISSUES IN STUDIO CRITICISM

A course that allows non-Art students to explore current studio practice and to investigate approaches to the evaluation of quality in contemporary art. Students taking this course are required to attend a preset number of Studio Critiques and Visiting Artists' Talks*

Seminar (two hours); one term

Prerequisite: Registration in Level III of an Art History program

*Studio Art Critiques are regularly scheduled sessions during which the work of Art students is discussed by their peers, faculty members and visiting professionals from the art world. Visiting Artists' talks are held on weekday evenings on the same day as the Studio Critiques.

ART HIST 3S03 ART AND CIVILIZATION AT THE DAWN OF THE ITALIAN RENAISSANCE 1200-1400

A study of Italian art and civilization in the age of transition between the Middle Ages and the Renaissance.

Three lectures; one term

Prerequisite: Registration in Level II or above. Prior completion of ART HIST 2I03 is recommended

Alternates with ART HIST 3I03.

ART HIST 3XX3 FILM HISTORY: 1941 TO THE PRESENT

An exploration of narrative film from 1941 to the present day, incorporating a study of a variety of narrative cinema styles. Theoretical issues will include questions of cinema's relationships to other art forms, narrative, genre and authorship.

Two lectures, plus one weekly film screening; one term

Prerequisite: ART HIST 2G03

Cross-list: THTR&FLM 3L03

Antirequisite: CMST 3XX3

Offered in alternate years.

This course is administered by Theatre & Film.

ART HIST 3Z03 CHINESE ART AND VISUAL CULTURE 200-750

An examination of how recent archaeological finds are re-defining our understanding of the pluralistic achievements in various arts during the transformative Period of Disunity leading to the Golden Age in China.

Three lectures; one term

Prerequisite: ART HIST 2Z03

ART HIST 4AA3 SEMINAR IN CONTEMPORARY ART AND VISUAL CULTURE

An in-depth examination of one or more significant movements in contemporary art, theory and criticism from c. 1970 to the present.

Seminar (two hours); one term

Prerequisite: ART HIST 3AA3 and permission of the School of the Arts

Offered in alternate years.

ART HIST 4BB3 SEMINAR IN ANCIENT ART

Consult the School of the Arts concerning the topic to be offered.

Seminar (two hours); one term

Prerequisite: ART HIST 2B03, 2C03 and registration in Level III or IV of an Honours program in Art History

Cross-list: CLASSICS 4BB3

ART HIST 4BB3 may be repeated, if on a different topic, to a total of six units.

This course is administered by the Department of Classics.

ART HIST 4C03 SEMINAR IN ART AND VISUAL CULTURE 900-1400

A focused study of issues concerning art and visual culture of the tenth through fourteenth centuries. Consult the School of the Arts concerning the topic to be offered.

Seminar (two hours); one term

Prerequisite: Registration in Level III or IV of an Honours program in Art or Art History. Prior completion of one of ART HIST 3I03, 3S03 or 3Z03 is recommended.

Offered in alternate years.

ART HIST 4C03 may be repeated, if on a different topic, to a total of six units.

ART HIST 4E03 SEMINAR IN ART AND VISUAL CULTURE 1400- 1750

A focused study of issues concerning art and visual culture of the fourteenth through eighteenth centuries. Consult the School of the Arts concerning the topic to be offered.

Seminar (two hours); one term

Prerequisite: Registration in Level III or IV of an Honours program in Art, Art History or Multimedia. Prior completion of one of ART HIST 3D03, 3I03 or 3S03 is recommended.

Offered in alternate years.

ART HIST 4E03 may be repeated, if on a different topic, to a total of six units.

ART HIST 4H03 SEMINAR IN ART AND VISUAL CULTURE 1750 TO THE PRESENT

A focused study of issues concerning art and visual culture of the eighteenth through twentieth centuries. Consult the School of the Arts concerning the topic to be offered.

Seminar (two hours); one term

Prerequisite: Registration in Level III or IV of an Honours program in Art or Art History. Prior completion of one of ART HIST 3AA3 or 3J03 is recommended.

Offered in alternate years.

ART HIST 4H03 may be repeated, if on a different topic, to a total of six units.

ART HIST 4006 THESIS

Supervised study of a problem in the history of art of special interest to the student.

Tutorials; two terms

Prerequisite: Registration in Level IV of any Honours program in Art History; and a grade of at least A- in a previous course in the chosen field; and permission of the School of the Arts

ART HIST 4V03 THE STUDY, CRITICISM AND EVALUATION OF ART

A seminar to introduce students to the history, theory and practice of connoisseurship. Its focus will be to develop skills in confronting the single work of art.

Seminar (two hours); one term

Prerequisite: Registration in Level III or IV of a program in Art or Art History, Communication Studies or Multimedia

Offered in alternate years.

ART HIST 4X03 INTRODUCTION TO ART GALLERIES AND MUSEUMS

A study of the history and methods of institutions created for the purpose of collecting, preserving, displaying and interpreting art objects.

Seminar (two hours); one term

Prerequisite: Registration in Level III or IV of a program in Art or Art History
Offered in alternate years.

ARTS AND SCIENCE

WEB ADDRESS: <http://www.mcmaster.ca/artsci>

Commons Building, Room 105

Ext. 24655 or 23153

Director

Peter G. Sutherland

Council of Instructors as of January 15, 2007

Betsy Agar

James Benn (*Religious Studies*)

John D. Browning (*Linguistics and Languages*)

Aaron Childs (*Mathematics and Statistics*)

Augie Fleras

Nibaldo H. Galleguillos (*Political Science*)

Kathleen Garay (*Women's Studies and History*)

Jonatheen Geen (*Religious Studies*)

Louis I. Greenspan (*Religious Studies*)

William E. Harris (*Physics and Astronomy*)

Robert Henderson (*Kinesiology*)

Atif Kubursi (*Economics*)

Miroslav Lovric (*Mathematics and Statistics*)

Sara H. Mendelson (*Arts and Science*)

Carmel E. Mothersill (*Medical Physics and Applied Radiation Sciences*)

Ann Pearson (*Religious Studies*)

Patangi K. Rangachari (*Medicine*)

Annette Reed (*Religious Studies*)

Victor Satzewich (*Sociology*)

Deborah Schrader

Colin B. Seymour (*Medical Physics and Applied Radiation Sciences*)

Peter G. Sutherland (*Physics and Astronomy*)

Matthew Valerioti (*Mathematics and Statistics*)

Roman Viveros-Aguilera (*Mathematics and Statistics*)

Mark Vorobej (*Philosophy*)

Mark Walker (*Philosophy*)

Jean Wilson (*Linguistics and Languages; Comparative Literature and Arts & Science*)

Notes:

1. **Prerequisites:** The prerequisite for all Level I, II, III and IV Arts & Science courses is registration in the Arts and Science Program.
2. **Limited Enrolment:** Enrolment in Level I of the Arts and Science Program is limited to approximately 60 students.

Courses**ARTS&SCI 1A06 WESTERN CIVILIZATION**

An examination of significant themes in Western social and intellectual history, including theories of historical change and the influence of class, race and gender on the evolution of social systems.

ARTS&SCI 1B06 WRITING AND INFORMAL LOGIC

The primary aim of this course is to develop the student's critical and analytical skills in dealing with the written word. Students will examine the structure of selected texts, analyze various types of reasoning and receive individual attention in expository writing.

ARTS&SCI 1C06 INQUIRY

This inquiry course, designed to develop skills basic to the systematic evidence-based investigation of public issues, focuses on issues relevant to Third World Development.

ARTS&SCI 1D06 CALCULUS

This course aims to provide a thorough understanding of the principles and major applications of differential and integral calculus of functions of one variable, as well as an introduction to multivariate calculus and differential equations.

ARTS&SCI 1D06 serves as a prerequisite for all upper level Mathematics, Statistics, Computer Science and Physics courses, for which MATH 1A06 or MATH 1AA3 is a prerequisite.

Antirequisite: MATH 1A03, 1AA3, 1X03, 1XX3

ARTS&SCI 1E03 MOLECULAR PHYSIOLOGY

Historical examples will be used to explore cellular signalling mechanisms. The course will blend didactic and problem-based approaches.

ARTS&SCI 2A06 MODERN WESTERN CIVILIZATION

Development of political, moral and religious thought in the writings of such major figures as Hobbes, Locke, Rousseau, Adam Smith, Burke, Marx, Mill, Weber, von Hayek, Nietzsche, Freud and Arendt.

ARTS&SCI 2D06 PHYSICS

This course explores many of the great concepts of physics in a quantitative way. Beginning with Newtonian mechanics, it moves into Einstein's relativity, wave phenomena, atomic physics, quantum mechanics and cosmology. Selected laboratory projects will be carried out.

ARTS&SCI 2R06 STATISTICS: MATHEMATICAL MODELS FOR CHANGE, CHANCE AND ERROR

Probability, distributions, measures of association, tests of significance, mathematical models and other quantitative methods useful in the analysis of variable phenomena, are considered.

ARTS&SCI 3A06 LITERATURE

Literary works drawn from a variety of genres, cultures and historical periods will be examined with a focus on how great writers have treated enduring ethical concerns. It aims to show how literature is an indispensable means of thinking about human life and society.

Prerequisite: Registration in Level III or above

ARTS&SCI 3B03 TECHNOLOGY AND SOCIETY I

The Culture of Technology. Technological practices and approaches are studied as cultural activities in the contexts of beliefs, philosophies, values and social structures both past and present.

Antirequisite: STPP 2A06

ARTS&SCI 3BB3 TECHNOLOGY AND SOCIETY II

The Social Control of Technology. The dominant mechanisms of the social control of technology will be studied. Includes an examination of assessment methods and the role of ethics.

ARTS&SCI 3CB6 INQUIRY TOPIC: ENVIRONMENTAL EDUCATION

Environmental crisis will be explored as a crisis of western culture's inability to live in a harmonious relationship with the earth. Intentional communities will be a focus with a residential field experience.

ARTS&SCI 3CE6 INQUIRY TOPIC: MEDIA

This course consists of four sections dealing with theoretical and analytical perspectives, political economy of the media, news media and entertainment media and their cultural effects.

ARTS&SCI 3CF3 INQUIRY TOPIC: DISCOVERY: THE CONTEXT OF SCIENTIFIC RESEARCH I

Using an issue-based approach, the antecedents and consequences of scientific discoveries will be explored, focusing on themes such as the role of imagination in leading scientific discovery.

ARTS&SCI 3CG3**INQUIRY TOPIC: DISCOVERY:
THE CONTEXT OF SCIENTIFIC RESEARCH II**

Using an issue-based approach, the antecedents and consequences of scientific discoveries will be explored, focusing on themes such as the art of interpreting scientific research.

ARTS&SCI 3CI3**INQUIRY TOPIC:
DIVERSITY AND MULTICULTURALISM I**

The social and economic impact in Canada of factors such as race, gender and culture will be explored from an historical perspective.

ARTS&SCI 3CJ3**INQUIRY TOPIC:
DIVERSITY AND MULTICULTURALISM II**

This course will focus on issues of diversity in Canada with respect to the Canadian model of multiculturalism and how it relates to other models, e.g. European, Australian and American models.

ARTS&SCI 3CK3**INQUIRY TOPIC:
CLIMATE CHANGE AND GLOBAL WARMING**

An exploration of: the evidence for climate change, the consequences of and timeline(s) for global warming and credible options for mitigating negative outcomes.

ARTS&SCI 3EE3**EXPERIENTIAL LEARNING STUDY I**

Experiential study under the supervision of a McMaster faculty member, including a presentation at a final defence.

Prerequisite: Registration in Level III or above. Permission is based on a study proposal submitted to the review committee, outlining the nature of the inquiry, the learning objectives and proposed modes of evaluation. An information package is available from the Arts & Science Office.

ARTS&SCI 3L03**THE INDIAN RELIGIOUS TRADITION**

Readings of Indian texts in translation will centre around themes such as the nature of human nature, free will and determinism; renunciation and social action; violence and non-violence; altruism and selfishness.

Two lectures, one tutorial; one term.

Prerequisite: Registration in Level III or above

Cross-list: RELIG ST 3L03

This course is administered by the Department of Religious Studies.

ARTS&SCI 3S03**THE EAST ASIAN RELIGIOUS TRADITION**

Readings of East Asian texts in translation will centre around themes such as culture vs. nature, virtue vs. power, social responsibility vs. personal cultivation, bookish learning vs. meditation.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level III or above

Cross-list: RELIG ST 3S03, JAPAN ST 3S03

This course is administered by the Department of Religious Studies.

ARTS&SCI 4A06**INDIVIDUAL STUDY**

This course consists of study under the supervision of a McMaster faculty member. Proposal deadline is March 1; information package is available in the Program office.

ARTS&SCI 4A12**INDIVIDUAL STUDY**

The same as ARTS&SCI 4A06 but based on more extensive study.

ARTS&SCI 4C06**THESIS**

This course consists of original research under the supervision of a McMaster faculty member. Proposal deadline is March 1; information package is available in the Program office.

ARTS&SCI 4C12**THESIS**

The same as ARTS&SCI 4C06 but based on more extensive research.

ARTS&SCI 4EE6**EXPERIENTIAL LEARNING STUDY II**

Experiential study under the supervision of a McMaster faculty member, including a presentation at a final defence.

Prerequisite: ARTS&SCI 3EE3 and registration in Level IV or above. Permission is based on a study proposal submitted to the review committee, outlining the nature of the inquiry, the learning objectives and proposed modes of evaluation. An information package is available from the Arts & Science Office.

ASIAN STUDIES

(SEE INTERDISCIPLINARY MINORS AND THEMATIC AREAS)

ASTRONOMY

(SEE PHYSICS AND ASTRONOMY)

AUTOMOTIVE AND VEHICLE TECHNOLOGY

(SEE TECHNOLOGY, AUTOMOTIVE AND VEHICLE TECHNOLOGY)

BIOCHEMISTRY AND BIOMEDICAL SCIENCES

WEB ADDRESS: <http://www.fhs.mcmaster.ca/biochem/>

Health Sciences Centre, Room 4H43

Ext. 22059

Faculty as of January 15, 2007**Chair**

Gerard D. Wright

Associate Chairs

Eric Brown/Research

Michelle MacDonald/Undergraduate Studies

Justin Nodwell/Graduate Studies

Professors

David W. Andrews/B.Sc. (Ottawa), Ph.D. (Toronto)/Senior Canada Research Chair

Mickie Bhatia/B.Sc. (McMaster), Ph.D. (Guelph)

John P. Capone/B.Sc. (Western Ontario), Ph.D. (McMaster)

Gerhard E. Gerber/B.Sc., Ph.D. (Toronto)

Radhey S. Gupta/B.Sc. (Agra), M.Sc. (New Delhi), Ph.D. (Bombay)

John A. Hassell/B.Sc. (Brooklyn College), Ph.D. (Connecticut)

Paul Higgs/Ph.D. (Cambridge)/Senior Canada Research Chair

Gerard D. Wright/B.Sc., Ph.D. (Waterloo)/Senior Canada Research Chair

Daniel S.C. Yang/B.Sc., M.Sc. (Alberta), Ph.D. (Pittsburgh)

Boris S. Zhorov/M.Sc., Ph.D., D.Sc. (St. Petersburg)

Associate Professors

Paul J. Berti/B.Sc. (Waterloo), M.Sc. (Ottawa), Ph.D. (McGill)

Russell E. Bishop/B.Sc., Ph.D. (Alberta)

Eric D. Brown/B.Sc., M.Sc., Ph.D. (Guelph)/Canada Research Chair

Douglas W. Bryant/B.Sc. (McGill), M.Sc., Ph.D. (York)/part-time

Lori L. Burrows/B.Sc., Ph.D. (Guelph)

Yingfu Li/B.Sc. (Anhui, China), M.Sc. (Beijing Agr.), Ph.D. (Simon Fraser)/Canada Research Chair

Justin R. Nodwell/B.Sc., Ph.D. (Toronto)

Ray Truant/B.Sc., Ph.D. (Toronto)

Assistant Professors

Brian K. Coombes/B.Sc., Ph.D. (McMaster)

Bradley W. Doble/B.Sc., Ph.D. (Manitoba)

Cécile Fradin/B.Sc., M.Sc. (Ecole Normale Supérieure, Paris), Ph.D. (Université Pierre et Marie Curie, Paris)/Canada Research Chair

Alba Guarné/B.Sc., M.Sc., Ph.D. (Barcelona)

Murray S. Junop/B.Sc., Ph.D. (Western Ontario)

Michelle L. MacDonald/B.Sc., Ph.D. (McMaster)

Graham A. McGibbon/B.Sc. (Toronto), Ph.D. (McMaster)

Giuseppe Melacini/B.Sc., Ph.D. (Milan)

Joaquin Ortega/B.Sc. (Zaragoza), Ph.D. (Universidad Autónoma de Madrid)

Sujata Persad/B.Sc. (Trinidad), M.Sc., Ph.D. (Manitoba)

Bernardo L. Trigatti/B.Sc., Ph.D. (McMaster)

Geoffrey Werstuck/B.Sc., Ph.D. (McMaster)

Christopher Wynder/B.Sc. (Western Ontario), Ph.D. (Rockefeller)

Associate Members

Stephanie A. Atkinson/(Pediatrics) B.A. (Western Ontario), Ph.D. (Toronto)

Christian Baron/Dipl., Ph.D. (Munich)

Jonathan L. Bramson/B.Sc., Ph.D. (McGill)

John D. Brennan/(Chemistry) B.Sc., Ph.D. (Toronto)/Canada Research Chair

Jack Gaudie/(Pathology) B.Sc. (McMaster), Ph.D. (University College, London)

Brian F. Leber/(Medicine) B.Sc., M.D.C.M. (McGill), F.R.C.P.C.

Karen Mossman/(Pathology) B.Sc. (Guelph), Ph.D. (Alberta)

Gurmit Singh/(Pathology) B.Sc., Ph.D. (Dalhousie)

Jeffrey I. Weitz/B.Sc., M.D. (Ottawa)

Peter F.M. Whyte/(Pathology) B.Sc., M.Sc. (British Columbia), Ph.D. (New York)

Lecturer

Paulina Dlugosz/B.Sc., M.Sc. (McMaster)

Courses *If no prerequisite is listed, the course is open.***BIOCHEM 2B03 NUCLEIC ACID STRUCTURE AND FUNCTION**

Fundamental concepts and experimental methods in studying both DNA and RNA. Nature of genetic information and its storage. Molecular basis of replication, transcription and translation.

Three lectures; first term

Prerequisite: BIOLOGY 1A03, CHEM 1AA3; and credit or registration in CHEM 2BA3 or 2OA3

Prerequisite (Beginning 2008-2009): BIOLOGY 1A03, CHEM 1AA3; and credit or registration in CHEM 2BA3 or 2OA3; and registration in Honours Biochemistry, Honours Molecular Biology or Honours Physics (Biophysics Specialization)

Antirequisite: BIOCHEM 3BT3, 3G03

BIOCHEM 2BB3 PROTEIN STRUCTURE AND ENZYME FUNCTION

Fundamental concepts and experimental methods in studying structures of proteins; including membrane proteins. Nature of enzyme catalysis. Introduction to enzyme kinetics and mechanism.

Three lectures, one tutorial; second term

Prerequisite: BIOCHEM 2B03 and either CHEM 2BA3 or 2OA3; and either CHEM 2PA3 or 2R03 and credit or registration in CHEM 2BB3 or 2OB3; or registration in Honours Chemistry (Biological Specialization)

Prerequisite (Beginning 2008-2009): BIOCHEM 2B03 and either CHEM 2BA3 or 2OA3; and either CHEM 2PA3 or 2R03 and credit or registration in CHEM 2BB3 or 2OB3; and registration in Honours Biochemistry, Honours Chemistry (Biological Specialization), Honours Molecular Biology or Honours Physics (Biophysics Specialization)

Antirequisite: BIOCHEM 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 2BA3, 2E03, 2OA3

Antirequisite: BIOCHEM 2A06, 3D03

Not open to students registered in an Honours Biochemistry or Honours Molecular Biology program.

BIOCHEM 2L06 INQUIRY IN BIOCHEMICAL TECHNIQUES

An inquiry approach to learning about current techniques in biochemistry research. Students will work in small groups in labs and workshops, with a focus on how to search the primary literature, prepare and deliver written and oral presentations.

One lecture (one hour), one lab or workshop (four hours); two terms

Prerequisite: Credit or registration in BIOCHEM 2B03 or 2BB3 and registration in Honours Arts & Science and Biochemistry, Honours Biochemistry, Honours Chemistry (Biological Specialization); or BIOCHEM 2EE3 and 3G03 and registration in Honours Chemistry (Biological Specialization); or registration in Honours Physics (Biophysics Specialization)

Cross-list: MOL BIOL 2L06

Antirequisite: BIOCHEM 3L03, HTH SCI 2N03

BIOCHEM 3A03 BIOCHEMICAL RESEARCH PRACTICE

A twelve week research project undertaken in a biochemistry laboratory during the fall, winter or summer term which requires the submission of a formal report. Students are responsible to arrange a suitable project, location and agreement of the supervisor. For further information, please refer to <http://www.fhs.mcmaster.ca/biochem/Undergraduate.htm>.

Prerequisite: BIOCHEM 2B03, 2BB3; and registration in Honours Biochemistry or Honours Molecular Biology. Permission of the Department is required.

BIOCHEM 3C03 CELLULAR BIOCHEMISTRY

Biochemical basis of complex cellular processes such as compartmentalization, vesicular traffic, movement and programmed cell death. Emphasis is placed on the principles of evaluation of current research literature.

Three lectures; second term

Prerequisite: BIOCHEM 3D03; and registration in Honours Biochemistry (Molecular Biology Specialization), Honours Arts & Science and Biochemistry or Honours Physics (Biophysics Specialization)

BIOCHEM 3D03 METABOLISM AND REGULATION

Principles of bioenergetics. Major pathways for carbohydrates and lipids in energy production. Photosynthesis. Nitrogen metabolism. Biosynthesis of small biomolecules. Integration and regulation of metabolic activities.

Three lectures; first term

Prerequisite: BIOCHEM 2B03, 2BB3

Antirequisite: BIOCHEM 2EE3

BIOCHEM 3G03 PROTEINS AND NUCLEIC ACIDS

Chemical and conformational properties of proteins and relationships to their function including regulation of enzyme activity. Chemical and physical structure of DNA and RNA relevant to biological function.

Three lectures; first term

Prerequisite: CHEM 2OA3 and 2OB3; or CHEM 2BA3 and 2BB3; or a grade of at least B+ in CHEM 2E03; or CHEM 2E03 and registration in a Chemical Engineering program or Honours Physics (Biophysics Specialization)

Antirequisite: BIOCHEM 2B03, 2BB3, 3BT3

BIOCHEM 3H03 CLINICAL BIOCHEMISTRY

An outline of clinical chemistry; its relation to disease and relevance to health care.

Three lectures; second term

Prerequisite: BIOCHEM 3D03; or BIOCHEM 2EE3 and 3G03; or a grade of at least C+ in BIOCHEM 2EE3; or HTH SCI 2E03

BIOCHEM 3N03 NUTRITION AND METABOLISM

Study of nutritional biochemistry and the regulation of metabolism; the role of specific nutrients in functional processes of the body in health and disease.

Three lectures; second term

Prerequisite: BIOCHEM 3D03; or BIOCHEM 2EE3 and 3G03; or a grade of at least C+ in BIOCHEM 2EE3; or HTH SCI 2E03

BIOCHEM 3P03 ADVANCED BIOCHEMISTRY LABORATORY

A preparation for independent experimental work in molecular biology and biochemistry. Multiple techniques are used to answer complex biochemical questions in a research project.

One lab (three hours), one tutorial (three hours); first term

Prerequisite: BIOCHEM 2L06 or 3L03; and registration in Honours Arts & Science and Biochemistry or an Honours Biochemistry Specialization

Antirequisite: BIOLOGY 3V03, MOL BIOL 3V03

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOCHEM 3X03 STRUCTURE AND FUNCTION OF MACROMOLECULES

Elucidation of the structure of proteins and macromolecular assemblies and how structure determines protein function through relevant examples.

Three lectures; first term

Prerequisite: BIOCHEM 2BB3 or 3G03

Antirequisite: BIOCHEM 4K03

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOCHEM 3Y03 INTRODUCTION TO COMPUTATIONAL BIOCHEMISTRY

Introduction to biochemical databases, biological data mining and analysis tools, molecular modelling, and ligand docking. Use of internet resources of biological information, computers and software for solving structure- and information-related problems in a biomedical lab.

Three lectures/tutorials in a computer lab; second term

Prerequisite: Completion of any Biochemistry course

Enrolment is limited.

BIOCHEM 4B06 SENIOR PROJECT IN BIOCHEMISTRY AND MOLECULAR BIOLOGY

An extended research project supervised by a member or associate member of the Department of Biochemistry and Biomedical Sciences. It provides a suitable experience for graduate school or industry. Assessment is based on laboratory work, a poster presentation and a final report.

Two terms

Prerequisite: BIOCHEM 3P03 and registration in an Honours Biochemistry Specialization; or registration in Honours Physics (Biophysics Specialization). Permission of the Department is required. Application for permission must be received by March 1st of the academic year prior to registration. Students are expected to have a CA of at least 8.0. For further information, please refer to <http://www.fhs.mcmaster.ca/biochem/Undergraduate.htm>.

Antirequisite: BIOCHEM 4BB6, 4C03, 4F09, 4L03, 4P03

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 Honours Biochemistry

Antirequisite: BIOCHEM 4B06, 4F09, 4P03

BIOCHEM 4E03 RECOMBINANT DNA TECHNOLOGY AND GENE EXPRESSION

Recombinant DNA techniques; theory and applications to the study of gene function and evolution and to disease diagnostics and gene therapy. Current concepts of gene regulation at different levels.

Three lectures; first term

Prerequisite: BIOCHEM 2B03 or 3BT3; or BIOLOGY 3H03 and BIOCHEM 3G03; or a grade of at least B+ in BIOCHEM 3G03; or HTH SCI 2E03

BIOCHEM 4EE3 ADVANCED TOPICS IN GENE EXPRESSION

A critical study of the literature from recent primary manuscripts on gene regulation and inter-related regulatory pathways. Emphasis is on the molecular and cellular biology of multiple pathways that interact to affect phenomena in biology and disease.

Three lectures; second term

Prerequisite: BIOCHEM 4E03

BIOCHEM 4F09 SENIOR THESIS IN BIOCHEMISTRY AND MOLECULAR BIOLOGY

A thesis based on a major research project supervised by a member or associate member of the Department of Biochemistry and Biomedical Sciences. The results will also be presented to the department in a seminar or as part of a poster session.

Two terms

Prerequisite: BIOCHEM 3P03 and registration in an Honours Biochemistry Specialization. Permission of the department is required. Application for permission must be received by March 1st of the academic year prior to registration. Students are expected to have a C.A. of at least 9.5. For further information, please refer to <http://www.fhs.mcmaster.ca/biochem/Undergraduate.htm>.

Antirequisite: BIOCHEM 4B06, 4C03, 4G03, 4L03, 4LL3, 4P03

Enrolment is limited. See the heading *Limited Enrolment Courses* in the *Faculty of Science* section of the Calendar.

BIOCHEM 4H03 BIOTECHNOLOGY AND DRUG DISCOVERY

Selected topics on genomics, proteomics and bioinformatics illustrating the modern application of molecular biology and biochemistry to pharmaceutical and other research.

Three lectures; first term

Prerequisite: BIOCHEM 3BT3 or 3D03; or BIOCHEM 3G03 and registration in a Chemical Engineering program; or HTH SCI 2E03

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: Either BIOLOGY 2B03 or HTH SCI 2K03; and either BIOLOGY 2C03 or HTH SCI 3D03, and either BIOLOGY 3X03 or HTH SCI 3I03, and HTH SCI 4I13; or permission of the instructor.

Cross-list: HTH SCI 4J03, MOL BIOL 4J03

This course is administered by the Bachelor of Health Sciences (Honours) Program.

BIOCHEM 4LL3 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: BIOCHEM 4H03 and registration in Honours Biochemistry (Biotechnology and Genetic Engineering Specialization); or BIOCHEM 3G03 and registration in a Chemical Engineering program

Cross-list: CHEM ENG 4LL3

Antirequisite: BIOCHEM 4F09, 4G03, 4L03

BIOCHEM 4N03 MOLECULAR MEMBRANE BIOLOGY

Properties and structures of membranes, molecular components of biological membranes and their interactions, strategies for signal transduction cascades, hormones, receptors.

Three lectures; second term

Prerequisite: BIOCHEM 3D03 or 3G03; or BIOCHEM 2BB3 and registration in Honours Chemistry (Biological Specialization); or HTH SCI 2E03

Antirequisite: BIOCHEM 4I03, 4K03, 4M03

BIOCHEM 4P03 RESEARCH PROJECT IN BIOCHEMISTRY AND MOLECULAR BIOLOGY

A project supervised by a member or associate member of the Department of Biochemistry and Biomedical Sciences. Assessment is based on laboratory work and a final report.

May be taken first or second term

Prerequisite: BIOCHEM 3P03; and registration in an Honours Biochemistry Specialization or Honours Physics (Biophysics Specialization). Permission of the Department is required. Application for permission must be received by March 1st of the academic year prior to registration. Students are expected to have a C.A. of at least 7.0. For further information, please refer to <http://www.fhs.mcmaster.ca/biochem/Undergraduate.htm>.

Antirequisite: BIOCHEM 4B06, 4C03, 4F09, MOL BIOL 4R09

Enrolment is limited. See the heading *Limited Enrolment Courses* in the *Faculty of Science* section of the Calendar.

BIOCHEM 4Q03 BIOCHEMICAL PHARMACOLOGY

Introduction to the basic concepts of pharmacology. Mechanisms of action of antibacterial, antiviral, antifungal and anticancer drugs, toxins and how cellular resistance to such agents develop. Applications of drug-resistant mutants for genetic, biochemical pharmacological and cell biological studies.

Three lectures; first term

Prerequisite: BIOCHEM 3BT3 or 3D03; or BIOCHEM 2EE3 and 3G03; or HTH SCI 2E03

BIOCHEM 4S03 INTRODUCTION TO MOLECULAR BIOPHYSICS

A presentation of recent contributions made to the fields of molecular and cell biology by the use of physical approaches. Topics include physical properties of biomolecules, protein folding, molecular motors, cell motion and cell adhesion. Emphasis on the critical evaluation of current research literature.

Three lectures; first term

Prerequisite: One of CHEM 2R03, MATLS 2B03 or PHYSICS 2H04. PHYSICS 3S03 is recommended.

Cross-list: PHYSICS 4S03

This course is administered by the Department of Physics and Astronomy.

BIOCHEM 4Y03 GENOMES AND EVOLUTION

Molecular evolution and comparative analysis of genomes. Bacterial evolution, phylogenetics, origins of eukaryotes. Organelles and their genomes. Comparison of the human genome with other species. Use of microarrays and proteomics.

Three lectures; second term

Prerequisite: BIOCHEM 2B03 or 3G03

Antirequisite: BIOLOGY 4DD3

BIOLOGY

WEB ADDRESS: <http://www.science.mcmaster.ca/biology/>

Life Sciences Building, Room 118

Ext. 23049

Faculty as of January 15, 2007**Chair**

Turlough M. Finan

Associate Chairs

Patricia Chow-Fraser/Undergraduate Studies

Elizabeth A. Weretilnyk/Graduate Studies

Distinguished University Professor

Christopher M. Wood/B.Sc., M.Sc. (British Columbia), Ph.D. (East Anglia), F.R.S.C./Senior Canada Research Chair

Professors

Patricia Chow-Fraser/B.Sc., M.Sc. (Waterloo), Ph.D. (Toronto)

Turlough M. Finan/B.Sc., M.Sc. (Galway), Ph.D. (Guelph)

G. Brian Golding/B.Sc. (Dalhousie), Ph.D. (Alberta)/Senior Canada Research Chair

Delsworth G. Harnish/(Pathology and Molecular Medicine) B.Sc., M.Sc. (Queen's), Ph.D. (McMaster)

John A. Hassell/(Biochemistry and Biomedical Sciences, Pathology and Molecular Medicine) B.Sc. (Brooklyn College), Ph.D. (Connecticut)

J. Roger Jacobs/B.Sc. (Calgary), M.Sc., Ph.D. (Toronto)

Jurek Kolasa/M.Sc., Ph.D. (Poznan)

Colin A. Nurse/B.E.Sc. (Western Ontario), Ph.D. (Harvard)

Michael J. O'Donnell/B.Sc., Ph.D. (Toronto)

James S. Quinn/B.Sc. (Queen's), M.Sc. (Brock), Ph.D. (Oklahoma)
 Andrew J. Rainbow/B.Sc. (Manchester), M.Sc. (London), Ph.D. (McMaster)/Undergraduate Advisor
 C. David Rollo/B.Sc., M.Sc. (Guelph), Ph.D. (British Columbia)
 Herbert E. Schellhorn/B.Sc., M.Sc. (Guelph), Ph.D. (North Carolina)
 Rama S. Singh/B.Sc. (Agra), M.Sc. (Kanpur), Ph.D. (California-Davis)
 Elizabeth A. Weretilnyk/B.Sc., Ph.D. (Alberta)

Associate Professors

Christian Baron/Dipl. Microbiol., Ph.D. (Munich)
 André Bédard/B.Sc. (Montreal), Ph.D. (McGill)
 Robin K. Cameron/B.Sc. (Waterloo), Ph.D. (McGill)
 Ana Campos/B.A., M.A. (Rio de Janeiro), Ph.D. (Brandeis)
 Juliet M. Daniel/B.Sc. (Queen's), Ph.D. (British Columbia)
 Susan A. Dudley/B.Sc., M.Sc. (McGill), Ph.D. (Chicago)/Undergraduate Advisor
 Suleiman A. Igdoura/B.Sc. (Victoria), M.Sc. (Western Ontario), Ph.D. (McGill)
 Jianping Xu/B.Sc. (Jiangxi), M.Sc. (Nanjing and Toronto), Ph.D. (Toronto)

Adjunct Associate Professors

David A. Galbraith/Royal Botanical Gardens, B.Sc., M.Sc. (Guelph), Ph.D. (Queen's)
 James S. Pringle/Royal Botanical Gardens, A.B. (Dartmouth), M.S. (New Hampshire), Ph.D. (Tennessee)

Assistant Professors

Kimberley Dej/B.Sc. (Toronto), Ph.D. (Johns Hopkins)
 Marie Elliot/B.Sc., Ph.D. (Alberta)/Canada Research Chair
 Ben Evans/B.S. (Tufts), M.S., M.Phil., Ph.D. (Columbia)
 Bhagwati Gupta/B.Sc. (Banaras Hindu), M.Sc. (Jawaharlal Nehru), Ph.D. (TATA Institute)/Canada Research Chair
 Lovaye Kajiura/B.Sc., M.Sc., Ph.D. (McMaster)
 Grant B. McClelland/B.Sc. (Ottawa), Ph.D. (British Columbia)
 Jonathon Stone/B.Sc., M.Sc., Ph.D. (Toronto)/SHARCNet Chair in Computational Biology
 Joanna Wilson/B.Sc. (McMaster), M.Sc. (Victoria), Ph.D. (MIT/Woods Hole Oceanographic Institution)
 Xu-Dong Zhu/B.Sc. (Nanjing), M.Sc. (Regina), Ph.D. (Toronto)

Instructional Assistants

Lori Goff/B.Sc., M.Sc. (Guelph)
 Marvin Gunderman/B.Sc., M.Sc. (McMaster)
 Thelma Leech/B.Sc., M.Sc. (Guelph), M.Sc.(T.) (McMaster)
 Beryl Piccinin/B.Sc. (Mount Allison), M.Sc. (McMaster)
 Raymond Procwat/B.Sc. (McMaster), B.Ed. (Toronto)

Note:

No more than 12 units of Level II, III Biology (six units per year) may be taken in total by students enrolled in a three year Baccalaureate degree program. Detailed course descriptions are available on the program web site at http://www.science.mcmaster.ca/biology/biology_undergraduate_CourseOfferings

Courses *If no prerequisite is listed, the course is open.*

BIOLOGY 1A03 CELLULAR AND MOLECULAR BIOLOGY

Structure, molecular composition and function in sub-cellular and cellular systems.

Three lectures, one lab (three hours); one term

Prerequisite: Grade 12 Biology U and registration in one of Science I, Arts & Science I, Kinesiology I, Mathematics and Statistics I, Medical Radiation Sciences I, Chemical Engineering and Bioengineering, Electrical and Biomedical Engineering, any program above Level I; or a grade of at least 80% in Grade 12 Biology U; and credit or registration in SCIENCE 1A00
 Prerequisite (Beginning 2008-2009): BIOLOGY 1M03 and registration in any Level I program in the Faculty of Science, Arts & Science I, Honours Kinesiology I, Chemical Engineering and Bioengineering or Electrical and Biomedical Engineering; or registration in Medical Radiation Sciences I; and credit or registration in SCIENCE 1A00

Registration in or completion of CHEM 1A03, 1AA3 is strongly recommended as both courses are prerequisites for many Level II, III and IV Biology courses. Students in non-Science programs should consider registering in BIOLOGY 1K03 and SCIENCE 2K03 which do not have laboratories.

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: Grade 12 Biology U and registration in one of Science I, Arts & Science I, Kinesiology I, Mathematics and Statistics I, Medical Radiation Sciences I, Chemical Engineering and Bioengineering, Electrical and Biomedical Engineering, any program above Level I; or a grade of at least 80% in Grade 12 Biology U; and credit or registration in SCIENCE 1A00
Registration in or completion of CHEM 1A03, 1AA3 is strongly recommended as both courses are prerequisites for many Level II, III and IV Biology courses. Students in non-Science programs should consider registering in BIOLOGY 1K03 and SCIENCE 2K03 which do not have laboratories. Last offered in 2007-2008.

BIOLOGY 1K03 BIOLOGY FOR THE HUMANITIES AND SOCIAL SCIENCES

Principles spanning the realms of biology with a particular emphasis towards the understanding of the human species.

Three lectures, one tutorial; one term

Antirequisite: SCIENCE 2H03

Not open to students registered in a program in the Faculty of Science. BIOLOGY 1K03 is not a prerequisite for further courses in Biology. Other Biology courses of interest to students in Humanities and Social Sciences include SCIENCE 2K03. Last offered in 2007-2008.

BIOLOGY 1M03 BIODIVERSITY, EVOLUTION AND ECOLOGY

Fundamental evolutionary and ecological concepts with particular reference to the diversity of life.

Three lectures; three hour seminar, every other week; one term

Prerequisite: Grade 12 Biology U or BIOLOGY 1P03

Antirequisite: BIOLOGY 1AA3

First offered in 2008-2009.

BIOLOGY 1P03 INTRODUCTORY BIOLOGY

Introduction to basic biological principles for students without Grade 12 Biology U.

Three lectures, one tutorial (two hours); one term

First offered in 2008-2009.

Not open to students with 60% or higher in Grade 12 Biology U.

BIOLOGY 1X03 INTRODUCTION TO COMPUTATIONAL BIOLOGY

An introduction to how computers are used to study living systems. The use of computational techniques such as modelling, simulation and data analysis to conduct biological research.

Three lectures, one tutorial; one term

Prerequisite: BIOLOGY 1AA3 or credit or registration in BIOLOGY 1M03 or HTH SCI 1E06; and MATH 1AA3; and registration in a program in the Faculty of Science or permission of the instructor
First offered in 2008-2009.

BIOLOGY 2A03 INTEGRATIVE PHYSIOLOGY OF ANIMALS

Fundamental principles of animal physiology, including: cellular energetics, diffusion, osmosis, membrane transport, excitability and contractility, gas exchange, fluid dynamics, electrolyte balance.

Three lectures, one lab (three hours); one term

Prerequisite: BIOLOGY 1A03, 1AA3

Antirequisite: BIOLOGY 4D03, ENGINEER 4X03, ENG PHYS 3X03, HTH SCI 1H03, 1HH3, 2F03, 2FF3, KINESIOL 1A06, 1Y03, 1YY3, MED PHYS 4XX3
Not open to students with credit or registration in BIOLOGY 3P03, 3U03, 3UU3.

BIOLOGY 2B03 CELL BIOLOGY

Basic treatment of cell structure and function, including transport and chemical signals; adaptation of structure and function in specialized cells.

Three lectures, one lab (three hours), one tutorial; one term

Prerequisite: BIOLOGY 1A03, 1AA3, CHEM 1AA3

Antirequisite: HTH SCI 2K03, MOL BIOL 2B03

Not open to students registered in the Honours Molecular Biology program.

BIOLOGY 2C03 GENETICS

Structure, function and transmission of genes; chromosomal basis of inheritance; mono- and dihybrid crosses; sequential steps in gene function; linkage maps; sex chromosome inheritance.

Three lectures and one tutorial (three hours); one term

Prerequisite: BIOLOGY 1A03, 1AA3, CHEM 1AA3; and registration in an Honours program in the Faculty of Science, or a program in Arts & Science, Health Sciences or Kinesiology. Students are required to have a C.A. of at least 6.0; students who require this course for completion of their program are guaranteed admission.

Enrolment is limited. See the heading *Limited Enrolment Courses* in the *Faculty of Science* section of the Calendar.

BIOLOGY 2D03 PLANT BIODIVERSITY

An introduction to plants emphasizing their diversity in structure, development, ecology, mechanisms of reproduction, adaptations for survival in different environments, and human uses.

Two lectures, one lab (three hours); one term

Prerequisite: BIOLOGY 1AA3; and BIOLOGY 1A03 or ENVIR SC 1B03

BIOLOGY 2EE3 INTRODUCTION TO MICROBIOLOGY AND BIOTECHNOLOGY

Introduction to microbial cell biology, ecology, pathogenicity, physiology, taxonomy, antimicrobial agent action and to the application of microorganisms in biotechnology.

Two lectures, one lab (three hours); one term

Prerequisite: BIOLOGY 1A03, 1AA3, CHEM 1AA3 and credit or registration in one of CHEM 2BA3, 2E03 or 2OA3; or registration in Level III Chemical Engineering and Bioengineering

Antirequisite: BIOLOGY 3E03

BIOLOGY 2F03 FUNDAMENTAL AND APPLIED ECOLOGY

An introduction to fundamental ecological principles and illustration of how these are applied to current environmental problems at the level of organisms, populations and ecosystems.

Two lectures, one optional tutorial, one mandatory lab (three hours); one term

Prerequisite: BIOLOGY 1AA3

BIOLOGY 2G03 INQUIRY I - CURRENT ISSUES IN BIODIVERSITY

An interactive course exposing students to current issues in the understanding, preservation and management of biodiversity and ecological integrity.

One lecture (three hours), one tutorial (two hours); one term

Prerequisite: BIOLOGY 2D03, 2F03; and registration in Level II or III of any program in the Faculty of Science, Health Sciences or the Arts & Science Program. Please note, BIOLOGY 3G03 is open only to students registered in the Biodiversity Specialization of the Honours Biology Program.

Antirequisite: BIOLOGY 2I03

BIOLOGY 2YY3 PRACTICAL DATABASES AND DATA MINING IN BIOLOGY

An introduction to the use of databases in the life sciences. How to find, add data to and extract knowledge from computer databases.

Three lectures, one tutorial; one term

Prerequisite: COMP SCI 1MD3 or PHYSICS 2G03

First offered in 2008-2009.

BIOLOGY 2Z03 SIMULATIONS AND DYNAMICAL SYSTEMS IN BIOLOGY

A practical introduction to programming simulations of biological systems in order to answer questions in the life sciences.

Three lectures, one tutorial; one term

Prerequisite: COMP SCI 1MD3 or PHYSICS 2G03

First offered in 2008-2009.

BIOLOGY 3AA3 FUNDAMENTAL CONCEPTS OF PHARMACOLOGY

Drug interactions with living organisms; absorption and elimination of drugs, variations in drug action, drug toxicity, receptor structure and function, and signal transduction pathways.

Three lectures, one tutorial (three hours); one term

Prerequisite: One of BIOLOGY 2A03, HTH SCI 2FF3, PSYCH 2F03; and one of BIOCHEM 2A06, 2BB3, 2EE3 or registration in BIOCHEM 3G03. BIOLOGY 3P03 is strongly recommended.

Not open to students with credit in BIOCHEM 4Q03 or registration in Honours Biology and Pharmacology.

BIOLOGY 3B03 PLANT PHYSIOLOGY

Principles of physiology and plant cell metabolism. Topics include: photosynthesis, photorespiration, 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

Offered on an irregular rotation basis.

BIOLOGY 3CC3 MICROBIAL GENOMES AND SYSTEMS BIOLOGY

Advanced topics of microbial physiology/biochemistry and introduction to systems approaches based on microbial genomics, transcriptomics, proteomics and metabolomics projects.

Two lectures, one lab or tutorial (three hours); one term

Prerequisite: BIOCHEM 2B03 or 2EE3; and BIOLOGY 2B03, 2C03; and BIOLOGY 2EE3 or 3E03; and CHEM 2OA3, 2OB3. Completion of BIOLOGY 3O03 is strongly recommended.

Prerequisite (Beginning 2008-2009): BIOCHEM 2B03 or 2EE3; and BIOLOGY 2B03, 2C03; and BIOLOGY 2EE3 or 3E03; and BIOLOGY 3O03; and CHEM 2OA3, 2OB3

BIOLOGY 3F03 VERTEBRATE ANATOMY

An introduction to the development of structure and function in vertebrates.

Three lectures, one lab (three hours); one term

Prerequisite: BIOLOGY 2B03. BIOLOGY 2A03 is strongly recommended.

Enrolment is limited. See the heading *Limited Enrolment Courses* in the *Faculty of Science* section of the Calendar.

Offered in alternate years.

Offered in 2007-2008.

BIOLOGY 3FF3 EVOLUTION

Introduction to the major theoretical concepts and empirical findings in micro- and macroevolution.

Three lectures, one tutorial; one term

Prerequisite: BIOLOGY 2C03

BIOLOGY 3G03 INQUIRY II - CURRENT RESEARCH IN BIODIVERSITY

An interactive course highlighting current research programs in the general area of biodiversity within the Biology Department. Preparation for BIOLOGY 4C09 and 4F06 project on a biodiversity topic. A mandatory weekend field trip will be held in September. Students enrolling in this course must pay both the nominal incidental fees as prescribed by the Instructor and regular tuition fees.

One lecture (three hours), one tutorial (two hours); one term

Prerequisite: BIOLOGY 2G03. Restricted to students registered in Level III Honours Biology (Biodiversity Specialization).

BIOLOGY 3H03 MOLECULAR BIOLOGY OF THE NUCLEUS

Structure of the nucleus and of chromatin; organization of DNA sequences; DNA replication, transcription; gene expression; some relevant techniques.

Two lectures, one tutorial (two hours); one term

Prerequisite: BIOLOGY 2B03

Antirequisite: BIOCHEM 3B03

BIOLOGY 3HH3 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

Molecular genetics of eukaryotes, with focus on molecular mechanisms of eukaryotic DNA replication, DNA repair and recombination, cell cycle and cancer, telomeres and telomerase.

Three lectures; one term

Prerequisite: BIOLOGY 2B03, 2C03

BIOLOGY 3K03 ANIMAL HISTOLOGY

The structure, function, and organization of cells, tissues, organs and organ systems.

Three lectures, one lab (three hours); one term

Prerequisite: BIOLOGY 2B03. BIOLOGY 2A03 is strongly recommended.

Antirequisite: HTH SCI 2F03, 2FF3

Enrolment is limited. See the heading *Limited Enrolment Courses* in the *Faculty of Science* section of the Calendar.

BIOLOGY 3M03 FUNDAMENTAL CONCEPTS OF DEVELOPMENT

Recent advances using genetic and molecular approaches will be discussed in the context of classical experiments. Various model systems (mice, fruitflies, worms) will be examined.

Two lectures, one tutorial or lab (three hours); one term

Prerequisite: BIOLOGY 2B03, 2C03

BIOLOGY 3MM3 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 BIOLOGY 1A03 and either KINESIOL 1A06 (or 1A03 and 1AA3) or both KINESIOL 1Y03 and 1YY3

BIOLOGY 3O03 MICROBIAL GENETICS

The genetics of bacteriophages, bacteria and fungi. Special emphasis will be placed on relationships between microbial genetics and general problems in genetics and gene regulation.

Three lectures, one tutorial; one term

Prerequisite: BIOLOGY 2C03. BIOLOGY 2EE3 or 3E03 is strongly recommended.

Prerequisite (Beginning 2008-2009): BIOLOGY 2C03; and credit or registration in BIOLOGY 2EE3 or 3E03

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; or both BIOLOGY 1A03 and either KINESIOL 1A06 (or 1A03 and 1AA3) or both KINESIOL 1Y03 and 1YY3; and credit or registration in one of BIOCHEM 2A06, 2BB3 or 3G03

BIOLOGY 3Q03 PEER MENTORING IN BIOLOGY (CELLULAR AND MOLECULAR BIOLOGY)

This course gives students theoretical and practical experience with teaching methods in cellular and molecular biology and focuses upon effective presentation and scientific writing skills.

One lecture (two hours); one practicum; one term

Prerequisite: BIOLOGY 1A03; and registration in Level III or above of a program in Arts & Science or the Faculty of Science; and permission of the instructor

Antirequisite: BIOLOGY 3Q03, HTH SCI 4X03

Enrolment is limited. Applications must be submitted to the Undergraduate Assistant, Life Sciences Building, Room 118 prior to registration. Placements announced after completion of a successful interview. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOLOGY 3Q03 PEER MENTORING IN BIOLOGY (BIODIVERSITY, EVOLUTION AND ECOLOGY)

This course gives students theoretical and practical experience with teaching methods in biodiversity, evolution and ecology and focuses on effective presentation and scientific writing skills.

One lecture (two hours); one practicum; one term

Prerequisite: BIOLOGY 1AA3; and registration in Level III or above of a program in Arts & Science or the Faculty of Science; and permission of the instructor.

Antirequisite: BIOLOGY 3Q03, HTH SCI 4X03

Enrolment is limited. Applications must be submitted to the Undergraduate Assistant, Life Sciences Building, Room 118 prior to registration. Placements announced after completion of a successful interview. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOLOGY 3R03 FIELD BIOLOGY I

Field work plus written assignments chosen from an assortment of modules offered by faculty from McMaster and other Ontario Universities' Biology Departments. This module must differ from any completed for credit in BIOLOGY 4J03, 4JJ3. Available modules are posted in December each year. Content and schedules vary annually. Students enrolling in this course must pay both the incidental fees, as prescribed by the Department, and the regular tuition fees.

Prerequisite: BIOLOGY 1A03, 1AA3 or one of ENVIR SC 1A03, 1B03 or 1G03; and permission of the Course Administrator, Life Sciences Building, Room 118. Some modules have additional prerequisites. For information on Field Biology, please refer to the Biology web site at http://www.science.mcmaster.ca/biology/biology_undergraduate_CourseOfferings and click on BIOLOGY 3R03, or contact the Course Administrator.

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOLOGY 3S03 AN INTRODUCTION TO BIOINFORMATICS

This course introduces the techniques and methods of basic computer analysis of sequence data, including alignment, databases, and phylogenetic reconstruction.

Three lectures, one tutorial; one term

Prerequisite: BIOLOGY 2C03

Antirequisite: BIOLOGY 4K03

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 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 2F03, BIOLOGY 2D03 and STATS 1CC3 are recommended.

BIOLOGY 3U03 ANIMAL PHYSIOLOGY - HOMEOSTASIS

Respiration, circulation, acid-base balance and renal function.

Two lectures, one lab/tutorial (three hours); one term

Prerequisite: BIOLOGY 2A03; or both BIOLOGY 1A03 and either KINESIOL 1A06 (or 1A03 and 1AA3) or both KINESIOL 1Y03 and 1YY3; and registration in Level III or above of any Honours program. BIOCHEM 2EE3 and 3G03 are recommended.

Antirequisite: MED PHYS 4XX3

Not open to students registered in the Faculty of Health Sciences or with credit or registration in HTH SCI 2L03 or 2LL3.

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOLOGY 3UU3 ANIMAL PHYSIOLOGY - REGULATORY SYSTEMS

Regulation associated with major features and functions of organisms (e.g. feeding, reproduction, thermoregulation, growth, stress, sleep, aging). Emphasis on endocrinology, evolution, vertebrates and ecology. Material will include selected readings.

Two lectures; one term

Prerequisite: BIOLOGY 2A03; or both BIOLOGY 1A03 and either KINESIOL 1A06 (or 1A03 and 1AA3) or both KINESIOL 1Y03 and 1YY3. BIOLOGY 2B03 and 2C03 are recommended.

Antirequisite: BIOLOGY 4D03, MED PHYS 4XX3

Not open to students registered in the Faculty of Health Sciences or with credit or registration in HTH SCI 2L03 or 2LL3.

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: Credit or registration in BIOLOGY 3O03 and registration in Level III or above of any Honours Biology program

Antirequisite: BIOCHEM 3P03, MOL BIOL 3V03

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOLOGY 3WW3 MICROBIOLOGY INQUIRY

An interactive course highlighting current research programs in the general field of microbiology as well as specific interests in microbiology within the Department of Biology.

One lecture (three hours), one tutorial; one term

Prerequisite: Registration in Level III Honours Biology (Microbiology and Biotechnology Specialization)

BIOLOGY 3Y03 PLANT RESPONSES TO THE ENVIRONMENT

How plants respond at the genetic, molecular, biochemical and phenotypic levels to environmental stress. Manipulation of these responses to improve crops will be explored.

Three lectures; one term

Prerequisite: BIOLOGY 2B03, 2C03, 2D03

BIOLOGY 3YY3 INTRODUCTION TO GENOMICS

An introduction to the field of genomics. The technologies used to do high throughput biological experiments, the results of large genomic studies and how these studies affect society.

Three lectures, one tutorial; one term

Prerequisite: BIOLOGY 2C03

First offered in 2009-2010.

BIOLOGY 3ZZ3 TOPICS IN PHYSIOLOGY

An advanced seminar focusing on current topics in physiology.

One seminar (two hours); two terms

Prerequisite: Registration in Honours Biology (Physiology Specialization)
First offered in 2008-2009.

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 3FF3, 3J03, 3SS3 or 3TT3; and registration in Level III or above of any Honours program

BIOLOGY 4AA3 CONSERVATION BIOLOGY

Examination of how biological principles, mainly from population biology and genetics can be applied to conserving diversity in the natural world.

Three lectures, one lab (three hours); one term

Prerequisite: BIOLOGY 2C03; and one of BIOLOGY 3FF3, 3J03, 3SS3 or 3TT3; and registration in Level III or above of any Honours program

BIOLOGY 4B03 PLANT METABOLISM AND MOLECULAR BIOLOGY

Analysis of plant cell metabolism and the regulation of metabolism at the biochemical and molecular genetic level.

Three lectures; one term

Prerequisite: One of BIOCHEM 2A06, 2BB3 or 3G03; and registration in Level III or above of any Honours program. BIOLOGY 3B03 and 3H03 are recommended.

Offered in alternate years.

Offered in 2007-2008.

BIOLOGY 4C09 SENIOR THESIS

A thesis based upon a research project in an area of biology carried out under the direction of a member of the Biology department.

Prerequisite: Registration in Level IV of any Honours Biology program and permission of the Course Administrator, Life Science Building, Room 118. Students are expected to have a C.A. of at least 8.5. Arrangements to take BIOLOGY 4C09, including agreement of the supervisory committee, should be made according to Departmental Guidelines before the end of March in Level III. For information on Departmental Guidelines, please refer to the Biology web site at http://www.science.mcmaster.ca/biology/biology_undergraduate_CourseOfferings and click on BIOLOGY 4C09, or contact the Course Administrator.

Enrolment is limited. See the heading *Limited Enrolment Courses* in the *Faculty of Science* section of the Calendar.

BIOLOGY 4DD3 MOLECULAR EVOLUTION

The study of how molecules change over time within and between species. The experimental data, techniques and theories will be examined.

Two lectures, one tutorial; one term

Prerequisite: ANTHROP 2D03 or BIOLOGY 3FF3; and registration in Level III or above of any Honours program

Antirequisite: BIOCHEM 4Y03

Offered in alternate years.

Not offered in 2007-2008.

BIOLOGY 4E03 POPULATION GENETICS

Conceptual foundations of evolutionary theory and principles of population genetics.

Three lectures; or two lectures, one tutorial; one term

Prerequisite: BIOLOGY 2C03, 3FF3; and registration in Level III or above of any Honours program

Antirequisite: BIOLOGY 3J03

BIOLOGY 4EE3 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; and registration in Level III or above of any Honours program

Prerequisite (Beginning 2008-2009): BIOLOGY 2C03, 3FF3 and registration in Level III or above of any Honours program

BIOLOGY 4F06 SENIOR PROJECT

Students undertake an experimental or library project in a specialized area of biology under the direction of a member of the Biology department.

Prerequisite: Registration in Level IV of any Honours Biology program and permission of the Course Administrator, Life Sciences Building, Room 118. Students are expected to have a C.A. of at least 8.5. Arrangements to take BIOLOGY 4F06, including the agreement of the supervisory committee, should be made according to Departmental Guidelines before the end of March in Level III. For information on Departmental Guidelines, please refer to the Biology web site at http://www.science.mcmaster.ca/biology/biology_undergraduate_CourseOfferings and click on BIOLOGY 4F06, or contact the Course Administrator.

Enrolment is limited. 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 co-registration in BIOLOGY 3K03); and registration in Level III or above of any Honours program; and permission of the instructor. Application for permission must be received by the Course Administrator, Life Sciences Building, Room 118, by March 31st of the academic year prior to registration. These are minimum requirements, and final selection will be based on academic merit.

Antirequisite: MED PHYS 4XX3

Enrolment is limited. See the heading *Limited Enrolment Courses* in the *Faculty of Science* section of the Calendar.

Offered in alternate years.

Not offered in 2007-2008.

BIOLOGY 4GG9 SENIOR GENETICS CO-OP THESIS

A thesis based upon a research project in an area of genetics carried out under the direction of a member of the Biology department.

Prerequisite: Registration in Level IV of the Honours Biology Genetics Specialization Co-Op program and permission of the Course Administrator, Life Sciences Building, Room 118. Arrangements to take BIOLOGY 4GG9, including the agreement of the supervisory committee, should be made according to Departmental Guidelines before the end of March in Level III. For information on Departmental Guidelines, please refer to the Biology web site at http://www.science.mcmaster.ca/biology/biology_undergraduate_CourseOfferings and click on BIOLOGY 4GG9.

Antirequisite: HTH SCI 3H03, 4A09, 4B06

Enrolment is limited. See the heading *Limited Enrolment Courses* in the *Faculty of Science* section of the Calendar.

BIOLOGY 4I03 INQUIRY IN BIOLOGY II

This course provides an opportunity to explore a specialized area of Biology in a small group setting.

Lectures, seminars and discussions (three hours); one term

Prerequisite: Registration in Level IV Honours Biology. BIOLOGY 4I03 may not be repeated. For information regarding module offerings, please refer to the Biology web site at http://www.science.mcmaster.ca/biology/biology_undergraduate_CourseOfferings and click on BIOLOGY 4I03, or contact the Course Administrator, Life Sciences Building, Room 118.

Antirequisite: BIOLOGY 4C09, 4F06, 4FF3, 4GG9, HTH SCI 3H03, 4A09, 4B06, MOL BIOL 4R09, PHARMAC 4F09

Enrolment is limited.

See the heading *Limited Enrolment Courses* in the *Faculty of Science* section of the Calendar.

BIOLOGY 4J03 FIELD BIOLOGY II

A second field module chosen from those offered by faculty from McMaster and other Ontario Universities' Biology Departments. This module must differ from any completed for credit in BIOLOGY 3R03, 4JJ3. Available modules are posted in December of each year. Content and schedules vary annually. Students enrolling in this course must pay both the incidental fees, as prescribed by the Department, and the regular tuition fees.

Prerequisite: BIOLOGY 1A03, 1AA3 or one of ENVIR SC 1A03, 1B03 or 1G03; and permission of the Course Administrator, Life Sciences Building, Room 118. Some modules have additional prerequisites. For information on Field Biology, please refer to the Biology web site at http://www.science.mcmaster.ca/biology/biology_undergraduate_CourseOfferings and click on BIOLOGY 4J03, or contact the Course Administrator.

Enrolment is limited. See the heading *Limited Enrolment Courses* in the *Faculty of Science* section of the Calendar.

BIOLOGY 4JJ3 FIELD BIOLOGY III

A third field module chosen from those offered by faculty from McMaster and other Ontario Universities' Biology Departments. This module must differ from any completed for credit in BIOLOGY 3R03, 4J03. Available modules are posted in December of each year. Content and schedules vary annually. Students enrolling in this course must pay both the incidental fees, as prescribed by the Department, and the regular tuition fees.

Prerequisite: BIOLOGY 1A03, 1AA3 or one of ENVIR SC 1A03, 1B03 or 1G03; and permission of the Course Administrator, Life Sciences Building, Room 118. Restricted to students who have completed Level III Honours Biology (Biodiversity Specialization). Some modules have additional prerequisites. For information on Field Biology, please refer to the Biology web site at http://www.science.mcmaster.ca/biology/biology_undergraduate_CourseOfferings and click on BIOLOGY 4JJ3, or contact the Course Administrator.

Enrolment is limited. See the heading *Limited Enrolment Courses* in the *Faculty of Science* section of the Calendar.

BIOLOGY 4P03 MEDICAL MICROBIOLOGY

Infectious diseases: identification, epidemiology and treatment.

Two lectures, one tutorial (three hours); one term

Prerequisite: BIOLOGY 2EE3 or 3E03; and registration in Level III or above of any Honours program. Credit or registration in BIOLOGY 3O03 is strongly recommended.

BIOLOGY 4PP3 MICROBIAL DIVERSITY AND ENVIRONMENTAL BIOTECHNOLOGY

Study of interaction of microorganisms with their environment with emphasis on topics of ecological significance including plant-microbe interactions, nutrient cycling and waste treatment.

Two lectures, one tutorial (three hours); one term

Prerequisite: BIOLOGY 2EE3 or 3E03; and registration in Level III or above of any Honours program. Credit or registration in BIOLOGY 3O03 is strongly recommended.

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; and registration in Level III or above of any Honours program.

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 lectures, one tutorial (three hours); one term

Prerequisite: BIOLOGY 3P03 and registration in Level III or above of any Honours program. One or more of BIOLOGY 3H03, 3HH3, 3UU3, PSYCH 2F03, 3FA3 is also recommended.

Offered in alternate years.

Not offered in 2007-2008.

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: BIOLOGY 2B03 or 2C03, and credit or registration in one of MED PHYS 3T03, 4B03, PHYSICS 3T03; or registration in Year 4 of Medical and Health Physics Co-op

BIOLOGY 4X03 ENVIRONMENTAL PHYSIOLOGY

The influence of environmental factors on the physiology of animals and the adaptation of animals to diverse environments in the context of biodiversity.

Three lectures; or two lectures, one tutorial; one term

Prerequisite: One of BIOLOGY 3MM3, 3P03, 3U03, 3UU3; and registration in Level III or above of any Honours program.

Enrolment is limited. See the heading *Limited Enrolment Courses* in the *Faculty of Science* section of the Calendar.

Offered in alternate years.

Offered in 2007-2008.

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 2EE3 or 3E03; and registration in Honours Biology (Genetics Specialization or Microbiology and Biotechnology Specialization) or Honours Biology Genetics Specialization Co-op; and permission of the instructor. Application for permission must be received by March 31st of the academic year prior to registration.

Enrolment is limited. See the heading *Limited Enrolment Courses* in the *Faculty of Science* section of the Calendar.

BIOLOGY 4Y03 ECOLOGY OF INLAND WATERS

Physical, chemical and biological interrelationships of inland waters, including aspects of pollution.

Two lectures, one lab (three hours); one term

Prerequisite: BIOLOGY 2F03 and credit or registration in one of BIOLOGY 3G03, 3SS3, 3TT3 and registration in Level III or above of any Honours program

BIOTECHNOLOGY

(SEE TECHNOLOGY, BIOTECHNOLOGY)

BUSINESS

(SEE COMMERCE)

CANADIAN STUDIES

(SEE INTERDISCIPLINARY MINORS AND THEMATIC AREAS)

CAYUGA

(SEE INDIGENOUS STUDIES, CAYUGA)

CHEMICAL ENGINEERING

WEB ADDRESS: <http://www.chemeng.mcmaster.ca>

John Hodgins Engineering Building, Room 374

Ext. 24957

Faculty as of January 15, 2007**Chair**

A. N. Hrymak

Distinguished University Professors

John L. Brash/B.Sc., Ph.D. (Glasgow), D.Hon.C. (Paris Nord), F.B.S.E., F.R.S.C., P.Eng

John F. MacGregor/B.Eng. (McMaster), M.Sc., Ph.D. (Wisconsin), F.A.S.A., F.C.A.E., P.Eng./Dofasco Chair in Process Automation and Information Technology

Professors

James M. Dickson/ B.A.Sc., M.A.Sc. (Waterloo), Ph.D. (Virginia Tech.)

Andrew N. Hrymak/B.Eng. (McMaster), Ph.D. (Carnegie Mellon), P.Eng., F.C.I.C.

Rafik O. Louffy/B.Sc., M.Sc. (Ain Shams), Ph.D. (Western Ontario), M.B.A. (Toronto), F.C.I.C.

Thomas E. Marlin/B.S. (SUNY), M.S. (Dayton), Ph.D. (Massachusetts)

Robert H. Pelton/B.Sc., M.Sc. (Guelph), Ph.D. (Bristol)/Senior Canada

Research Chair

Paul A. Taylor/B.Sc., Ph.D. (Wales), P.Eng.

John Vlachopoulos/Dipl. Ch. Eng. (National Technical University of Athens), M.S., D.Sc. (Washington, St. Louis), F.C.I.C., P.Eng.

Philip E. Wood/B.A.Sc. (Waterloo), Ph.D. (California Inst. Tech.), F.C.I.C., P.Eng.

Shiping Zhu/B.Eng. (Zhejiang), Ph.D. (McMaster), P.Eng./Canada Research Chair

Adjunct Professor

Joseph D. Wright/B.Sc. (Alberta), Ph.D. (Cambridge), P.Eng.

Associate Professors

Christopher L. E. Swartz/B.Sc.Eng. (Cape Town), Ph.D. (Wisconsin)

Heather Sheardown/B.Eng. (McMaster), Ph.D. (Toronto), P.Eng.

Adjunct Associate Professors

Lyndon W.J. Jones/B.Sc. (Wales), Ph.D. (Aston)

Theodora Kourti/Dipl. Eng. (Chemical) (Aristotle), Ph.D. (McMaster)

Assistant Professors

Carlos Filipe/B.S. (*Universidade Catolica Portuguesa*), Ph.D. (*Clemson*)
 Raja Ghosh/B.S., M.S. (*Jadavpur*), D.Phil. (*Oxford*)/Canada Research Chair

Kim Jones/B.A.Sc. (*Waterloo*), M.Sc. (*Guelph*), Ph.D. (*Toronto*)
 Prashant Mhaskar/B.Tech. (*IIT*), M.S. (*Louisiana State*), Ph.D. (*UCLA*)
 Michael Thompson/B.Sc., B.Eng., M.Eng. (*McMaster*), Ph.D. (*Waterloo*)

Adjunct Assistant Professors

Leopold K. (Kris) Kostanski/M.Eng., Ph.D. (*Technical University of Szczecin*)
 Shannon L. Quinn/B.Sc., B.A.Sc. (*Ottawa*), Ph.D. (*Queen's*)

Associate Members

Michael Brook/(Chemistry) B.Sc. (*Toronto*), Ph.D. (*McGill*)
 Kari Dalnoki-Veress/(Physics and Astronomy) B.Sc., M.Sc., Ph.D. (*Guelph*)
 Nicholas Kevlahan/(Mathematics and Statistics) B.Sc. (*British Columbia*), Ph.D. (*Cambridge*)
 Joseph McDermid/(Mechanical Engineering) B.A.Sc. (*Queens*) M.Eng., Ph.D. (*McGill*)
 Judith West-Mays/(Pathology and Molecular Medicine) B.Sc. (*Wilfrid Laurier*), M.Sc., Ph.D. (*Waterloo*)

Department Note:

All Chemical Engineering courses are open to students registered in a Chemical Engineering program, subject to prerequisite requirements. Prior permission of the Department is necessary for students from other Engineering departments and other faculties.

Courses**CHEM ENG 2A04 HEAT TRANSFER**

Steady and unsteady conduction and convection, condensation and boiling. Understanding fundamentals behind heat exchangers, and finned arrangements. Numerical simulations of complex heat transfer systems. Three lectures, one tutorial (two hours); second term

Prerequisite: Registration in a Chemical Engineering or Materials Engineering program

Corequisite: One of CHEM ENG 2B03, 2F04, MATLS 2B03, 2D03

CHEM ENG 2B03 INTRODUCTION TO BIOPROCESS ENGINEERING

Unit operations approach; material and energy balances; survey of momentum, heat and mass transfer; basics of chemical process design.

Two lectures (one hour each), one tutorial (two hours); first term

Prerequisite: Registration in Level II Honours Biochemistry (Biotechnology and Genetic Engineering Specialization); or Level II Civil Engineering (Water/Environmental Engineering Stream)

Not open to students registered in a Chemical Engineering program.

CHEM ENG 2D04 CHEMICAL ENGINEERING PRINCIPLES I

Steady-state mass balances in chemical processes and the first law of thermodynamics. The behaviour of gases and liquids, and their physical equilibria. Recycle in steady state operation.

Three lectures, one tutorial (three hours); first term

Prerequisite: Registration in Level II of any Chemical Engineering program

CHEM ENG 2F04 CHEMICAL ENGINEERING PRINCIPLES II

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 2G03 PROBLEM SOLVING AND TECHNICAL COMMUNICATION

Developing awareness, strategies, creativity, analysis and interpersonal skills in the context of solving homework problems and preparing technical communications. Interpretation, retrieval manipulation and communication of information.

Three lectures; first term

Antirequisite: CHEM ENG 2C02, 2G02

CHEM ENG 3BC4 CELL BIOLOGY AND MICROBIOLOGY

Introduction to cell structure and function, including transport and chemical signals, adaptation of structure and function. Use of micro organisms in biotechnology. Biology of the prokaryotic cell.

Three lectures, one lab (three hours); second term

Prerequisite: Registration in Chemical Engineering and Bioengineering

CHEM ENG 3BK3 BIO-REACTION ENGINEERING

Kinetics of cellular processes, microbial processes and enzyme reactions including those of immobilized cells and enzymes. Cell culturing. Bioreactor design. Bioprocess development including downstream processing.

Three lectures; first term

Prerequisite: Registration in Level IV of any Chemical Engineering program; or CHEM ENG 2B03; or permission of the Department

CHEM ENG 3BM3 BIOSEPARATIONS ENGINEERING

Introduction to bioseparations engineering, cell disintegration, precipitation based separation processes, extraction, adsorption, chromatography, centrifugal separations, filtration, membrane based separation processes, electrophoresis.

Three lectures; second term

Prerequisite: Registration in Level IV of a Chemical Engineering Program; or CHEM ENG 2B03; or permission of the Department

CHEM ENG 3D03 CHEMICAL ENGINEERING THERMODYNAMICS

Review of the total energy balance, mechanical energy balance and thermodynamics of one component system. Chemical reaction and phase equilibria of multicomponent systems, with emphasis on non-ideality.

Two lectures, one tutorial (two hours); first term

Prerequisite: CHEM ENG 2F04

CHEM ENG 3E04 PROCESS MODEL FORMULATION AND SOLUTION

Formulation of models for various chemical processing units in the steady and unsteady states. Techniques for numerical solution of model equations, including algebraic and ordinary differential equations, both linear and non-linear.

Three lectures; one tutorial (one hour), every week; first term

Prerequisite: CHEM ENG 2F04; and MATH 2M06 (or 2M03 and 2MM3) or both MATH 2A03 and 2C03, or both MATH 2P04 and 2Q04

CHEM ENG 3G04 SIMULATION, MODELLING AND PROBLEM SOLVING

Chemical process simulation including models for heat exchangers, separators and reactors. Group skills, decision-making and self-directed, problem-based learning.

Three lectures, one tutorial (two hours); second term

Prerequisite: CHEM ENG 2G02, or both CHEM ENG 2F04 and 2G03; and credit or registration in CHEM ENG 3D03

Antirequisite: CHEM ENG 3G03

CHEM ENG 3K04 INTRODUCTION TO REACTOR DESIGN

Stoichiometry of multiple reactions, kinetics of homogeneous reactions, interpretation of batch data, design of ideal and non-ideal CSTR and plug flow reactors.

Three lectures; one tutorial (two hours); second term

Prerequisite: MATH 2M06 (or 2M03 and 2MM3) or both MATH 2A03 and 2C03, or both MATH 2P04 and 2Q04 and registration or credit in CHEM ENG 2F04 and 3D03; or a grade of at least B+ in CHEM ENG 2B03 and permission of the Department

CHEM ENG 3L02 INTERMEDIATE LABORATORY SKILLS

Experiments and projects in heat transfer, thermodynamics, mass transfer and fluid mechanics with appropriate data analysis and report writing.

One lecture, one lab (three hours); second term

Prerequisite: CHEM ENG 3D03 and credit or registration in CHEM ENG 2A04 and 3O04

CHEM ENG 3M04 MASS TRANSFER AND STAGewise OPERATIONS

Stagewise operations, diffusion, mass transfer coefficients, distillation, differential contacting and absorption.

Three lectures, one tutorial (two hours); first term

Prerequisite: CHEM ENG 2F04

CHEM ENG 3O04 FLUID MECHANICS

The laws of statics and dynamics in both compressible and incompressible fluids. Equations of conservation and modern turbulence and boundary layer theory applied to submerged and conduit flow. Similitude, unsteady flow, measuring devices and fluid machinery.

Three lectures, one tutorial (three hours); first term

Prerequisite: MATH 2M06 (or 2M03 and 2MM3) or both MATH 2P04 and 2Q04, or both MATH 2A03 and 2C03 (any of which may be taken concurrently); and registration in a Chemical Engineering, Materials Science, Materials Engineering or Engineering Physics (Nuclear Engineering and Energy Systems Stream) program

CHEM ENG 3P04 PROCESS CONTROL

Transient behaviour of chemical processes. Theory and practice of automatic control. Introduction to computer process control.

Three lectures, one tutorial (two hours); second term

Prerequisite: MATH 2M06 (or 2M03 and 2MM3) or both MATH 2A03 and 2C03, or both MATH 2P04 and 2Q04; and credit or registration in CHEM ENG 2A04, 3E04, 3K04, 3O04

Antirequisite: CHEM ENG 3P03

CHEM ENG 3Q03 INTRODUCTION TO POLYMER SCIENCE

An overview of important synthetic and natural polymers with emphasis on polymer structure, the chemistry of polymer formation. An introduction to polymer characterization.

Three lectures; second term

Prerequisite: One of CHEM 2A03, 2E03, 2OA3, 2OB3, 2WW2

CHEM ENG 4B03 POLYMER REACTION ENGINEERING

Kinetics of polymerization: step-growth and chain-growth (free radical, anionic, anionic coordination and cationic). Polymerization processes: solution/bulk, suspension, emulsion, gas-phase, slurry and reactive processing. Principles of polymer process and reactor design, optimization and control.

Three lectures; first term

Prerequisite: CHEM ENG 3K04

CHEM ENG 4C03 STATISTICS FOR ENGINEERS

Linear regression analysis in matrix form, non-linear regression, multi-response estimation, design of experiments including factorial and optimal designs. Special emphasis on methods appropriate to engineering problems.

Three lectures; one term

Prerequisite: One of COMMERCE 2QA3, STATS 3N03 or 3Y03

CHEM ENG 4E03 DIGITAL COMPUTER PROCESS CONTROL

This course addresses key aspects of implementing control via discrete calculations using digital computers. Topics include discrete-time dynamic models, system identification, analysis of discrete-time systems, design of digital control systems and model predictive control.

Three lectures; first term

Prerequisite: CHEM ENG 3P03 or 3P04

CHEM ENG 4G03 OPTIMIZATION IN CHEMICAL ENGINEERING

The application on optimization methods to important engineering problems in equipment design and operation, statistics, control, engineering economics and scheduling. The course will emphasize problem definition, model formulation and solution analysis, with sufficient details on existing algorithms and software to solve problems.

Two lectures, one tutorial (two hours); second term

Prerequisite: CHEM ENG 3E04, 3M04, 3O04, 3P03 (or 3P04); and CHEM ENG 3G03 or 3G04

CHEM ENG 4K03 REACTOR DESIGN FOR HETEROGENOUS SYSTEMS

Catalytic kinetics, mass transfer limitations, packed and fluidized bed reactors, two phase reactors.

Three lectures; second term

Prerequisite: CHEM ENG 3K04

CHEM ENG 4L02 ADVANCED LABORATORY SKILLS

Experiments and projects in transport phenomena, reaction kinetics, reactor design and process control with appropriate data analysis and report writing.

One lab (three hours), one lecture; first term

Prerequisite: CHEM ENG 3L02; and registration in Level IV of any Chemical Engineering program

CHEM ENG 4LL3 BIO LABORATORIES

Recombinant DNA technology including cloning, directed mutagenesis, DNA sequencing and expression of cloned genes. Reaction kinetics and reactor design for enzyme and fermentation reactions. Advanced separation methods for bioprocessing operations.

Two labs (four hours); second term

Prerequisite: BIOCHEM 4H03 and registration in Honours Biochemistry (Biotechnology and Genetic Engineering Specialization); or BIOCHEM 3G03 and registration in Chemical Engineering and Bioengineering

Antirequisite: BIOCHEM 4B06, 4BB6, 4F09, 4G03, 4L03

Cross-list: BIOCHEM 4LL3

This course is administered by the Department of Biochemistry and Biomedical Sciences.

CHEM ENG 4M03 SEPARATIONS

Overview of separation processes, liquid-liquid extraction, supercritical fluid extraction, adsorption, filtration, membrane separation processes.

Three lectures; first term

Prerequisite: CHEM ENG 2A04, 3O04, 3M04

CHEM ENG 4N04 ENGINEERING ECONOMICS AND PROBLEM SOLVING

Making decisions about the design and operation of engineering systems, with the analysis emphasizing safety, economics, equipment performance, uncertainty, flexibility and monitoring, including trouble shooting. Students will work individually and in groups on problem-based projects.

Three lectures, one tutorial (two hours); first term

Prerequisite: CHEM ENG 3K04, 3M04, 3O04, 3P03 (or 3P04); and registration in CHEM ENG 3G03 or 3G04

Antirequisite: ENGINEER 2B03 or 4B03

CHEM ENG 4T03 APPLICATIONS OF CHEMICAL ENGINEERING IN MEDICINE

Applications of chemical engineering principles to 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 3O04, ENG PHYS 3O03, 3O04 or MECH ENG 3O04

CHEM ENG 4W04 CHEMICAL PLANT DESIGN AND SIMULATION

Projects, often in cooperation with industry, usually involve steady-state computer simulation of an existing process or design of a new process. Plant equipment may be tested to develop simulation models.9.5

Two lectures and two tutorials (two hours); second term

Prerequisite: Registration in CHEM ENG 4N04; and registration in Level IV Chemical Engineering or Level V Chemical Engineering and Management or Level V Chemical Engineering and Society or Level V Chemical Engineering and Bioengineering

CHEM ENG 4X03 POLYMER PROCESSING

An introduction to the basic principles of polymer processing, stressing the development of models. Rheology of polymers, extrusion, molding, films, fibers, and mixing. Reactive processing.

Three lectures; one term

Prerequisite: One of CHEM ENG 2A04, MATLS 3E04 or MECH ENG 3R03; and CHEM ENG 3O04 or MECH ENG 3O04

CHEM ENG 4Y04 SENIOR INDEPENDENT PROJECT

A research and design project with students working independently under the direction of a Faculty member.

Two labs (three hours); both terms. The hours assigned can be freely scheduled to suit those involved in a particular project and may include computation classes, laboratory work, discussions, or individual study.

Prerequisite: Registration in Level IV Chemical Engineering or Level V Chemical Engineering and Management or Level V Chemical Engineering and Society or Level V Chemical Engineering and Bioengineering; and a CA of at least 9.5

CHEM ENG 4Z03 INTERFACIAL ENGINEERING

The physics and chemistry at the "nano" scale including interactions forces, colloids, surface active systems, wetting, adhesion, and flocculation.

Three lectures; second term

Prerequisite: Registration in final level of any Engineering program

CHEMISTRY

WEB ADDRESS: <http://www.chemistry.mcmaster.ca>

A.N. Bourns Science Building, Room 156

Ext. 23490

Faculty as of January 15, 2007**Chair**

Brian E. McCarry

Associate Chair

Jacques 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)

John E. Greedan/B.A. (Bucknell), Ph.D. (Tufts), F.C.I.C.

Adam P. Hitchcock/B.Sc. (McMaster), Ph.D. (British Columbia), F.C.I.C./

Senior Canada Research Chair, F.R.S.C.

William J. Leigh/B.Sc., M.Sc., Ph.D. (Western Ontario), F.C.I.C.

Brian E. McCarry/B.Sc. (British Columbia), Ph.D. (Stanford), F.C.I.C./

Stephen A. Jarislowsky Chair in Environment and Health

Gary J. Schrobilgen/B.Sc. (Loras College, Iowa), M.Sc. (Brock), Ph.D. (McMaster), F.R.S.C.

Harald D.H. Stöver/B.Sc. (Darmstadt), Ph.D. (Ottawa)

Johan K. Terlouw/B.Sc., M.Sc., Ph.D. (Utrecht)

Adjunct Professor

Timothy P. Bender/B.Sc., Ph.D. (Carleton)

Associate Professors

Paul J. Berti/B.Sc. (Waterloo), M.Sc. (Ottawa), Ph.D. (McGill)

John D. Brennan/B.Sc., M.Sc., Ph.D. (Toronto)/Canada Research Chair

Alfredo Capretta/B.Sc., Ph.D. (McMaster)

Randall S. Dumont/B.Sc. (Western Ontario), Ph.D. (Toronto)

Paul H.M. Harrison/B.A. (Oxford), Ph.D. (Alberta)

Yingfu Li/B.Sc. (Anhui, China), M.Sc. (Beijing Agr.), Ph.D. (Simon Fraser)/Canada Research Chair

Jim McNulty/B.Sc., M.Sc., Ph.D. (Toronto)

John F. Vallian/B.Sc., Ph.D. (McMaster)

Ignacio Vargas-Baca/B.Sc., M.Sc. (UNAM), Ph.D. (Calgary)/Undergraduate Advisor

Assistant Professors

Alex Adronov/B.Sc. (McMaster), Ph.D. (California-Berkeley)

Paul W. Ayers/B.S. (David Lipscomb), Ph.D. (North Carolina-Chapel Hill)/Canada Research Chair

James F. Britten/B.Sc. (St. Francis Xavier), Ph.D. (McMaster)

Philip Britz-McKibbin/B.Sc. (Toronto), Ph.D. (British Columbia)

David J.H. Emslie/B.Sc., Ph.D. (Bristol)

Gillian R. Goward/B.Sc. (McMaster), Ph.D. (Waterloo)

Donald W. Hughes/B.Sc., Ph.D. (McMaster)

Peter Kruse/Dipl. Chem. (FSU-Jena), Ph.D. (California-San Diego)

Philippa Lock/B.Sc., Ph.D. (McMaster)

Graham A. McGibbon/B.Sc. (Toronto), Ph.D. (McMaster)

Giuseppe Melacini/B.Sc., Ph.D. (Milan)

Yurij Mozharivskyj/B.Sc., M.Sc. (Lviv State), Ph.D. (Iowa State)

Kalaichelvi Saravanamuttu/B.Sc., Ph.D. (McGill)

Associate Members

Raman Chirakal/(Radiology) B.Sc. (Kerala, India), M.Sc. (Brock), Ph.D. (McMaster)

Richard M. Epan/(Biochemistry and Biomedical Sciences) AB. (Johns Hopkins), Ph.D. (Columbia)

Robert H. Pelton/(Chemical Engineering) M.Sc. (Guelph), Ph.D. (Bristol)

Gerald D. Wright/(Biochemistry and Biomedical Sciences) B.Sc., Ph.D. (Waterloo)

Daniel S.C. Yang/(Biochemistry and Biomedical Sciences) B.Sc., M.Sc. (Alberta), Ph.D. (Pittsburgh)

Shiping (Stephen) Zhu/(Chemical Engineering and Materials Science and Engineering) B.Eng. (Zhejiang), Ph.D. (McMaster), P.Eng.

Department Notes:

1. Course codes ending with * indicate that the course is not necessarily offered every session.
2. Students not in a Science program should note that CHEM 1AA3 is a prerequisite for CHEM 2E03 and that CHEM 2E03 is a prerequisite for BIOCHEM2EE3.

Courses

If no prerequisite is listed, the course is open.

CHEM 1A03 INTRODUCTORY CHEMISTRY I

An introduction to chemical principles, including bonding, structure, energetics and electrochemistry. A laboratory provides experience in experimental techniques and accurate measurement.

Three lectures, one tutorial, one lab (three hours) every other week; first term
Prerequisite: Grade 12 Chemistry U and either registration in one of Science I, Engineering I, Arts & Science I, Health Science I, Kinesiology I, Mathematics and Statistics I, Medical Radiation Sciences I, any program above Level I; or a grade of at least 80% in Grade 12 Chemistry U; or CHEM 1R03

Corequisite: SCIENCE 1A00. Students registering in CHEM 1A03 must also register in SCIENCE 1A00 when completing their registration.

Antirequisite: CHEM 1E03

CHEM 1AA3

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 a program in Engineering

Antirequisite: CHEM 1A03

CHEM 1R03

GENERAL CHEMISTRY

A general introduction to chemistry, suitable for students without Grade 12 Chemistry U.

Three lectures; second term

Prerequisite: Grade 11 Chemistry SCH 3U

Not open to students with 80% or higher in Grade 12 Chemistry U or with credit or registration in CHEM 1A03.

CHEM 2A03

ANALYTICAL CHEMISTRY I

An introduction to the basic principles of analytical chemistry, with particular emphasis on solution equilibria and classical methods of analysis.

Two lectures, one lab (three hours); first term

Prerequisite: Registration in a Chemical Engineering program; or credit or registration in CHEM 2PB3 or 2R03

Antirequisite: CHEM 2N03

CHEM 2BA3

ORGANIC CHEMISTRY A

Bonding. Alkanes, alkyl halides, alkynes, alkenes, and alcohols. Stereochemistry. Reaction intermediates and reaction mechanisms.

Three lectures, one lab (three hours) every week; first term

Prerequisite: CHEM 1AA3; and registration in an Honours Biochemistry program (with a grade of at least B+ in CHEM 1AA3), an Honours Chemistry program, B.Sc. Physical Science or the Honours Science (Stream D) program
Antirequisite: CHEM 2E03, 2OA3, 2WW2

CHEM 2BB3

ORGANIC CHEMISTRY B

Infra-red, ^1H and ^{13}C nuclear magnetic resonance, ultraviolet and mass-spectrometric methods. Aldehydes and ketones including enolates. Electrophilic aromatic substitution. Carboxylic acids and functional derivatives. Reaction intermediates and reaction mechanisms.

Three lectures, one lab (three hours) every week; second term

Prerequisite: CHEM 2BA3

Antirequisite: CHEM 2OB3

CHEM 2E03

INTRODUCTORY ORGANIC CHEMISTRY

An introduction to the chemistry of monofunctional aliphatic and aromatic compounds.

Three lectures, one tutorial; first term

Prerequisite: CHEM 1AA3

Antirequisite: CHEM 2BA3, 2OA3

CHEM 2E03 is not a prerequisite for further courses in Organic Chemistry.

CHEM 2I03

STRUCTURE AND REACTIONS OF THE MAIN GROUP ELEMENTS

Comparative chemistry of the non-transition elements; introduction to symmetry.

Three lectures, one lab (three hours) every week; second term

Prerequisite: Registration in a Biochemistry, Chemistry, Honours Materials Science, Honours Science (Stream D) or B.Sc. Physical Science program; or permission of the instructor

Antirequisite: CHEM 2WW2

CHEM 2N03

BIO-ANALYTICAL CHEMISTRY

An introduction to the basic principles of analytical chemistry with application to selected classical and instrumental methods of analysis.

Two lectures, one lab (three hours); second term

Prerequisite: Registration in an Honours Biochemistry program; or credit or registration in either CHEM 2R03 or both CHEM 2PA3 and 2PB3; or permission of the instructor

Antirequisite: CHEM 2A03

CHEM 20A3 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 and registration in an Honours Program. Students with a grade of less than C- in CHEM 1AA3 are encouraged to seek counselling before attempting this course.

Antirequisite: CHEM 2BA3, 2E03

Students with credit in CHEM 2E03 will forfeit credit upon completion of this course.

CHEM 20B3 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 20A3

Antirequisite: CHEM 2BB3

CHEM 2PA3 THERMODYNAMICS AND PHASE EQUILIBRIA

An introduction to macroscopic and microscopic aspects of thermodynamics and their application to physical transformations.

Three lectures, one lab (three hours), one tutorial; first term

Prerequisite: CHEM 1AA3, MATH 1AA3

Antirequisite: CHEM 2R03, HTH SCI 2P01, PHYSICS 2H04

CHEM 2PB3 CHEMICAL THERMODYNAMICS AND KINETICS

Thermodynamics of equilibrium chemical and electrochemical systems, and macroscopic and microscopic aspects of kinetics.

Three lectures, one lab (three hours), one tutorial; second term

Prerequisite: CHEM 2PA3

Antirequisite: CHEM 2R03

CHEM 2R03 GENERAL PHYSICAL CHEMISTRY

Physical chemistry as applied to life and environmental sciences. Topics include thermodynamics, chemical equilibria, physical equilibria, transport phenomena, kinetics and enzyme kinetics.

Three lectures; first term

Prerequisite: CHEM 1AA3, and ARTS&SCI 1D06 or MATH 1A03

Antirequisite: CHEM 2PA3, 2PB3, HTH SCI 2P01, PHYSICS 2H04

CHEM 2WW2 INTRODUCTORY INORGANIC CHEMISTRY

An introduction to inorganic chemistry. Emphasis on bonding and structure in inorganic compounds of representative main group and transition elements.

Two lectures; first term

Prerequisite: CHEM 1A03 or 1E03; and registration in a program administered by the Department of Materials Science and Engineering

Antirequisite: CHEM 2I03, 3Q03

CHEM 3A03 ANALYTICAL CHEMISTRY II

An introduction to modern instrumental methods of analysis.

Two lectures, one lab (three hours); first term

Prerequisite: CHEM 2A03 or 2N03; and CHEM 2PA3 or 2R03

Antirequisite: ENVIR SC 3A03

CHEM 3BA3 QUANTUM MECHANICS AND SPECTROSCOPY I

An introduction to quantum chemistry, quantum structures, group theory and symmetry, and vibrational and rotational spectroscopy, and molecular orbital theory.

Three lectures, one lab (three hours), one tutorial; first term

Prerequisite: CHEM 2PB3; and PHYSICS 1BA3 or 1BB3

Antirequisite: CHEM 3B03

CHEM 3BB3 QUANTUM MECHANICS AND SPECTROSCOPY II

An introduction to the electronic structure and spectroscopy of atoms and molecules.

Three lectures; second term

Prerequisite: CHEM 3BA3; and MATH 2A03 or 2P04

Antirequisite: CHEM 3B03

CHEM 3D03 ORGANIC CHEMISTRY

A mechanistically oriented discussion of mono- and polyfunctional organic compounds with emphasis on applications to synthesis.

Three lectures, one lab (three hours); first term

Prerequisite: CHEM 2BB3 or 2OB3

Antirequisite: CHEM 3F03

CHEM 3FF3 BIO-ORGANIC CHEMISTRY

Topics in bio-organic chemistry focusing on catalysis in chemistry and nature.

Three lectures, one lab (three hours); second term

Prerequisite: CHEM 2BB3 or 2OB3

Antirequisite: CHEM 3F03

CHEM 3I03 INDUSTRIAL CHEMISTRY

A systematic study of modern processes in the chemical, petrochemical and polymer industries, as well as their environmental impact and the role of emerging green chemistry technologies.

Three lectures; first term

Prerequisite: CHEM 2I03 and one of CHEM 2BB3, 2E03, 2OB3; or registration in Level III or IV of a Chemical Engineering program

CHEM 3LI3 CHEMISTRY LABORATORY INQUIRY

An advanced experimental chemistry laboratory.

Two labs (three hours each); second term

Prerequisite: CHEM 2A03, 2BB3, 2I03, 2PB3 and registration in a Level III Honours Chemistry program

Antirequisite: CHEM 4TA3

CHEM 3P03 TRANSITION METAL CHEMISTRY

The chemistry of the heavier transition elements; an introduction to organometallic chemistry and bio-inorganic chemistry.

Three lectures, one lab (three hours); second term

Prerequisite: CHEM 3Q03

CHEM 3Q03 INORGANIC CHEMISTRY

The properties, structures and reactions of inorganic compounds with emphasis on transition metal chemistry.

Three lectures, one lab (three hours); first term

Prerequisite: CHEM 2I03

Antirequisite: CHEM 2WW2

CHEM 3ZZ3* PROPERTIES OF MATERIALS

Familiar material properties—optical, thermal, electromagnetic and mechanical—and their exploitation in commercial applications, are investigated in terms of the physical chemistry toolkit of quantum mechanics, spectroscopy and introductory statistical mechanics.

Three lectures; second term

Prerequisite: CHEM 2PB3 and credit or registration in CHEM 3BA3; or permission of the instructor

Antirequisite: CHEM 3Z03

CHEM 4A03* ADVANCED ORGANIC CHEMISTRY

An introduction to the principles of physical organic chemistry and the elucidation of organic reaction mechanisms, and either pericyclic organic reactions or organic photochemistry.

Three lectures; one term

Prerequisite: CHEM 3D03 or 3F03

CHEM 4B03 CHEMICAL APPLICATIONS OF SPECTROSCOPY

Aspects of molecular spectroscopies and their application to the solution of chemical problems.

Three lectures; one term

Prerequisite: CHEM 3BA3

CHEM 4C03* SOLID STATE CHEMISTRY

Structure and properties of crystalline solids. Topics include crystal chemistry and crystal symmetry, introduction to space groups, defects in ionic crystals, non-stoichiometry, electronic structure and properties of semiconductors and metals.

Three lectures; one term

Prerequisite: CHEM 3Q03

CHEM 4D03 ORGANIC STRUCTURE AND SYNTHESIS

Application of spectroscopic methods to structure determination. Synthetic methodology in organic chemistry.

Three lectures; one term

Prerequisite: CHEM 3D03 or 3F03

CHEM 4DD3 MECHANISTIC BIOLOGICAL CHEMISTRY

Amino acid, nucleic acid, enzyme and coenzyme chemistry with emphasis on molecular reaction mechanisms.

Three lectures; one term

Prerequisite: One of CHEM 3D03, 3F03 or 3FF3

CHEM 4F03* SURFACE CHEMISTRY

Current topics in surface science; surface characterization and microscopy; adsorption and heterogeneous catalysis; applications in electronic materials and nanotechnology.

Three lectures; one term

Prerequisite: CHEM 3BA3 or permission of the instructor

CHEM 4G09**SENIOR THESIS**

A thesis based on a research project under the direction of a Chemistry Department faculty member.

Prerequisite: Registration in Level IV of any Honours Chemistry program and a C.A. of at least 6.0; or permission of the Department

Antirequisite: CHEM 4G06

Enrolment is limited See the heading *Limited Enrolment Courses* in the *Faculty of Science* section of the Calendar.

CHEM 4P03***ADVANCED ANALYTICAL CHEMISTRY**

A course dealing with modern topics in analytical chemistry.

Three lectures; one term

Prerequisite: CHEM 3A03; and CHEM 2PB3 or 2R03

CHEM 4PP3***POLYMER CHEMISTRY**

Chemistry of monomers, polymers, polymerization mechanisms and processes, with emphasis on organic polymer chemistry.

Three lectures; one term

Corequisite: CHEM 3D03 or 3F03

CHEM 4Q03***ADVANCED QUANTUM MECHANICS**

Applications of quantum mechanics to problems of chemical interest.

Three lectures; one term

Prerequisite: CHEM 3BB3 or PHYSICS 3MM3

CHEM 4R03***ADVANCED TRANSITION METAL CHEMISTRY**

A selection from the following topics: mechanisms of reactions involving transition metal ions; homogeneous catalysis; applications of NMR and other physical methods; organometallic chemistry; ligand field theory.

Three lectures; one term

Prerequisite: CHEM 3P03 or permission of the instructor

CHEM 4S03***ADVANCED MAIN GROUP CHEMISTRY**

A selection from the following topics: chemistry of selected main group elements, electron deficient compounds, and applications of physical methods to inorganic structure determination.

Three lectures; one term

Prerequisite: CHEM 3Q03

CIVIL ENGINEERING

WEB ADDRESS: <http://www.eng.mcmaster.ca/civil/>

John Hodgins Engineering Building, Room 301

Ext. 24287 or 24315

Faculty as of January 15, 2007**Chair**

A. Ghani Razaqpur

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/JNE Consulting Chair in Design, Construction and Management in Infrastructure Renewal

Frederick L. Hall/B.A. (Amherst), M.Sc. (M.I.T.), Ph.D. (Chicago)

Gail Krantzberg/B.Sc. (McGill), M.Sc., Ph.D. (Toronto)

Susan Masten/B.S. (Fairleigh Dickinson), M.S.E. (West Virginia), Ph.D. (Harvard), P.E.

Stan Pietruszczak/B.Sc., M.Sc. (Warsaw), Ph.D. (Polish Acad. Sci.)

A. Ghani Razaqpur/B.Sc. (American University of Beirut), M.Sc. (Hawaii), Ph.D. (Calgary), P.Eng.

K.S. Sivakumaran/B.Sc. (Sri Lanka), M.Eng. (Asian Inst. Tech.), Ph.D. (Calgary), P.Eng.

Dieter Stolle/B.Eng., M.Eng., Ph.D. (McMaster), P.Eng.

Ioannis K. Tsanis/Dip.Civ.Eng. (Aristoteles Univ., Thessaloniki), M.A.Sc., Ph.D. (Toronto), P.Eng.

John C. Wilson/B.Eng., M.Eng. (McMaster), Ph.D. (Caltech), P.Eng.

Associate Professors

Samir E. Chidiac/B.Eng., M.Eng., Ph.D. (McMaster), P.Eng.

Paulin Coulibaly/B.A.Sc., M.A.Sc. (Nice), Ph.D. (Laval)

Assistant Professors

Sarah Dickson/B.A.Sc., Ph.D. (Waterloo), P.Eng.

Wael El-Dakhkhni/B.Sc. (Ain Shams), M.Sc., Ph.D. (Drexel), P.Eng.

Peijun Guo/B.Sc., M.Sc., Ph.D. (SWJTU), Ph.D. (Calgary)

Yiping Guo/B.Sc. (Zhejiang), M.A. Sc., Ph.D. (Toronto), P.Eng.

Michael J. Tait/B.E.Sc., Ph.D. (Western Ontario)

Adjunct Professors

Déan Inglis/B.Eng., Ph.D. (McMaster)

Syed Moin/B.S. (Osmania), M.S. (Nevada), Ph.D. (McMaster), P.Eng.

Department Notes:

1. All Civil Engineering courses are open to students registered in a civil engineering program, subject to prerequisite requirements. Prior permission of the Department is necessary for students from other engineering departments and other faculties.
2. Unless otherwise stated, the duration and the frequency of activities are as follows:
 - one lecture consists of one hour each week
 - one tutorial consists of two hours each week
 - one lab consists of three hours each week

Courses**CIV ENG 2A03****SURVEYING AND MEASUREMENT**

Introduction to measurement and computational techniques of surveying, the theory of measurement and errors, adjustment of observations; laboratory measurement and instrumentation.

Two lectures, one tutorial or one lab; first term

Antirequisite: CIV ENG 2A02

CIV ENG 2B03**PRINCIPLES OF ENVIRONMENTAL ENGINEERING I**

Mass balances; fundamentals of thermodynamics, heat transfer, and environmental chemistry and microbiology; introduction to hydrological and ecological systems, water quality, water treatment and wastewater treatment. Two lectures (two hours each), one tutorial; first term

Prerequisite: Credit or registration in CIV ENG 2I03

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 differential equations; sensitivity analysis; use of several software packages for numerical analysis; civil engineering applications.

Two lectures, one tutorial; second term

Prerequisite: 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 program involving site visits.

Two lectures, one tutorial (three hours); first term

CIV ENG 2J04**ECOLOGICAL AND GEOLOGICAL ASPECTS OF CIVIL ENGINEERING**

The relationship between humans and their earth environment. Composition of "earth"; processes that operate on or beneath the surface. Global interactions of the atmosphere, hydrosphere, lithosphere and the biosphere. Principles of ecological systems. Man's perturbations on the biosphere.

Three lectures, one tutorial or one lab; second term

Prerequisite: Credit or registration in CIV ENG 2I03

Antirequisite: GEO 3U03

CIV ENG 2Q04**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, MATH 2M06 (or 2M03 and 2MM3)

CIV ENG 2Q03**ENGINEERING MECHANICS: DYNAMICS**

Kinematics and dynamics of particles and rigid bodies. Motion with respect to a rotating frame of reference. Work, energy and momentum principles.

Two 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: ENGINEER 2Q04, MECH ENG 2Q04

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, 2O04

CIV ENG 3B03 GEOTECHNICAL ENGINEERING II
Shear strength characteristics and failure criteria for soils; direct shear, triaxial, plane strain and field tests; earth pressure theory; bearing capacity theory; slope stability and embankment analysis. Two lectures, one tutorial or one lab; second term
Prerequisite: Credit or registration in CIV ENG 3A03

CIV ENG 3C03 ENGINEERING SYSTEMS
Mathematical models and systems; economic comparison of projects; optimization; linear, nonlinear and dynamic programming; simulation modelling. Two lectures, one tutorial; second term
Prerequisite: CIV ENG 2E03; and credit or registration in MATH 3J04 or STATS 3J04

CIV ENG 3G03 STRUCTURAL ANALYSIS
Structural analysis and modelling of linear elastic truss, beam and frame structures; stress resultants and deformations of statically determinate structures; methods for analysis of indeterminate structures; stiffness matrix method; plane frame computer analysis. Two lectures, one tutorial; first term
Prerequisite: CIV ENG 2C04

CIV ENG 3J04 REINFORCED CONCRETE DESIGN
Design by limit states methods to ensure adequate capacities for bending moment, shear and diagonal tension, axial force, bond and anchorage; and design to satisfy serviceability requirements for deflection and cracking; practical design requirements; interpretation of building code for behaviour of structures. Three lectures, one lab; second term
Prerequisite: Credit or registration in CIV ENG 3G03, 3P03

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 3L03 WATER QUALITY
Physical, chemical and biological characteristics of water; Stoichiometry, reaction kinetics and material balances; mathematical modelling of physical systems; water quality in rivers, and lakes; water quality standards. Two lectures, one tutorial; first term
Prerequisite: Credit or registration in CIV ENG 2B03
Antirequisite: CIV ENG 3M04

CIV ENG 3M03 MUNICIPAL HYDRAULICS
Analysis/design of water distribution networks; analysis and design of wastewater collection systems; pumps. Two lectures, one tutorial or one lab; second term
Prerequisite: CIV ENG 2O04; and credit or registration in MATH 3J04 or STATS 3J04
Antirequisite: CIV ENG 3M04

CIV ENG 3P03 CIVIL ENGINEERING MATERIALS AND DESIGN
Characteristics, behaviour and use of Civil Engineering materials: concrete, metals, wood, and composites; Physical, chemical and mechanical properties; Quality control and material tests; Concepts of Structural design, limit states design, estimation of structural loads. Three lectures, two labs (three hours each); first term
Prerequisite: CIV ENG 2C04, MATLS 1M03
Antirequisite: ENGINEER 3P03

CIV ENG 3R03 PROJECT MANAGEMENT WITH CONSTRUCTION APPLICATIONS
An introduction to construction project management; tender documents, estimating, bidding, proposals, and construction contracts; project planning, scheduling, controlling of time, cost and quality, dispute resolution; Safety Act and construction regulations, liability, legal and ethical considerations; case histories. Two lectures, one tutorial; first term
Prerequisite: Registration in Level III or above of a Civil Engineering program

CIV ENG 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, 3P03

CIV ENG 3U03 PHYSICO-CHEMICAL PROCESSES IN WATER AND WASTEWATER TREATMENT
Water/waste water quality/characteristics; primary and secondary treatment; emphasis is placed on physical and chemical unit processes including coagulation, flocculation, sedimentation, filtration, precipitation; advanced treatment processes, including ion exchange, chemical oxidation, and membranes are also addressed. Two lectures, one tutorial; second term
Prerequisite: One of CHEM ENG 2D04, 2F04, CIV ENG 2B03

CIV ENG 4A04 ENGINEERING HYDROLOGY
Hydrologic cycle; climate; hydrologic processes, precipitation; unit hydrograph; hydrologic statistic, hydrologic routing; groundwater flow. Design units = 1.0
Three lectures, one tutorial (three hours); first term
Prerequisite: CIV ENG 3M04

CIV ENG 4C04 ENVIRONMENTAL IMPACT AND SUSTAINABILITY
Natural and urban ecosystems; environmental impact/assessment/legislation; energy and environmental audits; life cycle analysis; solid and hazardous wastes; air quality and control; sustainable infrastructure design. Design units = 3.0
Three lectures, one tutorial, capstone project; first term
Prerequisite: Registration in the final level of a Civil Engineering program
Antirequisite: CIV ENG 4C03

CIV ENG 4D04 GEOMETRIC HIGHWAY DESIGN
Design of various types and classes of streets and highways. Theory and practice in design of intersections, interchanges, arterial highways, and freeways. Design and traffic safety concepts. Design units = 3.0
Three lectures, one tutorial; first term
Prerequisite: CIV ENG 3K03

CIV ENG 4G04 PAVEMENT MATERIALS AND DESIGN
Components of highway pavements; ground water and drainage for highway facilities; soil compaction and stabilization; aggregates; bituminous materials; asphalt mix design; flexible and rigid pavement design; embankment design. Design units = 3.0
Three lectures, one tutorial or lab; first term
Prerequisite: CIV ENG 3B03
Antirequisite: CIV ENG 4G03

CIV ENG 4H03 ANALYSIS OF TRANSPORTATION SYSTEMS
An introduction to the use of models in transportation planning. Topics include data issues, the four-stage approach to modelling transportation systems, discrete choice models and contextual factors such as land use. Design units = 0.0
Three lectures; one term
Prerequisite: MATH 3J04 or STATS 3J04
Cross-list: GEO 4D03
This course is administered by the School of Geography and Earth Sciences.

CIV ENG 4K04 MODERN METHODS OF STRUCTURAL ANALYSIS
Stiffness method; development and applications in structural analysis. Introduction to finite element method. Influence lines, elastic stability analysis of frames with and without sway effects. Application of computer programs. Design units = 0.0
Three lectures, one tutorial; second term
Prerequisite: CIV ENG 3G03; MATH 3J04 or STATS 3J04

CIV ENG 4L04 DESIGN OF WATER RESOURCES SYSTEMS
Investigation, planning, analysis and design of water resources systems. Introduction to GIS tools. Frequency analysis, design storms, urban drainage and analysis, floodplain analysis and flood control. Design units = 4.0
Two lectures, one tutorial (one hour), one lab; second term
Prerequisite: CIV ENG 3M04

CIV ENG 4R04 DESIGN AND SYNTHESIS OF STRUCTURES
Structural design process, gravity and lateral loading requirements, structural performance criteria, choice of structural systems. Analysis and design of different structural systems, such as frames, structural walls and slabs. Analysis and design of actual buildings. Design units = 4.0
Three lectures, one lab, capstone project; first term
Prerequisite: CIV ENG 3G03, 3J04, 3S03

CIV ENG 4S03 FOUNDATION ENGINEERING

Principles of foundation design; bearing capacity, settlement and location, footings, deep foundations, piles, pile groups and drilled piers; retaining walls. Design units = 3.0

Three lectures, one tutorial; second term

Prerequisite: CIV ENG 3B03

Antirequisite: CIV ENG 4S04

CIV ENG 4W04 DESIGN OF LOW RISE BUILDINGS

Structural systems and load distribution, design of masonry, wood, and cold-formed steel. Introduction to building envelope design. Design units = 4.0

Three lectures, one tutorial; second term

Prerequisite: CIV ENG 3G03, 3J04, 3S03

CIV ENG 4Y04 BRIDGES AND OTHER STRUCTURAL SYSTEMS

Bridge loads and analysis for load effects. Design of reinforced concrete solid-slab, T-beam type bridges, composite floor system and plate girders. Stresses, ultimate strength, and design of pre-stressed concrete structures. Fatigue Design. Design units = 4.0

Three lectures, one tutorial; first term

Prerequisite: CIV ENG 3G03, 3J04, 3S03

CIV ENG 4Z04 INDEPENDENT STUDY

An experimental and/or analytical investigation related to any branch of civil engineering, under the direction of a faculty member. Students choose a project from a list of department approved projects. The student may be required to present a seminar, and will submit a final written report before April 1. Design units = variable according to project

Two labs (three hours); both terms. The hours assigned can be freely scheduled to suit those involved in a particular project and may include computation classes, laboratory work, discussion or individual study. Prerequisite: Registration in a final level of a Civil-Engineering program, and a SA of at least 9.5.

CIVIL ENGINEERING INFRASTRUCTURE TECHNOLOGY

(SEE TECHNOLOGY, CIVIL ENGINEERING INFRASTRUCTURE TECHNOLOGY)

CLASSICS

WEB ADDRESS: <http://www.humanities.mcmaster.ca/~classics/>

Togo Salmon Hall, Room 706

Ext. 24311

Faculty as of January 15, 2007

Chair

Michele G. George

Professor

Paul Murgatroyd/B.A., M.A. (Cambridge), Ph.D. (London)

Associate Professors

Claude Eilers/B.A. (Saskatchewan), M.A. (McMaster), D.Phil. (Oxford)

Michele G. George/B.A. (Toronto), M.A., Ph.D. (McMaster)

Evan Haley/A.B. (Dartmouth), Ph.D. (Columbia)

Assistant Professors

Sean Comer/B.A., M.A. (Oxford), Ph.D. (Princeton)

Daniel McLean/B.A. (S Carolina), Ph.D. (Pennsylvania)

Alexandra Retzleff/B.A. (McGill), M.A. (British Columbia), Ph.D. (North Carolina-Chapel Hill)

Department Note:

The following courses are available as electives to qualified students in any program:

a) **Classical Archaeology and Art History**
CLASSICS 1A03, 2B03, 2C03, 3G03, 3H03, 3Q03, 3S03

b) **Ancient History and Society**
CLASSICS 2K03, 2LA3, 2LB3, 2LC3, 2LD3, 3EE3, 3HH3, 3M03, 3TT3, 3X03

c) **Ancient Philosophy**

CLASSICS 2P06, 4K03

d) **Classical Literature in Translation**

CLASSICS 2D03, 2E03, 2Y03, 2YY3, 3EE3, 3I03, 3M03, 3YY3

e) **Greek Language and Literature**

GREEK 1Z03, 1ZZ3, 2A03, 2AA3, 3A03, 3B03, 4AA3, 4B03, 4BB3

f) **Latin Language and Literature**

LATIN 1Z03, 1ZZ3, 2A03, 2AA3, 3A03, 3B03, 4AA3, 4B03, 4BB3

CLASSICS ...

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

CLASSICS 1B03 MYTH AND LITERATURE: THE TROJAN WAR AND BEYOND

A study of Greek and Roman mythology and literature with emphasis on the heroines and heroes of the Trojan War. Homer's *Odyssey* and Vergil's *Aeneid* will be read in translation.

Two lectures, one tutorial; one term

CLASSICS 1M03 HISTORY OF GREECE AND ROME

The history of Greece and Rome from the bronze age to the fall of Rome based on literary, documentary and archaeological evidence.

Two lectures, one tutorial; one term

Antirequisite: CLASSICS 1L03, 1LL3, HISTORY 1L03, 1LL3

Cross-list: HISTORY 1M03

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 2M03

CLASSICS 2E03 THE ANCIENT WORLD IN FILM

The emphasis is on myth (Amazons, Hercules) and history (slave revolts, banquets, decadent emperors), studied via Greek and Latin accounts (in translation) and cinematic versions (e.g. *Electra*, *Medea*, *Mighty Aphrodite*, *Apocalypse Now*, *Spartacus*, *I Claudius*).

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: THTR&FLM 2G03

Antirequisite: CMST 2Y03

CLASSICS 2K03 THE SOCIETY OF GREECE AND ROME

An examination of selected aspects of the social life of Greece and Rome. Attention will be given to subjects such as work and leisure, war and the warrior, slavery, marriage and family, and the role of women.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: HISTORY 2K03

CLASSICS 2LA3 HISTORY OF ANCIENT GREECE I

Greece from the rise of the city-state to the Peloponnesian War, with particular attention to political, social and cultural development in the light of literary and archaeological evidence.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: HISTORY 2LA3

Antirequisite: CLASSICS 2L03, HISTORY 2L03

Alternates with CLASSICS 2LC3.

CLASSICS 2LB3 HISTORY OF ANCIENT GREECE II

Greece from the Peloponnesian War to the coming of Rome, with particular attention to political, social and cultural development in the light of literary and archaeological evidence.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: HISTORY 2LB3

Antirequisite: CLASSICS 2L03, 3LL3, HISTORY 2L03, 3LL3

Alternates with CLASSICS 2LD3.

CLASSICS 2LC3 HISTORY OF ANCIENT ROME I

Rome from its early development to the dictatorship of Caesar, with particular attention to the political, military and social developments in the light of literary and archaeological evidence.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: HISTORY 2LC3

Antirequisite: CLASSICS 2LL3, HISTORY 2LL3

Alternates with CLASSICS 2LA3.

CLASSICS 2LD3 HISTORY OF ANCIENT ROME II

Rome from the dictatorship of Caesar to Late Antiquity, with particular attention to the political, military and social developments in the light of literary and archaeological evidence.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: HISTORY 2LD3

Antirequisite: CLASSICS 2LL3, HISTORY 2LL3

Alternates with CLASSICS 2LB3.

CLASSICS 2P06 ANCIENT GREEK PHILOSOPHY

A study of Western philosophical thought from its earliest beginnings to late Roman times, with emphasis on Plato and Aristotle.

Three lectures; two terms

Prerequisite: One of three units of Philosophy, ARTS&SCI 1A06, registration in a program in Classics or Philosophy or permission of the Department

Cross-list: PHILOS 2A06

This course is administered by the Department of Philosophy.

CLASSICS 2Y03 ANCIENT COMEDY

Representative texts of the Greek and/or Roman comedic authors will be read in translation and considered in their literary, historical or social contexts. Relevant texts from other genres might also be considered.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: COMP LIT 2Y03

Antirequisite: CLASSICS 2H03

Offered in alternate years.

CLASSICS 2YY3 GREEK TRAGEDY

Selected plays of the Greek tragic playwrights will be read in translation and considered in their literary, historical or social contexts.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: COMP LIT 2YY3

Offered in alternate years.

CLASSICS 3EE3 THE GREEK HISTORIANS

The study in translation of Herodotus, Thucydides, and other Greek historical writers, with consideration of the evolution of their genre and their contributions to the development of historiography.

Three lectures; one term

Prerequisite: Six units from CLASSICS 2K03, 2L03, 2LA3, 2LB3 or registration in Level III or above of a program in Classics

Cross-list: HISTORY 3EE3

Offered in alternate years.

CLASSICS 3G03 LATE ANTIQUE AND EARLY CHRISTIAN ART

The art and architecture of the later Roman Empire, and the birth of Christian art (A.D. 200-600).

Three lectures; one term

Prerequisite: ART HIST 2C03 or CLASSICS 2C03

Cross-list: ART HIST 3G03

Alternates with CLASSICS 3H03.

CLASSICS 3H03 ARCHAIC GREEK ART

The formative period of Greek Art, from its rebirth after the Dark Ages to the Persian Wars (c. 1000-480 B.C.), and its relationship to the art of the Near East.

Three lectures; one term

Prerequisite: CLASSICS 2B03

Cross-list: ART HIST 3H03

Alternates with CLASSICS 3G03.

CLASSICS 3HH3 ROMAN SLAVERY

An examination of Roman slavery using a variety of sources (historical and juridical texts, funerary inscriptions, archaeological evidence) in order to determine its place in Roman social structure and its importance to the ancient economy and culture.

Three lectures; one term

Prerequisite: Six units from CLASSICS 2K03, 2LC3, 2LD3, 2LL3, 2P06 or registration in Level III or above of a program in Classics

Cross-list: HISTORY 3HH3

Not open to students with credit in CLASSICS 3MM3 or HISTORY 3MM3 if the topic was Roman Slavery.

Offered in alternate years.

CLASSICS 3I03 TOPICS IN CLASSICAL LITERATURE

Previous topics include: Greek and Roman Epic, Greek and Roman Elegiac and Lyric Poetry, The Legend of the Trojan War, Crime and Punishment, Satire, The Poet and Society. Consult the Department concerning the topic to be offered.

Three lectures; one term

Prerequisite: Six units of Classics

Cross-list: COMP LIT 3I03

CLASSICS 3I03 may be repeated, if on a different topic, to a total of six units.

CLASSICS 3M03 GREEK INTELLECTUAL REVOLUTION

A study of the birth of rationalistic and naturalistic thought in Greece, placing this intellectual revolution in its social, political and cultural context.

Three lectures; one term

Prerequisite: Six units from CLASSICS 2K03, 2L03, 2LA3, 2LB3, 2P06 or registration in Level III or above of a program in Classics

Cross-list: HISTORY 3M03

Offered in alternate years.

CLASSICS 3MM3 TOPICS IN ANCIENT HISTORY

Studies of Greek or Roman history and institutions. Consult the Department for the topic to be offered.

Three lectures; one term

Prerequisite: Six units from CLASSICS 2K03, 2L03, 2LA3, 2LB3, 2LC3, 2LD3, 2LL3 or registration in Level III or above of a program in Classics

Cross-list: HISTORY 3MM3

CLASSICS 3MM3 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: CLASSICS 1A03 or 2B03

Alternates with CLASSICS 3S03.

CLASSICS 3S03 THE ARCHAEOLOGY OF THE ROMAN CITY

Urbanism in Roman Italy through an examination of the archaeological remains of Pompeii, Herculaneum, Ostia and other cities of Roman Italy.

Three lectures; one term

Prerequisite: CLASSICS 1A03 or 2C03

Alternates with CLASSICS 3Q03.

CLASSICS 3TT3 LEISURE AND ENTERTAINMENT IN GREECE AND ROME

Social life, leisure and festivals in the Greek and/or Roman world. Topics may include banqueting, bathing, theatre and spectacle, and religious holidays. Literature, art and archaeological evidence will be considered.

Three lectures; one term

Prerequisite: Six units of Level II or III Classics or registration in Level III or above of a program in Classics

Cross-list: HISTORY 3TT3

Antirequisite: CLASSICS 3T03

Offered in alternate years.

CLASSICS 3X03 ROMAN RELIGION

A study of the role of religion in Roman public and private life using literary, documentary and archaeological evidence.

Three lectures; one term

Prerequisite: Six units from CLASSICS 2K03, 2LC3, 2LD3, 2LL3 or registration in Level III or above of a program in Classics

Cross-list: HISTORY 3X03

Offered in alternate years.

CLASSICS 3Y03 CLASSICAL LITERATURES AND BEYOND

A study of representative texts from the Greek and Roman literary traditions as well as their influence and afterlife in one or more later literary traditions.

Two hours; one term

Prerequisite: Registration in Level II or above of a Classics or Comparative Literature program or permission of the Department.

Cross-list: COMP LIT 3Y03

CLASSICS 3YY3 OVID

Representative texts of the Latin poet Ovid will be read in translation, especially his erotic poetry and mythical stories. There will be literary analysis and later adaptations in literature and film will be considered.

Three hours; one term

Prerequisite: Six units from CLASSICS 2D03, 2E03, 2H03, 2Y03, 2YY3 or registration in Level III or above of a program in Classics

Cross-list: COMP LIT 3YY3

Offered in alternate years.

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, 3Q03, 3S03 and registration in Level III or above of an Honours program in Classics

CLASSICS 4B03 may be repeated, if on a different topic, to a total of six units.

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 above of an Honours program in Classics

Cross-list: ART HIST 4BB3

CLASSICS 4BB3 may be repeated, if on a different topic, to a total of six units.

CLASSICS 4E03 SEMINAR IN ANCIENT CULTURE

Consult the Department for the topic to be offered.

Seminar (two hours); one term

Prerequisite: Six units from Level II or III Classics and registration in Level III or above of an Honours program in Classics

CLASSICS 4E03 may be repeated, if on a different topic, to a total of six units.

CLASSICS 4F03 SEMINAR IN ANCIENT HISTORY

Consult the Department for the topic to be offered.

Seminar (two hours); one term

Prerequisite: Six units from CLASSICS 2K03, 2L03, 2LA3, 2LB3, 2LC3, 2LD3, 2LL3, 3C03, 3CC3, 3E03, 3HH3, 3LL3, 3M03, 3X03 and registration in Level III or above of an Honours program in Classics

CLASSICS 4F03 may be repeated, if on a different topic, to a total of six units.

Offered in alternate years.

CLASSICS 4K03 ANCIENT PHILOSOPHY

A critical study of one or more ancient Greek philosophers such as Parmenides, Plato, Aristotle.

Seminar (two hours); one term

Prerequisite: CLASSICS 2P06 and registration in Level III or above

Cross-list: PHILOS 4K03

Offered in alternate years.

This course is administered by the Department of Philosophy.

CLASSICS 4T03 INDEPENDENT STUDY

Reading and research in Classics, supervised by a department member and culminating in a major paper to be evaluated by the supervisor, with confirmation by a second reader. See Department for more detailed guidelines.

Tutorials; two terms

Prerequisite: Registration in Level IV of any Honours program in Classics with a Cumulative Average of at least 9.5, and permission of the Department

GREEK ...**Notes:**

- Students should note that the Department has classified its Greek language courses under the following categories:

Introductory Level Language Courses

GREEK 1Z03, 1ZZ3

Intermediate Level Language Courses

GREEK 2A03, 2AA3

- Students with Grade 12 Greek U should normally register in GREEK 2A03, but with special permission, may register in either GREEK 1Z03 or 1ZZ3.

Courses

If no prerequisite is listed, the course is open.

GREEK 1Z03 BEGINNER'S INTENSIVE ANCIENT GREEK I

A rapid introduction to the basic grammar of Ancient Greek.

Three lectures; one term

Not open to graduates of Grade 12 Greek U, who must have special permission to register in the course.

GREEK 1ZZ3**BEGINNER'S INTENSIVE ANCIENT GREEK II**

This course continues the study of the grammar of Ancient Greek begun in Greek 1Z03.

Three lectures; one term

Prerequisite: GREEK 1Z03. Students with Grade 12 Greek U must obtain special permission to register in the course.

This course, with a grade of at least B- is accepted as a prerequisite for admission to any Honours program in Classics, or, with a grade of at least C-, for admission to the B.A. program in Classics.

GREEK 2A03**INTERMEDIATE GREEK I**

This course continues the study of Greek grammar begun in Greek 1Z03 and 1ZZ3 and introduces students to the reading of simple passages from Greek authors.

Three lectures; one term

Prerequisite: One of Grade 12 Greek U, GREEK 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. The course may also include grammatical exercises.

Three lectures; one term

Prerequisite: GREEK 2A03

GREEK 3A03**GREEK HISTORIANS**

Selected readings from Greek historical authors, such as Herodotus and Thucydides.

Three lectures; one term

Prerequisite: Six units of Level II Greek

GREEK 3B03**GREEK EPIC**

Selected readings from Homer, Hesiod, and/or other Greek epic authors.

Three lectures; one term

Prerequisite: Six units of Level II Greek

Alternates with GREEK 4B03.

GREEK 4AA3**GREEK PROSE**

Selected readings in one or more Greek prose authors.

Three lectures; one term

Prerequisite: Six units of Level II Greek

GREEK 4B03**GREEK DRAMA**

Selected readings from Greek tragedy and/or comedy.

Three lectures; one term

Prerequisite: Six units of Level II Greek.

Alternates with GREEK 3B03.

GREEK 4BB3**TOPICS IN GREEK LITERATURE**

Consult the Department for the topic to be offered.

Three lectures; one term

Prerequisite: Six units of Level II Greek

GREEK 4BB3 may be repeated, if on a different topic, to a total of six units.

GREEK 4K03**INDEPENDENT STUDY IN GREEK**

Selected readings from Greek authors supervised by a member of the Department.

Tutorials; one term

Prerequisite: Six units of Level II Greek and registration in Level III or IV of any Honours program in Classics, and permission of the Department

GREEK 4K03 may be repeated, if on a different topic, to a total of six units.

LATIN ...**Notes:**

- 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

- Students with Grade 12 Latin U should normally register in LATIN 2A03, but with special permission, may register in either LATIN 1Z03, 1ZZ3.

Courses

If no prerequisite is listed, the course is open.

LATIN 1Z03**BEGINNER'S INTENSIVE LATIN I**

A rapid introduction to the basic grammar of Classical Latin.

Five hours (lectures and tutorials); one term

Not open to graduates of Grade 12 Latin U, who must obtain special permission to register in the course.

LATIN 1ZZ3**BEGINNER'S INTENSIVE LATIN II**

This course continues the study of Latin grammar begun in LATIN 1Z03. Five hours (lectures and tutorials); one term
Prerequisite: LATIN 1Z03. Students with Grade 12 Latin U must obtain special permission to register in the course.

This course, with a grade of at least B-, is accepted as a prerequisite for admission to any Honours program in Classics, or, with a grade of at least C-, for admission to the B.A. program in Classics.

LATIN 2A03**INTERMEDIATE LATIN I**

This course continues the study of Latin grammar begun in LATIN 1Z03 and 1ZZ3 and introduces students to the reading of simple passages from Latin authors.

Three lectures; one term

Prerequisite: One of Grade 12 Latin U, LATIN 1ZZ3. Students using this course as a Humanities 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. Attention will be given to grammar and techniques of literary criticism.

Three lectures; one term

Prerequisite: LATIN 2A03

LATIN 3A03**LATIN HISTORIANS**

Readings in selected Latin historians such as Sallust, Livy, and Tacitus.

Three lectures; one term

Prerequisite: LATIN 2A03, 2AA3

LATIN 3B03**LATIN EPIC**

Readings from Vergil, and/or other epic authors.

Three lectures; one term

Prerequisite: LATIN 2A03, 2AA3

Alternates with LATIN 4B03.

LATIN 4AA3**LATIN PROSE**

Selected readings in one or more Latin prose authors.

Three lectures; one term

Prerequisite: Six units of Level II Latin

LATIN 4B03**LATIN LOVE POETRY**

Readings in Latin Love Poetry.

Three lectures; one term

Prerequisite: LATIN 2A03, 2AA3

Alternates with LATIN 3B03.

LATIN 4BB3**TOPICS IN LATIN LITERATURE**

Consult the Department for the topic to be offered.

Three lectures; one term

Prerequisite: Six units of Level II Latin

LATIN 4BB3 may be repeated, if on a different topic, to a total of six units.

LATIN 4K03**INDEPENDENT STUDY IN LATIN**

Selected readings from Latin authors supervised by a member of the Department.

Tutorials; one term

Prerequisite: Six units of Level II Latin; and registration in Level III or IV of any Honours program in Classics; and permission of the Department.

LATIN 4K03 may be repeated, if on a different topic, to a total of six units.

COLLAB

(SEE NURSING, NURSING CONSORTIUM (D) STREAM)

COMMERCE

WEB ADDRESS: <http://www.degroote.mcmaster.ca>

DeGroote School of Business, Room 104

Ext. 24433

Faculty as of January 15, 2007**Chair, Strategic Market Leadership and Health Services Management Area**

Kenneth R. Deal

Chair, Finance and Business Economics Area

Trevor Chamberlain

Acting Chair, Accounting and Financial Management Services Area

Mohamed Shehata

Chair, Human Resources and Management Area

Willi Wiesner

Chair, Management Science and Information Systems Area

Mahmut Parlar

Professors

Prakash L. Abad/B.Tech. (Indian Institute of Technology), M.S., M.B.A., Ph.D. (Cincinnati)/(Management Science)

Naresh C. Agarwal/B.A., M.A. (Delhi), Ph.D. (Minnesota)/(Human Resources)/Coordinator, Ph.D. Program (Human Resources)

Amin Amershi/B.Sc. (University of East Africa), Ph.D. (British Columbia)/(Accounting and Financial Management Services Area)/AIC Chair in Investment and Portfolio Management

Vishwanath Baba/B. Eng. (Madras), M.B.A. (Western Illinois), Ph.D. (British Columbia)/(Organizational Behaviour)

Christopher K. Bart/B.A., M.B.A. (York), Ph.D. (Western Ontario), C.A./ (Business Policy)/Director of the Management of Innovation and Technology Program

Trevor W. Chamberlain/B.Sc. (California-Berkeley), M.B.A. (McGill), Ph.D. (Toronto), C.A./ (Finance)/Chair, Finance and Business Economics Area

M.W. Luke Chan/B.Sc. (Prince Edward Island), M.A., Ph.D. (McMaster) (Finance and Business Economics)/Associate Vice-President (International Affairs)

C. Sherman Cheung/B.S. (Louisiana State), M.S., Ph.D. (Illinois)/(Finance and Business Economics)

Robert G. Cooper/B.Eng., M.Eng. (McGill), M.B.A., Ph.D. (Western Ontario)/(Marketing)

Richard W. Deaves/B.A., M.A., Ph.D. (Toronto)/(Finance and Business Economics)

Rick D. Hackett/B.Sc. (Toronto), M.A. (Windsor), Ph.D. (Bowling Green State)/(Human Resources)/Canada Research Chair, Management of Organizational Behaviour and Human Performance

Elko J. Kleinschmidt/Dip. Ing. (Staatliche Ingenieurschule, Hannover), M.B.A., Ph.D. (McGill)/(Marketing and International Business)

Clarence C.Y. Kwan/Ph.D. (Ottawa), M.B.A. (McMaster), Ph.D. (Toronto), P.Eng./ (Finance)/CIBC Chair in Financial Markets

John W. Medcot/B.A. (New Brunswick), M.A., Ph.D. (Toronto)/(Organizational Behaviour)/Director, Engineering and Management Programs

G. John Miltenburg/B.Eng. Mgt., M.B.A. (McMaster), M.Eng. (Toronto), Ph.D. (Waterloo), P.Eng./ (Production and Management Science)

Ali R. Montazemi/H.N.D. (Teesside Polytechnic), M.Sc. (Southampton), Ph.D. (Waterloo)/(Information Systems)

Dean C. Mountain/B.A. (McMaster), M.A., Ph.D. (Western Ontario)/(Finance and Business Economics)

S.M. Khalid Nainar, B.A., M.A. (Delhi), Ph.D. (Florida)/(Accounting)

Mahmut Parlar/B.Sc., M.Sc. (Middle East Technical University), Ph.D. (Waterloo)/(Management Science)/Chair, Management Science and Information Systems Area

Joseph B. Rose/B.B.A. (Adelphi), M.B.A. (California), Ph.D. (SUNY-Buffalo)/(Industrial Relations)

Sudipto Sarkar/B.Tech. (Indian Institute of Technology), Ph.D. (Columbia)/(Finance)

Mohamed M. Shehata/B.Com. (Tanta), M.S. (Ain-Shams), M.B.A. (North Texas State), Ph.D. (Florida)/(Accounting)/Acting Chair, Accounting and Financial Management Services Area

George Steiner/M.Sc. (Budapest), Ph.D. (Waterloo)/(Production and Management Science)

George O. Wesolowsky/B.A.Sc. (Toronto), M.B.A. (Western Ontario), Ph.D. (Wisconsin)/(Management Science)

Yufei Yuan/B.S. (Fudan), Ph.D. (Michigan)/(Information Systems)/Wayne C. Fox Chair

F. Isik Zeytinoglu/B.A., M.A. (Bogazici), M.S., Ph.D. (Pennsylvania)/(Management and Industrial Relations)

Associate Professors

Nick Bontis/B.A., Ph.D. (Western Ontario)/(Strategic Market Leadership and Health Services Management)/Director, Undergraduate Programs

Y.C. Lilian Chan/B.B.A. (Chinese University of Hong Kong), Ph.D. (Virginia Polytechnic Institute and State University)/(Accounting)

Narat Charupat/B.A. (Thammasat), M.B.A. (Drexel), Ph.D. (York)/(Finance)

Kenneth R. Deal/B.S., M.B.A., Ph.D. (SUNY-Buffalo)/(Marketing and Management Science)/Chair, Strategic Market Leadership and Health Services Management Area

Brian Detlor/B.Sc. (Western Ontario), M.I.S., Ph.D. (Toronto)/(Information Systems)
 Khaled Hassanein/B.Sc. (Kuwait), M.A.Sc. (Toronto), Ph.D. (Waterloo), M.B.A. (Wilfrid Laurier)/(Information Systems)/Director, MeRC
 Milena Head/B.Math. (Waterloo), M.B.A., Ph.D. (McMaster)/(Management Science/Information Systems)/Associate Dean
 Maureen Hupfer/B.Com., M.A., Ph.D. (Alberta)/(Marketing)
 Kiridaran Kanagarethnam/B.Sc. (Peradeniya), M.S.E.E. (Purdue), Ph.D. (Syracuse), C.M.A./Accounting and Financial Management Services
 Rosemary Luo/B.Eng. (Business) (Beijing), M.A. (McMaster), Ph.D. (Western Ontario)/(Finance)
 Devashish Pujari/B. Com, M.Com., M.Phil., (Kurukshetra), Ph.D. (Bradford)/(Strategic Market Leadership and Health Services Management)
 D. Wayne Taylor/B.A. (Toronto), M.P.A., Ph.D. (York)/(Business and Public Policy)/Director, Health Services Management Program
 James H. Tiessen/B.Sc. (Alberta), M.Sc. (Guelph), Ph.D. (York)/(International Business)/Director, M.B.A. Programs
 Willi Wiesner/ B.A. (Wilfrid Laurier), M.A.Sc., Ph.D. (Waterloo)/(Human Resources)/Chair, Human Resources and Management Area
 Toru Yoshikawa - B. Law. (Meiji), M.A. (Western Michigan), M.A. (Toronto), Ph.D. (York)/Strategic Market Leadership and Health Services Management

Assistant Professors

Catherine Connelly/B.Com. (McMaster), M.Sc., Ph.D. (Queen's)/(Organizational Behaviour)
 Anna Danielova/ B.Sc. (Yerevan Polytechnic Institute), M.S. (American University of Armenia), M.A., Ph.D. (Indiana)/(Finance)
 Terry Flynn/B.A. (Carleton), M.S., Ph.D. (Syracuse)/(Marketing)
 Elkafi Hassini/B.Sc. (Bilkent), M.A.Sc., Ph.D. (Waterloo)/Management Science
 Xinghua Liang/B. Econ. (Guangdong), M.Sc. (Concordia)/Accounting and Financial Management Services
 Christopher Longo/B.A. (York), M.Sc. (Western Ontario), Ph.D. (Toronto)/Health Services Management
 Peter Miui/B.Sc. (Hong Kong), M.B.A., Ph.D. (Toronto)/(Finance)
 Emad Mohammad/ B.A. (Kuwait), M.B.A., Ph.D. (Georgia State)/(Accounting and Financial Management Services)
 Jiaping Qiu/B.A. (Xiamen), M.Sc. (Hong Kong University of Science and Technology), Ph.D. (Toronto)/(Finance)
 Glen Randall/B.A., M.A., M.B.A. (McMaster), Ph.D. (Toronto)/(Marketing)
 Sourav Ray/B.Tech (Indian Institute of Technology), M.S. (Texas A&M), Ph.D. (Minnesota)/(Marketing)
 Aaron Schat/B.A. (Redeemer), M.A., Ph.D. (Guelph)/(Organizational Behaviour)
 Alfred Seaman/B.B.A.Admin. (New Brunswick), Ph.D. (Queen's) C.M.A./Accounting and Financial Management Services
 John Siam/B.A., M.A., Ph.D. (Concordia)/(Accounting and Financial Management Services)
 Kevin Tasa/B.Com. (Saskatchewan), M.Sc., Ph.D. (Toronto)/(Human Resource Management)
 Patricia Wakefield/B.S. (Alberta), M.S. (Cornell), M.P.A. (New York), Ph.D. (Boston)/(Marketing)

Industry Professor

Paul K. Bates/(Financial Management Services)/Dean

Lecturers

Gokhul Bhandari/B.E.E. (Mehran), M.B.A. (Minnesota), M.A. (McMaster), Ph.D. (McMaster)/(Finance and Economics)
 Rita Cossa/H.B.B.A. (Wilfrid Laurier), M.B.A. (McMaster)/(Marketing)
 Horng-Tzu Hao/B.B.A. (Tamkang), M.B.A. (SUNY-Buffalo)/(Accounting)
 Mandeep Malik/B.A. (Panjab), M.A. (Canberra)/(Marketing)
 Sara Mann/B.Com., M.B.A. (McMaster), Ph.D. (Toronto)/(Organizational Behaviour and Human Resource Management)
 Teal McAteer/B.Comm. (Queen's), M.I.R., Ph.D. (Toronto)/(Human Resources and Management)
 Marvin G. Ryder/B.A., B.Sc. (Carleton), M.B.A. (McMaster)/(Marketing and Business Policy)
 Tiina Salisbury/B.Com., M.B.A. (McMaster)/(Management Science and Information Systems)
 Linda Stockton/M.B.A. (McMaster)/(Marketing)
 Peter Vilks/B.Sc.E.E. (Sunny-Buffalo), M.B.A. (McMaster), P.Eng./Marketing

Faculty Notes:

- Upper Level Commerce courses are not open to Business I students.
- The Commerce courses for the Business Minor are open to students registered in any four- or five-level McMaster degree program. For these students, enrolment will be limited to 40 spaces per course on a first-come, first-served basis in the following courses: COMMERCE 2AA3, 2AB3, 2BA3, 2FA3, 2MA3, 2QA3, 2QB3, 3BC3, 3FA3, 3MC3. Please note that all prerequisites for these courses must also be satisfied. Students registered in a McMaster Commerce, Engineering Management or Labour Studies program (where applicable) will be guaranteed enrolment in these courses. See *Minor in Business* in the *Faculty of Business* section of this Calendar.
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; or completion of ECON 2G03 or 2X03 with a minimum grade of B- as a prerequisite.
- The Commerce courses for the Minor in Finance and the Minor in Accounting and Financial Management Services are open to students admitted to the Minor. Please take note that all prerequisites for these courses must also be satisfied. Students taking COMMERCE 2AA3 and 2FA3 as Minor in Accounting or Minor in Accounting and Financial Management Services courses will also be required to have obtained a minimum grade of B- in ECONOMICS 1A06 or an average of at least 7.0 in ECON 1B03 and 1BB3 as a prerequisite.
- Graduates of McMaster's Commerce programs or one of the Engineering and Management programs may take, as part-time students, Level III and IV Commerce courses (not previously taken, to a maximum of 18 units), space permitting excluding COMMERCE 4AG3*, 4AH3*, 4AI3*, with the permission of the Academic Programs Office. (See the *Admission Requirements* section of this Calendar under the heading *Continuing Students*.)
*These courses are available as ACC 500, ACC 501, ACC 502, through the School of Business, subject to sufficient enrolments and availability of qualified instructors.
Other than those graduates specified above, Commerce courses are not open to Continuing Students.
- Level II and Level III Commerce courses are generally scheduled for three one-hour lectures per week; one term. Level IV Commerce courses are generally scheduled for two lectures per week (a two-hour lecture and a one-hour lecture); one term.
- Level IV Commerce requirements: the six units of Level III or IV Commerce courses noted in the *School of Business* section of this Calendar can only be taken by Level IV Commerce students in their final year.**

Courses

COMMERCE 1E03 BUSINESS ENVIRONMENT AND ORGANIZATION

This course will examine the relationship between business organizations, their functional areas and the environments - social, political, legal and regulatory and technological - that affect them.

Prerequisite: Registration in Business I

COMMERCE 1PA0 ORIENTATION TO UNDERGRADUATE BUSINESS PROGRAM

This course provides entering students with a comprehensive orientation of all programs and services within the DeGroote community. This course will be taught using a combination of in-class instruction and on-line resources.
Prerequisite: Registration in Business I

COMMERCE 2AA3 FINANCIAL ACCOUNTING I

This is an introduction to the basic principles and practices of financial accounting, which includes an examination of income measurement and asset and liability valuation, to provide an understanding of financial accounting information and the ethics of financial reporting.

Prerequisite: ECON 1A06 or 1B03 and registration in any Commerce or Engineering and Management program; or a grade of at least B- in ECON 1A06 or 1B03 and registration in any four or five-level non-Commerce program

COMMERCE 2AB3 MANAGERIAL ACCOUNTING I

An introduction to concepts underlying the use of cost accounting information for managerial planning and control and for inventory valuation. The nature and analysis of costs and the usefulness and limitations of accounting data for decision-making, including ethical considerations, will be discussed.

Prerequisite: COMMERCE 2AA3 and registration in any Commerce, Engineering and Management or four or five-level non-Commerce program

COMMERCE 2BA3 ORGANIZATIONAL BEHAVIOUR

The central objective of this course is to develop an understanding of human behaviour in organizations with a view toward effective management of such behaviour.

Prerequisite: Registration in any Commerce, Engineering and Management, Labour Studies or four or five-level non-Commerce program
Antirequisite: KINESIOL 3L03

COMMERCE 2FA3 INTRODUCTION TO FINANCE

This course introduces the main instruments and institutions in the Canadian financial system. The basic concepts and models of modern financial theory are introduced through lectures and "hands-on" problem solving. Topics include: the time value of money, capital budgeting, the trade-off between risk and return and security valuation.

Prerequisite: ECON 1A06 or 1B03; and one of MATH 1A03, 1M03, or 1N03; and COMMERCE 2AA3; and registration in any Commerce, Engineering and Management or four or five-level non-Commerce program. Students in a four- or five-level non-Commerce program must have at least B- in ECON 1A06 or 1B03.

Not open to students with credit or registration in ECON 2103.

COMMERCE 2MA3 INTRODUCTION TO MARKETING

This course introduces the conceptual underpinnings and operational facets of marketing with a primarily consumer (as opposed to industrial) focus.

Prerequisite: ECON 1A06 or 1B03 and registration in any Commerce or Engineering and Management program; or a grade of at least B- in ECON 1A06 or 1B03 and registration in any four or five-level non-Commerce program

COMMERCE 2QA3 COMPUTER-AUGMENTED STATISTICAL ANALYSIS

An introduction to the application of statistical analysis in managerial decision-making. The concepts of statistical analysis are applied to a variety of topics, including decision-making, estimation by sampling, hypothesis testing, analysis of variance, simple linear and multiple regression and forecasting.

Prerequisite: Finite Math (or Mathematics of Data Management U or equivalent) or STATS 1L03; and registration in any Commerce, Engineering and Management or four or five-level non-Commerce program

Antirequisite: ECON 2B03, HTH SCI 1F03, 2A03, SOC SCI 2J03, STATS 1CC3, 2MB3, 3J04, 3N03, 3Y03

COMMERCE 2QB3 INFORMATION SYSTEMS IN BUSINESS

This course emphasizes the strategic role of information systems in modern business. Topics include: the technical foundations of information systems, the impact of information systems on business operations and decision-making and the processes that are required for successful implementation of business information systems.

Prerequisite: One of COMP SCI 1BA3, 1MC3, 1SA3, 1TA3, 1ZA3, ENGINEER 1D04, MMEDIA 1A03; and registration in any Commerce or four or five-level non-Commerce program or non-Engineering and Management program

Antirequisite: COMMERCE 3QB3

COMMERCE 2S03 COMMUNICATION, THINKING AND GROUP SKILLS

Students will be introduced to the effective use of written and oral communication skills; thinking skills including convergent, divergent and creative thinking as well as logic and rhetoric; and group and interpersonal skills including leadership. Students practice these skills in exercises concerned with current business issues.

Prerequisite: Registration in a Commerce program

COMMERCE 2SB3 BUSINESS ETHICS

An analysis of ethical issues arising in contemporary business life. Sample topics include: fair and unfair competition; responsibilities towards employees, society and the environment; honesty and integrity in business; the moral status of corporations.

Prerequisite: Registration in Level II or above of any Commerce or Engineering and Management program

Cross-list: PHILOS 2N03

This course is administered by the Department of Philosophy.

COMMERCE 3AB3 FINANCIAL ACCOUNTING II

A first course in intermediate financial accounting dealing with the theory and practice of financial statement preparation and reporting. The emphasis will be on asset valuation and the related impact on income measurement.

Prerequisite: COMMERCE 2AA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 3AC3 FINANCIAL ACCOUNTING III

A second course in intermediate financial accounting dealing with reporting issues that relate to liabilities and owners' equity. In particular, the concepts of recognition, measurement and disclosure of such items as bonds, taxes, leases and pensions as well as the phenomenon of off-balance sheet financing are examined.

Prerequisite: COMMERCE 3AB3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)
Antirequisite: COMMERCE 4AB3

COMMERCE 3BC3 HUMAN RESOURCE MANAGEMENT AND LABOUR RELATIONS

This course builds on COMMERCE 2BA3, focusing on human resource management and labour relations issues and practices from a general management education perspective.

Prerequisite: COMMERCE 2BA3; and registration in any Commerce, Labour Studies, Engineering and Management or four or five-level non-Commerce program

Antirequisite: COMMERCE 3BA3, 3BB3

COMMERCE 3FA3 MANAGERIAL FINANCE

This course examines various aspects of the financial management of the firm including the sources and methods of financing, capital structure, dividend policy, leasing, mergers and acquisitions, working capital management, effects of taxation on financial decisions and international aspects of finance.

Prerequisite: COMMERCE 2FA3 or ECON 2103; and registration in any Commerce, Engineering and Management or four or five-level non-Commerce program

COMMERCE 3FB3 SECURITIES ANALYSIS

This course is concerned with the analysis of marketable securities, especially common stocks. Topics include: the institutional characteristics and operation of financial markets, securities analysis and valuation, investment characteristics and strategies to increase return.

Prerequisite: COMMERCE 2FA3 or ECON 2103; and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 3FC3 INTERNATIONAL FINANCE

This course provides a framework for examining financial management decisions in an international setting. Issues examined include: foreign exchange risk management, multinational working capital management, foreign investment analysis and financing foreign operations.

Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 3IN0 COMMERCE INTERNSHIP PROGRAM

Career development; job strategies; skills assessment; resume/application form preparation; interview/presentation skills; orientation to the workplace. Successful completion of an eight, twelve or sixteen month Internship, employer evaluation and work term report.

Lecture/workshop (six sessions); first term or second term

Prerequisite: Successful completion of Level II Commerce. Transcript notation granted upon successful completion of an 8, 12 or 16 month approved internship.

COMMERCE 3MA3 MARKETING RESEARCH

This course covers the effective obtaining, communicating and using of competitive and market intelligence. Students work in groups with a company or public organization and receive training and experience in making business presentations.

Prerequisite: COMMERCE 2MA3, 2QA3 and registration in any Commerce or Engineering and Management program; or COMMERCE 2MA3 and one of STATS 2MB3, 3J04, 3N03 or 3Y03 and registration in any Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 3MB3 CONSUMER BEHAVIOUR

This course examines why people buy, ways of satisfying consumer needs more effectively and the creation of communications that will influence consumers.

Prerequisite: COMMERCE 2MA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 3MC3 APPLIED MARKETING MANAGEMENT

This course builds upon material in COMMERCE 2MA3 but is more applied in nature and covers the 4 P's 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 program

COMMERCE 3QA3 MANAGEMENT SCIENCE FOR BUSINESS

This course is a study of analytical approaches that assist managerial decision-making; it provides coverage of decision theory and an introduction to optimization methods, computer simulation and the general approach of management science.

Prerequisite: COMMERCE 2QA3 and registration in any Commerce or Engineering and Management program; or one of STATS 2MB3, 3J04, 3N03 or 3Y03 and registration in any Engineering and Management program.

COMMERCE 3QC3 PRODUCTION/OPERATIONS MANAGEMENT

An introduction to the production/operations function with emphasis on the use of quantitative analysis to assist decision-making. Topics include: layout of facilities, aggregate planning, scheduling, inventory control and quality control.

Prerequisite: COMMERCE 3QA3 and registration in any Commerce program

Antirequisite: COMMERCE 4QA3, MECH ENG 4C03

COMMERCE 4AA3 MANAGERIAL ACCOUNTING II

A consideration of advanced topics in management planning and control including cost behaviour determination, production planning, innovation in costing, cost allocations, variance analysis and performance evaluation for responsibility centres.

Prerequisite: COMMERCE 2AB3 or 3AA3; and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4AC3 FINANCIAL ACCOUNTING IV

An advanced accounting course 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 program. (B.Com. students - see Note 6 above.)

COMMERCE 4AD3 INTRODUCTION TO AUDITING

An examination of the attest function in accounting including ethical, legal, and statutory influences in the development of auditing standards. Control structure and audit evidence will be examined.

Prerequisite: COMMERCE 3AB3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4AE3 ACCOUNTING INFORMATION SYSTEMS

This course emphasizes the understanding of the roles of accounting information and 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 program. (B.Com. students - see Note 6 above.)

COMMERCE 4AF3 ACCOUNTING THEORY

A review of accounting theory as a background for applying underlying concepts to current accounting problems. The course emphasizes current literature.

Prerequisite: Credit or registration in COMMERCE 3AC3 or 4AB3; and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4AX3 SPECIAL TOPICS IN ACCOUNTING

Various topics in Accounting are considered. They will vary depending upon recent developments in the field and upon the research interests of the instructor. The topics to be included are announced at the time of the course offering.

Prerequisite: Announced at the time of offering

For information on course offerings, please refer to the School of Business web site at <http://www.dogroote.mcmaster.ca/programs/commerce/courses.html> or contact the Academic Programs Office, DSB 104.

COMMERCE 4AX3 may be repeated, if on a different topic, to a total of six units.

COMMERCE 4BA3 BEHAVIOURAL ISSUES IN MANAGEMENT

Detailed analysis of employee motivation and reward systems; organizational structure; leadership and decision-making; group processes; and management of conflict and change.

Prerequisite: Registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4BB3 PERSONNEL SELECTION

This course exposes students to staffing issues in the Canadian context. Topics include job analysis, methods of recruitment and selection, human rights legislation and decision-making strategies.

Prerequisite: COMMERCE 3BB3 or 3BC3; and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4BC3 COLLECTIVE BARGAINING

A survey of the nature, determinants, and impact of collective bargaining in Canada. Both the procedural and substantive aspects of collective bargaining will be studied.

Prerequisite: One of COMMERCE 3BC3, LABR ST-2A03 or 2A06; and registration in any Commerce, Engineering and Management or Labour Studies program. (B.Com. students - see Note 6 above.)

COMMERCE 4BD3 SETTLEMENT OF INDUSTRIAL DISPUTES

The nature and the role of industrial conflict as well as the techniques which have been developed to control the incidence of conflict in union-management situations.

Prerequisite: One of COMMERCE 3BC3, LABR ST 2A03 or 2A06; and registration in any Commerce, Engineering and Management or Labour Studies program. COMMERCE 4BC3 is recommended. (B.Com. students - see Note 6 above.)

COMMERCE 4BE3 COMPENSATION/REWARD SYSTEMS

Key issues in designing effective pay systems are discussed. Topics include: job evaluation, market pay surveys, pay structures, performance incentives, knowledge pay and employee benefits.

Prerequisite: COMMERCE 3BB3 or 3BC3; and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4BF3 LABOUR LAW AND POLICY

An analysis of the concepts and fundamentals of Canadian labour law and analysis of Canadian labour policy.

Prerequisite: COMMERCE 3BC3; and registration in any Commerce or Engineering and Management program. Subject to space availability. (B.Com. students - see Note 6 above.)

Cross-list: LABR ST 3C03.

This course is administered by Labour Studies.

COMMERCE 4BG3 PUBLIC SECTOR COLLECTIVE BARGAINING

This course examines unionization and collective bargaining for employees in the public sector. Topics include: bargaining issues, bargaining outcomes and impasse resolution.

Prerequisite: COMMERCE 3BC3; and registration in any Commerce or Engineering and Management program. Subject to space availability. (B.Com. students - see Note 6 above.)

Cross-list: LABR ST 4C03

COMMERCE 4BI3 TRAINING AND DEVELOPMENT

This course provides a framework for establishing, revising and examining training programs in organizations. Topics include: needs assessment, development of training objectives, planning and delivery of instruction, learning principles and evaluation of training.

Prerequisite: COMMERCE 3BB3 or 3BC3; and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 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 program. (B.Com. students - see Note 6 above.)

Not open to students with credit in COMMERCE 4SX3, SPECIAL TOPICS IN BUSINESS, if taken in January 1998.

COMMERCE 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: COMMERCE 2BA3 registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

Not open to students with credit in COMMERCE 4BX3, if taken in January 1998 or 1999.

COMMERCE 4BL3 OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT

This course enhances students' knowledge on managing occupational health and safety, teaches research skills, and assists students in developing strategies for creating healthy workplaces.

Prerequisite: COMMERCE 3BC3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

Not open to students with credit in COMMERCE 4BX3, if the topic was Occupational Health and Safety (2004-2005).

COMMERCE 4BM3 STRATEGIC HUMAN RESOURCE PLANNING

This course provides an understanding of the essential elements of Human Resource Planning processes in organizations. Students will acquire knowledge in analyzing, assessing and programming for human resource requirements of the organizational business plans and strategies.

Prerequisite: COMMERCE 3BC3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)
Not open to students with credit in COMMERCE 4BX3, if the topic was Strategic Human Resource Planning (2004-2005 and 2005-2006).

COMMERCE 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 web site at <http://www.degroote.mcmaster.ca/programs/commerce/courses.html> or contact the Academic Programs Office, DSB 104. COMMERCE 4BX3 may be repeated, if on a different topic, to a total of six units.

COMMERCE 4FA3 APPLIED CORPORATE FINANCE

This course examines the application of financial theory to a variety of problems in corporate finance. The appropriate use of valuation principles and techniques, and the design of corporate strategies intended to create shareholder wealth, are considered.

Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4FD3 FINANCIAL INSTITUTIONS

This course examines, from a managerial perspective, the major types of financial institutions in Canada: chartered banks, trust companies, insurance companies, investment banks and other institutional investors.

Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4FE3 OPTIONS AND FUTURES

This course provides an integrated approach to understanding the relations between options, futures, and their underlying assets. The theory of pricing of options and futures and the application of the theory to instruments currently traded in financial markets are considered.

Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4FF3 PORTFOLIO THEORY AND MANAGEMENT

This course offers an advanced treatment of investment decision-making and the role of financial markets in pricing securities. Topics include: portfolio selection models, the institutional environment of investment decisions, and investment and asset pricing theory.

Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)
 Antirequisite: COMMERCE 4FC3

COMMERCE 4FG3 FINANCIAL THEORY

This course explores the theoretical foundations of finance and their applications to corporate finance policy. Topics covered include rational investment decisions, asset pricing, efficient markets, financial decisions and the role of information in financial decision-making.

Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)
 Antirequisite: COMMERCE 4FB3

COMMERCE 4FH3 MERGERS, ACQUISITIONS AND CORPORATE CONTROL

This course examines the process by which mergers and other types of corporate control transactions take place, and the role of restructuring shifts in resource allocation by corporations.

Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4FI3 TRADING IN FINANCIAL MARKETS

This course attempts to develop practical skills in trading financial securities -fixed income, equities, futures and options- focusing on trading strategies based on market analysis and risk measurement.

Prerequisite: COMMERCE 3FA3; and registration in any Honours Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)
 Enrolment is limited.

COMMERCE 4FJ3 FIXED INCOME ANALYSIS

This course provides an advanced treatment of investments in the field of fixed income analysis and focuses on fixed income securities; fixed income portfolio management and fixed income derivatives.

Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4FK3 FINANCIAL STATEMENT ANALYSIS

This course provides a comprehensive and up-to-date treatment of the analysis of financial statements as an aid to decision making. The relationship between financial markets and financial statements is studied using computerized data sets on personal computers.

Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4FL3 PERSONAL FINANCIAL MANAGEMENT

The course covers various topics that are relevant to the financial decision making of individuals. These decisions include investment, retirement planning, debt and credit management, renting vs. buying a home, insurance and risk management and personal income tax planning and strategies.

Prerequisite: COMMERCE 2FA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)
Not open to students with credit in COMMERCE 4FX3, if the topic was Personal Financial Management (2004-2005 and 2005-2006).

COMMERCE 4FV3 VENTURE CAPITAL

This course focuses on financing and value creation strategies for early- and growth-stage companies. It is designed for students considering careers in financial services or as entrepreneurs.

Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4FX3 SPECIAL TOPICS IN FINANCE

Various topics in Finance are considered. They will vary depending upon recent developments in the field and upon the research interests of the instructor. The topics to be included are announced at the time of the course offering.

Prerequisite: Announced at time of offering

For information on course offerings, please refer to the School of Business web site at <http://www.degroote.mcmaster.ca/programs/commerce/courses.html> or contact the Academic Programs Office, DSB 104. COMMERCE 4FX3 may be repeated, if on a different topic, to a total of six units.

COMMERCE 4MC3 NEW PRODUCT MARKETING

This course covers the management of new products from the idea stage through to product launch with a strong practical orientation. A field project is a major component of the course.

Prerequisite: COMMERCE 3MC3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4MD3 BUSINESS MARKETING

An overview of business marketing including: derived demand, vendor analysis, the multiple buying unit, value analysis, competitive bidding, industrial design, key accounts, and trade shows.

Prerequisite: COMMERCE 3MC3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4ME3 SALES MANAGEMENT

Cases, presentations, field work, library research, role playing and group exercises help to understand customers, the selling process, sales presentations, negotiation, legal and ethical responsibilities, self and team management.

Prerequisite: COMMERCE 3MC3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)
Not open to students with credit or registration in COMMERCE 4MX3, if the topic was Sales Management.

COMMERCE 4MF3 RETAILING MANAGEMENT

This course will familiarize students with key managerial and policy issues involved in the design, implementation and assessment of the retail mix. It will cover several areas relating to the institution of retailing, elements of the retail environment; and retail strategies.

Prerequisite: COMMERCE 3MC3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4PA3 BUSINESS POLICY: STRATEGIC MANAGEMENT

As the capstone to the program, this case course is designed to unify the student's learning experience by exploring the formulation and implementation of corporate strategy.

Prerequisite: COMMERCE 3MC3; and registration in Level IV of a Commerce program or Level V of an Engineering and Management program

COMMERCE 4QA3 OPERATIONS MODELLING AND ANALYSIS

A course that looks at productions and operations management as practiced in engineering and manufacturing industries and the services sector.

Prerequisite: One of STATS 2MA3, 3J04, 3N03, 3Y03 or equivalent; and registration in any Engineering and Management or Mechanical Engineering program
Antirequisite: COMMERCE 3QC3

COMMERCE 4QB3 ANALYSIS OF PRODUCTION/OPERATIONS PROBLEMS

An examination of analytical approaches to problems in the field of production/operations. The course will provide in-depth coverage of a limited number of topics. Enterprise resource planning system SAP may be used to highlight some of the concepts covered in the course.

Prerequisite: One of COMMERCE 3QC3, 4QA3 or MECH ENG 4C03; and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

Enrolment is limited.

COMMERCE 4QC3 MANAGERIAL DECISION MODELLING WITH SPREADSHEETS

This application-oriented course will cover several optimization modelling techniques that can be used to support managers and engineers in a wide variety of decision making situations in finance, marketing and production. Prerequisite: COMMERCE 3QA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

Enrolment is limited.

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 project.

Prerequisite: COMMERCE 2QB3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4QE3 2ND GENERATION INTERNET AND BUSINESS APPLICATION

As a result of new and converging technologies, the telecommunications industry is moving all services to the 2nd generation internet: called the broadband age. This course is a lecture/seminar course to take students through the changes and impacts of entering the broadband age. Particular attention will be paid to the business impacts of these changes to prepare students for the new business models that are emerging.

Prerequisite: COMMERCE 2QB3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

Not open to students with credit in COMMERCE 4QX3, if the topic was Specific Topics in Business Data Communication (if taken in September 1997).

COMMERCE 4QF3 PROJECT MANAGEMENT

Topics include: project selection, project organization structures, life cycles, planning, estimation, budgeting, resource allocation, contracting, project management software, reporting and controlling issues and conflict management.

Prerequisite: COMMERCE 2BA3, 3QA3 and registration in a Commerce program; or registration in an Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4QH3 MANAGEMENT ISSUES IN ELECTRONIC BUSINESS

This course will cover the issues that the modern business manager must deal with in making strategic decisions concerning the choice, implementation, and execution of electronic business solutions.

Prerequisite: COMMERCE 2QB3 and registration in any Commerce program; or registration in any Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4QX3 SPECIAL TOPICS IN MANAGEMENT SCIENCE AND INFORMATION SYSTEMS

Various topics in Management Science and Information Systems are considered. They will vary depending upon recent developments in the field and upon the research interests of the instructor. The topics to be included are announced at the time of the course offering.

Prerequisite: Announced at time of offering

For information on course offerings, please refer to the School of Business web site at <http://www.dcgroote.mcmaster.ca/programs/commerce/courses.html> or contact the Academic Programs Office, DSB 104. COMMERCE 4QX3 may be repeated, if on a different topic, to a total of six units.

COMMERCE 4SA3 INTERNATIONAL BUSINESS

The key features of, and trends in, the global business environment. The implications of cultural and political differences. Comparative operational practices and multinational management.

Prerequisite: COMMERCE 3MC3; and registration in Level IV of a Commerce program or Level V of any Engineering and Management program
Antirequisite: COMMERCE 4PE3

COMMERCE 4SB3 INTRODUCTION TO CANADIAN TAXATION

The principles of Canadian federal income taxation are examined in detail, emphasizing the application of both statute and common law to individuals' and businesses' situations.

Prerequisite: Credit or registration in COMMERCE 3AB3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

Antirequisite: COMMERCE 4PB3

COMMERCE 4SC3 ADVANCED CANADIAN TAXATION

This course continues the study of Canadian federal income taxation with an in-depth coverage of selected provisions of the Income Tax Act pertaining to business activities, particularly the activities of corporations.

Prerequisite: COMMERCE 4SB3 or 4PB3; and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

Antirequisite: COMMERCE 4PC3

COMMERCE 4SD3 COMMERCIAL LAW

This course emphasizes those areas of law which are most relevant to business activity. Particular attention is given to the law relating to contracts and business organizations. Other areas of study include: sources of law, the judicial process, real and personal property, torts, agency, credit and negotiable instruments.

Prerequisite: Registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

Antirequisite: COMMERCE 4PD3

COMMERCE 4SE3 ENTREPRENEURSHIP

The problems and experiences encountered in starting and developing new enterprises will be studied. A cornerstone of the course is the development of a detailed business plan for a local entrepreneur. Prerequisite: COMMERCE 3FA3; and COMMERCE 3MA3 or 3MC3; and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4SF3 JAPANESE BUSINESS

An introduction to Japan's business system. The approach is integrative, as the course examines Japan's economic history, culture, politics, industrial policy, management practices, advertising and doing business with Japan. Prerequisite: Registration in any Commerce, Japanese Studies or Engineering and Management program. (B.Com. students - see Note 6 above.)
Cross-list: JAPAN ST 4S03

COMMERCE 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 program. Project forms are available from DSB-104. (B.Com. students - see Note 6 above.)

COURSES FOR PROFESSIONAL DESIGNATION ...

COMMERCE 4AG3 ADVANCED ACCOUNTING TOPICS

This course extends the knowledge base of earlier accounting courses and deals with specific advanced accounting topics, such as the conceptual framework, standard setting, not-for-profit accounting and fiduciary accounting.

Prerequisite: COMMERCE 4AC3, 4AF3; and registration in any Commerce or Engineering and Management program or graduation from a Commerce program. Available Summers subject to sufficient enrolments and availability of qualified instructors.

COMMERCE 4AH3 ADVANCED AUDITING

This course considers a number of advanced topics concerning both the auditor and the audit profession. It builds on the knowledge of the audit task derived in earlier courses as well as on the technical skills and breadth of knowledge obtained in earlier accounting courses.

Prerequisite: COMMERCE 4AC3, 4AD3; and registration in any Commerce or Engineering and Management program or graduation from a Commerce program

Available Summers subject to sufficient enrolments and availability of qualified instructors.

COMMERCE 4A13 COMPUTER CONTROL AND AUDITING

This course introduces the student to the field of EDP auditing through lectures, readings and hands-on experience with EDP audit software. Prerequisite: COMMERCE 4AC3, 4AD3; and registration in any Commerce or an Engineering and Management program or graduation from a Commerce program. Available Summers subject to sufficient enrolments and availability of qualified instructors.

COMMUNICATION STUDIES AND MULTIMEDIA

WEB ADDRESS: <http://csmm.humanities.mcmaster.ca/>

Togo Salmon Hall, Room 331

Ext. 23488

Faculty as of January 15, 2007**Chair**

Graham Knight

Adjunct Professor

Laurence Mussio/B.A. (Western Ontario), M.A. (McMaster), Ph.D. (York)

Associate Professors

Robert S. Hamilton/ M.F.A. (S.A.I.C.), M.F.A. (Jan van Eyck Academie)

Graham Knight/B.A. (Kent), M.A., Ph.D. (Carleton)

Liss Platt/B.F.A. (Connecticut), M.F.A. (California-San Diego)

Geoffrey Rockwell/ B.A. (Haverford College), M.A. Ph.D. (Toronto)

Alexandre Sévigny/(Communication Studies and Multimedia; French) B.A. (York), M.A., Ph.D. (Toronto)

Assistant Professors

Christina Baade/(Communication Studies and Multimedia; School of the Arts) B.Mus. (Northwestern), M.Mus., Ph.D. (Wisconsin-Madison)

Violetta Ignieski/(Communication Studies and Multimedia; Philosophy) B.A., M.A. (Western Ontario), Ph.D. (Toronto)

Andrew Mactavish/B.A. (Mount Saint Vincent), M.A. (Dalhousie), Ph.D. (Alberta)

Stéfan Sinclair/ B.A. (British Columbia), M.A. (Victoria), Ph.D. (Queen's)

Jeremy Stollow/(Communication Studies and Multimedia; Sociology) B.A. (Toronto), M.A., Ph.D. (York)

Associate Member

Henry Giroux/(English and Cultural Studies) B.S. (Maine), M.A. (Appalachian State), D. Arts (Carnegie-Mellon)/Global Television Network Chair in Communications

Adjunct Lecturer

Rocco Piro

COMMUNICATION STUDIES ...**Courses** *If no prerequisite is listed, the course is open.***CMST 1A03 INTRODUCTION TO COMMUNICATION**

Students will examine both practical and fundamental concepts in communication studies and the effects of language, mass communications, performative acts and the Internet on social, cultural and cognitive processes in the context of the four streams of the Communication Studies Program. Three hours (lectures and tutorials); one term

CMST 2A03 QUANTITATIVE METHODS IN COMMUNICATION RESEARCH

An introduction to the basic approaches and principles for gathering and analyzing quantitative data in communication studies. Topics include sampling techniques, interviewing, questionnaire construction, focus groups, content analysis, and the fundamentals of statistical analysis and inference. Three hours (lectures and tutorials); one term

Prerequisite: Registration in a program in Communication Studies
Antirequisite: ANTHROP 2Z03, GEO 2HR3, GERONTOL 2C03, HEALTHST 2B03, SOCIOL 2Z03

CMST 2B03 QUALITATIVE METHODS IN COMMUNICATIONS RESEARCH

An introduction to the qualitative research in communication studies. Topics may include research ethics, discourse analysis, textual analysis, ethnography, structuralist and poststructuralist approaches to the study of communication. Three hours (lectures and tutorials); one term

Prerequisite: Registration in a program in Communication Studies

CMST 2BB3 INTRODUCTION TO CULTURE AND COMMUNICATION

An introduction to theoretical and methodological approaches to cultural studies focusing on communicative practice. Students will analyse relationships between cultural identity, producers, consumers, institutions, technologies and practices of mediated communication.

Three hours; one term

Prerequisite: Registration in a program in Communication Studies

CMST 2C03 COMMUNICATION THEORY I: 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 hours (lectures and tutorials); one term

Prerequisite: Registration in Level II or above of a program in Communication Studies

CMST 2CC3 DEVELOPMENTS IN HUMAN COMMUNICATION: PAST AND PRESENT

A survey of human communication throughout history and across cultures. This course will include discussions of orality and literacy; manuscript, print and electronic media; and human communication through visual images.

Three hours; one term

Prerequisite: Registration in Level II or above of a program in Communication Studies

Antirequisite: CMST 1B03

CMST 2DD3 MEDIA ORGANIZATIONS

An examination of the occupational, professional and organizational structures and processes of media production in the press, radio, television and digital media. Topics include news gathering, radio and TV production practices and media management.

Three hours; one term

Prerequisite: Registration in Level II or above of a program in Communication Studies

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 Linguistics and Languages.

CMST 2F03 PROFESSIONAL WRITING

This course offers instruction on a variety of professional communication forms such as resumes, letters of inquiry, proposals, press releases and the evaluation of web page design. Students will also read and evaluate arguments covering timely media topics such as television violence and internet spam.

Three hours (lectures, discussion and workshops); one term

Prerequisite: Registration in Level II or above of a program in Communication Studies

CMST 2G03 PERFORMANCE AND PERFORMATIVITY

An introduction to the study of performative modes of communication such as storytelling, gesture, movement, dress. Students will learn to analyze the relationship between cultural performances, such as games, garage bands, group facilitation, or live theatre and social structures.

Three hours (lectures and discussion); one term

Prerequisite: Three units of Communication Studies and registration in Level II or above

Cross-list: SOTA 2G03

CMST 2H03 GENDER AND PERFORMANCE

An examination of gender as identities performed or constructed in complex social, historical and cultural processes and conditions, including how gender gives meaning to different performance texts, as well as to a range of performance practices in daily life.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above of a program in Communication Studies or Women's Studies

Cross-list: WOMEN ST 2J03

CMST 2103 VISUAL LITERACY

A course of lectures and discussions that explores the concept of visual literacy and examines the ways in which fine and popular arts structure our understanding through images.

One lecture (two hours), one tutorial/discussion; one term

Prerequisite: Registration in Level II or above of a program in Communication Studies

Cross-list: ART HIST 2A03

This course is administered by the School of the Arts.

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 of a program in Communication Studies

CMST 2N03 THE HISTORY OF GRAPHIC DESIGN

An introduction to the history of graphic, two-dimensional design. The course demonstrates the admixture of high and popular culture that informs advertising, posters, book design and illustration, etc.

Three lectures; one term

Prerequisite: Registration in Level II or above. Prior completion of ART HIST 1A03 and 1AA3 is recommended.

Cross-list: ART HIST 2F03, MMEDIA 2F03

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 2H03, PHILOS 2H03

Offered in alternate years.

This course is administered by the Department of Philosophy.

CMST 2P03 DRAMATIC FORMS

Different performance techniques and conventions demand particular forms of dramatic narrative. By comparing the way similar stories are told in different media and genres, students identify the structuring elements of dramatic texts written for live performance, film television and music theatre.

Three hours (lectures and group presentations); one term

Prerequisite: DRAMA 1A03, 1AA3 (or 1A06); or THTR&FLM 1A03, 1B03

Cross-list: COMP LIT 2D03, THTR&FLM 2C03

Antirequisite: DRAMA 2D03

This course is administered by the School of the Arts.

CMST 2Q03 MUSIC OF THE WORLD'S CULTURES

A survey of music traditions of non-European cultures, e.g., far Eastern, Indian, African.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: MUSIC 2A03

Offered in alternate years.

This course is administered by the School of the Arts.

CMST 2R03 POPULAR MUSIC IN NORTH AMERICA AND THE UNITED KINGDOM: POST-WORLD WAR II

Popular music, its social meanings and media and technology interactions, from rock-and-roll to now. Topics include rhythm and blues (Chuck Berry), pop (Madonna), metal (Led Zeppelin).

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: MUSIC 21I3

Antirequisite: MUSIC 2AA3

This course is administered by the School of the Arts.

CMST 2RR3 POPULAR MUSIC IN NORTH AMERICA AND THE UNITED KINGDOM: PRE-WORLD WAR II

Two centuries of popular music, its social meanings and media and technology interactions, emphasizing the early twentieth century. Topics include minstrelsy, early blues and musical theatre.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: MUSIC 2103

This course is administered by the School of the Arts.

CMST 2S03 NEW MEDIA AND PERFORMANCE

This course will explore critical issues in new media and examine the ways in which new media shape the creation, reception and interpretation of forms of performance.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above of a program in Theatre and Film Studies or Communication Studies

Cross-list: THTR&FLM 2E03

Antirequisite: DRAMA 2B03

This course is administered by the School of the Arts.

CMST 2T03 MUSIC FOR FILM AND TELEVISION

An examination of how music functions to help create meanings in film and television programs. Examples will be drawn from throughout the history of film and television.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: MUSIC 2F03, THTR&FLM 2T03

This course is administered by the School of the Arts.

CMST 2Z03 POLITICS AND THE MEDIA

Theories and practices of the reciprocal relationship between the communications media and the political system.

Three hours (lectures and tutorials); one term

Prerequisite: CMST 1A03 and 1B03; or POL SCI 1G06

Cross-list: POL SCI 2Z03

This course is administered by the Department of Political Science.

CMST 3AA3 CONFLICT AND THE MEDIA

An examination of how different forms of conflict, such as war, terrorism and industrial disputes are represented in both information and entertainment media.

Three hours; one term

Prerequisite: Registration in Level III or above of a program in Communication Studies

CMST 3B03 PRACTICAL ASPECTS OF MEDIA PRODUCTION

In consultation with a faculty member, students will complete an independent project or an applied placement on an approved topic involving the application of communication skills, theories and methodologies. It is the student's responsibility to obtain the agreement of the instructor and to complete a proposal form (available in the Communication Studies Office). Independent Study proposals must be approved by the Committee of Instruction during the term before the project is to be done.

Prerequisite: Registration in Level III or IV of a program in Communication Studies with a Cumulative Average of at least 8.5 and permission of the Committee of Instruction.

CMST 3BB3 WOMEN AND VISUAL CULTURE

Students will explore ideas about representation, spectatorship and production in relation to issues of social difference, such as gender, race and class. Emphasis is on visual modalities such as film, video, television, advertising, et cetera.

Two hour lecture and discussion, plus one weekly film screening; one term

Prerequisite: Registration in Level III or above and one of ART HIST 2A03, CMST 2F03, 2I03, THTR&FLM 1B03 or both WOMEN ST 1A03 and 1AA3 (or 1A06)

Cross-list: THTR&FLM 3P03, WOMEN ST 3BB3

Not open to students with credit or registration in WOMEN ST 3B03 if taken in 2001-2002.

This course is administered by Women's Studies.

CMST 3C03 MEDIA AND SOCIAL ISSUES

An analysis of relationships between mass media and modern society. Topics may include ideology and agenda-setting in the media, representations of social problems (e.g., homelessness, violence), moral panics, media scandals, or public ceremonies.

Three lectures; one term

Prerequisite: Registration in Level III or above of a Communication Studies program; or SOCIOL 2L03 and registration in a Sociology program

Cross-list: SOCIOL 3C03

This course is administered by the Department of Sociology.

CMST 3CC3 READING FILM

A critical examination of selected films and film genres as cultural texts, using methods drawn from film theory and cultural studies.

Three hours, plus one weekly film screening; one term

Prerequisite: Registration in Level II or above of a program in Art History, Communication Studies, Comparative Literature, Cultural Studies and Critical Theory or Theatre and Film Studies. Completion of CMST 2X03 or THTR&FLM 2F03 is recommended.

Cross-list: COMP LIT 3L03, CSCT 3CC3, ENGLISH 3CC3, THTR&FLM 3R03

This course is administered by the Department of English and Cultural Studies.

CMST 3D03 POLITICAL COMMUNICATION

The relationship between politics and the media is analyzed in terms of issues such as political news coverage, electioneering, political marketing, policy formation and publicity, and agenda-setting and public opinion. Three lectures (three hours); one term
Prerequisite: Registration in a Communication Studies or Political Science program

Cross-list: POL SCI 3BB3

This course is administered by the Department of Political Science.

CMST 3E03 ARGUMENTATION THEORY

A study of some theoretical issues concerning the identification, analysis and evaluation of arguments.

Three hours (lectures and discussion); one term

Prerequisite: One of ARTS&SCI 1B06, CMST 2W03, HUMAN 2C03 or PHILOS 2B03; and registration in Level II or above
Cross-list: PHILOS 3M03

This course is administered by the Department of Philosophy.

CMST 3F03 TOPICS IN VISUAL CULTURE

This course will examine a variety of topics in the critical study of visual culture, including gender and spectatorship, consumerism and the arts, and visual literacy in the 21st century.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

Cross-list: SOTA 3C03

This course is administered by the School of the Arts.

CMST 3G03 INTRODUCTION TO SOCIOLINGUISTICS

An introduction to sociolinguistics with particular emphasis on the social situation of the major European languages. Topics covered include linguistic variation (regional, social, situational), language and gender, language and disadvantage/power, language choice, language change, pidgin and creole languages. Three lectures; one term

Prerequisite: Registration in Level III or IV of a program in Communication Studies (Language and Social Life Stream) or Linguistics; or permission of the Department of Linguistics and Languages
Cross-list: LINGUIST 3X03

Antirequisite: ANTHROP 3X03

This course is administered by the Department of Linguistics and Languages.

CMST 3H03 CREATING CEREMONIES

An examination of the performative aspects of ceremonies and rituals such as weddings, funerals, political inaugurations, parades, mass, festivities around such religious celebrations as Christmas and Hanukkah, and the rituals associated with theatre and concert going.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level III or above of a program in Communication Studies

CMST 3I03 COMMUNICATION POLICY AND LAW

An examination of the role of government policy, regulation, and law on the structure and functioning of the mass media. Topics include cultural policy, communication technology policy, free speech and privacy rights. Three lectures; one term

Prerequisite: Registration in Level III or above of a program in Communication Studies

CMST 3K03 MEDIA 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: CMST 2A03 and registration in Level III or above of a program in Communication Studies

CMST 3L03 THEORIZING CULTURE THROUGH PERFORMANCE

Students will explore artists' practises in making performances and will analyse how artists work with theories, texts, spaces, bodies, audiences and produce challenges to artistic, social and political norms.

Three hours; one term

Prerequisite: One of ART HIST 2D03, 3AA3, CMST 2G03, 2P03, 2S03, THTR&FLM 2C03, 2D03, 2E03

Cross-list: ART HIST 3L03, THTR&FLM 3I03

Not open to students with credit in DRAMA 2B03, NEW MEDIA AND PERFORMANCE, if taken in 2001-2002, or credit in THTR&FLM 2E03 if taken in 2002-2003.

Offered in alternate years.

This course is administered by Theatre & Film.

CMST 3MM3 THE INTERNET AND PUBLIC LIFE

This course examines how the internet and other digital media may be reshaping political and personal relationships and altering the nature of the public sphere.

Three hours; one term

Prerequisite: CMST 2Z03 or POL SCI 2Z03; and registration in Level III or above
Cross-list: POL SCI 3MM3

Not open to students with credit in CMST 3A03, TOPICS IN COMMUNICATION, if the topic was Public Life in a Digital Age.

This course is administered by the Department of Political Science.

CMST 3N03 ETHICAL ISSUES IN COMMUNICATION

This course will examine ethical issues as they arise in interpersonal communication and mass communication. The dominant moral theories and approaches to moral decision-making will be analysed and put to use to help students understand and evaluate concrete examples.

Three hours (lectures and discussion groups); one term

Prerequisite: CMST 2C03; and one of CMST 2A03 or 2B03; and registration in Level III or above of a program in Communication Studies or Peace Studies
Cross-list: PEACE ST 3N03

Not open to students with credit in CMST 3A03, TOPICS IN COMMUNICATION, if the topic was Ethical Issues in Communication.

CMST 3Q03 TOPICS IN ORGANIZATIONAL COMMUNICATION

This course focuses on communication as an effective management tool for issues including consensus-building, corporate culture, leadership and motivation, decision-making, cultural diversity and communicating change. Three hours (lectures and discussion groups); one term

Prerequisite: CMST 2C03; and one of CMST 2A03 or 2B03; and registration in Level III or above of a program in Communication Studies.

CMST 3SS3 FILM, VIDEO AND ENTERTAINMENT CULTURE

Critical approaches to forms of entertainment culture which permeate our everyday lives (e.g., popular films, video culture, television). Topics may include the cultural meanings of popular imagery, star-gazing and commercialization.

Two hour lecture and discussion, plus one weekly film screening; one term

Prerequisite: CMST 2X03 or THTR&FLM 2F03

Cross-list: THTR&FLM 3M03

Offered in alternate years.

This course is administered by the School of the Arts.

CMST 3U03 PERFORMANCE ART

This course will examine historical and contemporary concerns related to performance art including the relevance of traditional categories of artistic production, the roles of the audience, the institution and market, and the body as artistic medium.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

Cross-list: SOTA 3B03

This course is administered by the School of the Arts.

CMST 3UU3 INDEPENDENT FILM AND VIDEO

An exploration of artists' film and video produced outside of dominant institutions, including such practises as documentary, autobiography, community projects, experimental film, short film and video art.

Two hour lecture and discussion, plus one weekly film screening; one term

Prerequisite: One of CMST 2S03, 2X03 or THTR&FLM 2F03

Cross-list: THTR&FLM 3N03

Offered in alternate years.

This course is administered by the School of the Arts.

CMST 3V03 PRAGMATICS

A discussion of the problems confronting the linguist in the study of text and discourse at the level beyond the sentence. The course will deal with the interaction between grammar and situational factors.

Three lectures; one term

Prerequisite: LINGUIST 1A03 and 1AA3 (or 1A06); or FRENCH 2H03; or permission of the Department of Linguistics and Languages

Cross-list: LINGUIST 3P03

Antirequisite: ANTHROP 3PL3

Offered in alternate years.

This course is administered by the Department of Linguistics and Languages.

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 or PHILOS 2B03; and registration in Level III or IV of any program

Cross-list: PHILOS 3E03

Offered in alternate years.

This course is administered by the Department of Philosophy.

CMST 4A03 THESIS PROJECT

Students will develop and execute their own research project, in consultation with a faculty advisor. Involves regular meetings with the advisor and a final public presentation of research endeavours.

Prerequisite: Registration in Level IV of a program in Communication Studies with a Cumulative Average of at least 9.0

CMST 4B03 INDEPENDENT STUDY IN ADVANCED APPLIED COMMUNICATION

Students will apply communication skills, theories and methodologies to complete an advanced independent project in the field of communications. This will be undertaken following successful completion of relevant courses in the appropriate Stream. Entry is by application to the Committee of Instruction during the term before the course is to be taken. Prerequisite: Registration in Level IV of a program in Communication Studies with a Cumulative Average of at least 8.5 and permission of the Committee of Instruction

CMST 4C03 ISSUES IN PERFORMANCE STUDIES

This course serves to synthesize and expand students' engagement with issues studied in performance studies courses through the examination of writings that draw on anthropology, phenomenology, materialist analysis, psychoanalysis, gender theory, postmodernism, postcolonialism and intercultural reception.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level IV of a program in Communication Studies (Performance Studies or Cultural Studies Stream)

CMST 4D03 INTERNATIONAL COMMUNICATION

The relationship between globalization and the media is examined in light of the debates over cultural imperialism, information and technology flow, cultural hybridization and the media's impact on socio-economic development.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level IV of a program in Communication Studies

CMST 4E03 MEDIA AND PROMOTIONALISM

An examination of the media's role in the promotion of different interests, values and patterns of behaviour. Topics include advertising, public relations, social activism and public information campaigns.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level IV of a program in Communication Studies

CMST 4FF3 STUDIES IN FILM

Senior seminar: An examination of selected films.

Seminar (two hours); one term

Prerequisite: CMST 2S03 and registration in Level III or IV of a program in Communication Studies. THTR&FLM 2F03 is recommended.

Cross-list: THTR&FLM 4E03

Priority will be given first to students registered in Level IV of any Theatre & Film Studies program and then to students registered in Level IV of the Communication Studies program.

This course is administered by the School of the Arts.

CMST 4G03 SECOND LANGUAGE ACQUISITION

The course examines empirical evidence and theoretical perspectives on language learning by adults.

Three lectures; one term

Prerequisite: LINGUIST 1A03, 1AA3 and six units of Linguistics courses above Level I; or permission of the Department of Linguistics and Languages

Cross-list: LINGUIST 4B03

Antirequisite: ANTHROP 4BL3

This course is administered by the Department of Linguistics and Languages.

CMST 4I03 COMPUTERS AND LINGUISTIC ANALYSIS

This course studies the linguistic applications of computer technology in general and language processing in particular, including parsers and machine translation.

Two lectures, one lab; one term

Prerequisite: LINGUIST 1A03, 1AA3 and six units of Linguistics courses above Level I; or permission of the Department of Linguistics and Languages

Cross-list: LINGUIST 4D03

Offered in alternate years.

This course is administered by the Department of Linguistics and Languages.

CMST 4L03 APPROACHES TO DISCOURSE

This course offers an overview of different approaches to the analysis of discourse, including speech act theory, interactional sociolinguistics, ethnography of communication, pragmatics, conversation analysis and critical discourse analysis.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level III or IV of a program in Communication Studies or Linguistics, or permission of the Program Counsellor for Communication Studies

Cross-list: LINGUIST 4ZZ3

CMST 4M03 COMMUNICATION, CULTURE AND TECHNOLOGY, 1844-1927

This course surveys social patterns of reception and adaptation of communication technologies and their interaction with cultural constructions of (gendered) bodies, everyday life, organization of space and time, and other cultural distinctions.

Three hours (lectures and discussion); one term

Prerequisite: CMST 2BB3 and registration in Level IV of a program in Communication Studies

CMST 4N03 PRODUCING AND VIEWING THE NEWS

This course will examine how the mode of production of the news influences audiences' perceptions and values of social and political life. Specific emphasis will be put on gate-keeping, agenda-setting and headline transformation.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level IV of a program in Communication Studies

Antirequisite: CMST 4K03, 4Q03, 4QQ3

Students may take only one of CMST 4N03, 4Q03 or 4QQ3.

CMST 4P03 SOCIAL ACTIVISM AND THE MEDIA

This course examines the role of print, electronic and digital media in the relationship between social movements, the state and corporate interests.

Three hours (lecture and/or seminar); one term

Prerequisite: Registration in Level IV of a program in Communication Studies

CMST 4Q03 ADVANCED TOPICS IN COMMUNICATION I

Students will learn about specific areas or aspects of research in communication studies, such as critical media discourse, culture and consumption, media and globalization, etc.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level IV of a program in Communication Studies

Antirequisite: CMST 4K03, 4N03, 4QQ3

Students may take only one of CMST 4N03, 4Q03 or 4QQ3.

CMST 4QQ3 ADVANCED TOPICS IN COMMUNICATION II

Students will learn about specific areas or aspects of research in communication studies, such as critical media discourse, culture and consumption, media and globalization, etc.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level IV of a program in Communication Studies

Antirequisite: CMST 4N03, 4Q03

Students may take only one of CMST 4N03, 4Q03 or 4QQ3.

CMST 4R03 CROSS-CULTURAL COMMUNICATION

Students explore the links between language and culture and learn skills necessary to be intermediaries between cultures. Topics include: communication between genders, the cognitive role of metaphor, language and perception, emotions across cultures, culture and advertising, body language and cultural stereotyping.

Seminar (two hours); one term

Prerequisite: LINGUIST 1A03, 1AA3 and six units of Linguistics courses above Level I; or permission of the Department

Cross-list: LINGUIST 4R03

Not open to students with credit in CMST 4H03, TOPICS IN THE APPLICATION OF LINGUISTICS, if the topic was Cross-Cultural Communication. Offered on an irregular rotation basis.

This course is administered by the Department of Linguistics and Languages.

CMST 4S03 INTERPERSONAL COMMUNICATION

This course offers an introduction to contemporary interpersonal communication theories and research. Topics include: small group communication, persuasive communication, argumentation strategies, conflict resolution, as well as computer mediated, intercultural, international and political communication.

Seminar (two hours); one term

Prerequisite: LINGUIST 1A03, 1AA3 and six units of Linguistics courses above Level I; or permission of the Department

Cross-list: LINGUIST 4S03

Not open to students with credit in CMST 4H03, TOPICS IN THE APPLICATION OF LINGUISTICS, if the topic was Interpersonal Communication. Offered on an irregular rotation basis.

This course is administered by the Department of Linguistics and Languages.

CMST 4T03**FORENSIC LINGUISTICS**

This course examines issues arising from the language-law interface, including: speaker/author identification; interpretation and transcription of police interrogations, witness statements, trial discourse; written legal language.

Seminar (two hours); one term

Prerequisite: LINGUIST 3X03

Cross-list: LINGUIST 4T03

Not open to students with credit in CMST 4H03, TOPICS IN THE APPLICATION OF LINGUISTICS, if the topic was Forensic Linguistics.

Offered on an irregular rotation basis.

This course is administered by the Department of Linguistics and Languages.

MULTIMEDIA ...

WEB ADDRESS: <http://csmm.humanities.mcmaster.ca/>

Togo Salmon Hall, Room 331

Ext. 23488

Courses If no prerequisite is listed, the course is open.

MMEDIA 1A03**INTRODUCTION TO DIGITAL MEDIA IN THE HUMANITIES**

Students will be introduced to the history, theory and design of digital media in the context of the arts and humanities. Students will learn to use Internet research resources to create digital media.

One lecture (two hours), one tutorial; one term

Antirequisite: COMP SCI 1BA3, 1SA3, 1TA3

MMEDIA 1B03**THE DIGITAL IMAGE**

An introduction to the critique and creation of digital images. Readings will explore issues concerning the digital image and graphic design for the Internet. Students will be expected to use graphics software and create web pages in order to complete design assignments.

One lecture (two hours), one tutorial; one term

Antirequisite: MMEDIA 1BE3

MMEDIA 1BE3**THE DIGITAL IMAGE FOR SOFTWARE ENGINEERING**

An introduction to the critique and creation of digital images. Readings will explore issues concerning the digital image and graphic design for the Internet. Students will be expected to use graphics software and create web pages in order to complete design assignments.

One lecture (two hours), one tutorial; one term

Prerequisite: Registration in the Software Engineering and Game Design program

Antirequisite: MMEDIA 1B03

MMEDIA 2A03**INTRODUCTION TO MULTIMEDIA**

This course presents arts students with the fundamentals of computer-based multimedia. Students will read about and discuss how to critique multimedia works, create such works, and consider the application of multimedia technology.

One lecture (two hours), one tutorial; one term

Prerequisite: Registration in the Combined Honours in Multimedia program

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 program

Antirequisite: MMEDIA 2BE3

MMEDIA 2BE3**DIGITAL MEDIA (AUDIO AND VIDEO) FOR SOFTWARE ENGINEERING**

A study of digital media where students will create and critique digital audio and video. Readings will explore the evolution of digital media and the technical and social aspects of digital audio and video.

One lecture (two hours), one tutorial; one term

Prerequisite: MMEDIA 1BE3 and registration in the Software Engineering and Game Design program

Antirequisite: MMEDIA 2B03

MMEDIA 2C03**COMPUTER ARCHITECTURE FOR MULTIMEDIA**

This course covers fundamentals of microcomputers, operating systems, and multimedia peripherals with emphasis on: diagnostic knowledge of hardware; operating systems for multimedia development; media acquisition hardware; standards for connecting media devices; computing history.

One lecture (two hours), one tutorial; one term

Prerequisite: Registration in the Combined Honours in Multimedia program

MMEDIA 2D03**ELECTRONIC TEXTUALITY AND PROGRAMMING**

An introduction to the fundamentals of markup languages for multimedia and programming information applications. Students will develop a markup model, create an electronic text database, and write stylesheets and programs to transform the data within the context of an original project.

One lecture (two hours), one tutorial; one term

Prerequisite: One of MMEDIA 1A03, 1B03, 1C03, 2I03, 2J03 or registration in the Honours Linguistic Cognitive Science program

MMEDIA 2E03**COMPUTER GRAPHICS**

This course develops both technical and conceptual aspects of computer drawing using standard computer graphics tools. Students will concentrate on developing drawing abilities through the computer and will be expected to present their work and discuss that of others.

One lecture (one hour), one tutorial (one hour), one hour of independent study; one term

Prerequisite: MMEDIA 1A03 or 1B03

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 that informs advertising, posters, book design and illustration, etc. Students will be introduced to desktop publishing.

Three lectures; one term

Prerequisite: Registration in Level II or above of a program in Art History, Communication Studies or Multimedia. Prior completion of ART HIST 1A03 and 1AA3 is recommended.

Cross-list: ART HIST 2F03, CMST 2N03

MMEDIA 2G03**INTRODUCTION TO MIDI AND COMPUTER MUSIC**

Basic electroacoustic theory; introduction to digital music composition techniques, MIDI applications; computer music notation; aesthetics of music composition. Students produce at least one original work. Experience with computers/music composition not required.

Two lectures, one tutorial; one term

Prerequisite: Registration in the Combined Honours in Multimedia program or registration in Level II or above of a Music program

Cross-list: MUSIC 2Z03

MMEDIA 2H03**INTRODUCTION TO ANIMATION**

An introduction to the history and basic principles of animation. Students will create a significant work of computer animation displaying a variety of techniques. Readings and discussions will cover theatre, film studies and narrative. Students will be expected to attend screenings.

One lecture (two hours), one tutorial/screening; one term

Prerequisite: Registration in the Combined Honours in Multimedia program

Antirequisite: MMEDIA 2HE3

MMEDIA 2HE3**INTRODUCTION TO ANIMATION FOR SOFTWARE ENGINEERING**

An introduction to the history and basic principles of animation. Students will create a significant work of computer animation displaying a variety of techniques. Readings and discussions will cover theatre, film studies and narrative. Students will be expected to attend screenings.

One lecture (two hours), one tutorial/screening; one term

Prerequisite: MMEDIA 2BE3 and registration in the Software Engineering and Game Design program

Antirequisite: MMEDIA 2H03

MMEDIA 2I03**DIGITAL RHETORIC AND COMMUNICATION**

An introduction to the history of rhetoric, the study of classical and electronic examples of oral discourse. Students analyze the persuasive technique of oral communication and deliver an expository speech with multimedia support.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level II or above

MMEDIA 3A03**ADVANCED MULTIMEDIA**

A study of multimedia programming, expanding upon the issues and techniques introduced in MMEDIA 2A03. Students will design and develop multimedia applications that combine text, images, sound, video, and animation. Critical readings and discussion will cover theories of interactivity, hypertext, and instructional technology.

One lecture (two hours), one tutorial; one term

Prerequisite: MMEDIA 2A03 and registration in the Combined Honours in Multimedia program

MMEDIA 3B03 TOPICS IN THE PHILOSOPHY AND HISTORY OF COMPUTING

The history and philosophy of computing and communications technology; topics may include: Computers and Culture, The History of Computers and Communications Technology, Computers and Education, and Privacy and the Freedom of Speech in the Electronic Age. Three hours; one term

Prerequisite: Registration in Level III or IV of the Combined Honours in Multimedia program or a program in Communication Studies

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

MMEDIA 3E03 INTERACTIVE DIGITAL CULTURE

Covers works, forms, theories of digitally interactive culture. Works may include hypertext fiction, computer games, interactive digital art, video, music; theories may cover hypertext, interactivity, immersion, simulation, reception, participatory culture.

One lecture (two hours), one tutorial; one term

Prerequisite: Registration in Level III of the Combined Honours in Multimedia program or a program in Communication Studies

Antirequisite: MMEDIA 3EE3

Alternates with MMEDIA 3K03.

MMEDIA 3EE3 INTERACTIVE DIGITAL CULTURE FOR SOFTWARE ENGINEERING

Covers works, forms, theories of digitally interactive culture. Works may include hypertext fiction, computer games, interactive digital art, video, music; theories may cover hypertext, interactivity, immersion, simulation, reception, participatory culture.

One lecture (two hours), one tutorial; one term

Prerequisite: MMEDIA 2HE3 and registration in the Software Engineering and Game Design program

Antirequisite: MMEDIA 3E03

MMEDIA 3F03 HUMAN COMPUTER INTERFACE DESIGN

Explores history and design of computer interfaces, focusing on the relationship between computers and people. Topics include computer interface usability/evaluation; drama, narrative, and interface; interface and representation; the politics of interface design.

One lecture (two hours), one tutorial; one term

Prerequisite: Six units of MMEDIA courses beyond Level I; and registration in the Combined Honours in Multimedia program or the Honours Linguistic Cognitive Science program

MMEDIA 3G03 NETWORK SERVICES FOR MULTIMEDIA

This course covers network systems/services for multimedia, emphasizing diagnostic knowledge of networked systems and services used for multimedia deployment. Focus on Web servers; also history of networking, the Internet, and the WWW.

One lecture (two hours), one tutorial; one term

Prerequisite: Registration in the Combined Honours in Multimedia program

MMEDIA 3H03 ADVANCED COMPUTER ANIMATION

An advanced study of computer animation with a focus on 3D animation. Students will create a significant work of 3D animation and critique current examples. Readings may cover theories and techniques of animation, performance, film and narrative. Students will attend screenings.

One lecture (two hours), one lab (one hour every week); one term

Prerequisite: MMEDIA 2H03 and registration in the Combined Honours in Multimedia program

MMEDIA 3I03 ADVANCED DIGITAL VIDEO

This course covers advanced techniques in digital video production, post production and delivery (i.e. interactive video, streaming media, video in multimedia.) Readings explore video art, digital and visual culture. Students create/critique digital video projects.

One lecture (two hours), one lab (one hour every week); one term

Prerequisite: MMEDIA 2B03 and registration in the Combined Honours in Multimedia program

MMEDIA 3J03 PROGRAMMING FOR THE WEB

Students build dynamic web sites driven by databases and programmed with server-side and client-side scripting languages; examine operational database driven sites, interface design and documentation; create database-driven sites.

One lecture (two hours), one lab (one hour every week); one term
Prerequisite: MMEDIA 2D03 or 3A03; and registration in the Combined Honours in Multimedia program or the Honours Linguistic Cognitive Science program

MMEDIA 3K03 DIGITAL GAMES

A study of the form, content, and playing of digital games. Topics include: form, genre, and technology; time and space; representation and narrative; and participatory play.

One lecture (two hours), one tutorial; one term

Prerequisite: Registration in Level III or above of the Combined Honours in Multimedia program or a program in Communication Studies

Alternates with MMEDIA 3E03.

MMEDIA 4A03 THE MANAGEMENT OF MULTIMEDIA

Students build and manage content collections; lead and participate in team based multimedia production; study case histories. Readings cover the design of large media collections, management theory, copyright and intellectual property.

One lecture (two hours), one tutorial; one term

Prerequisite: Registration in Level IV of the Combined Honours in Multimedia program. (See Program Note under the heading Multimedia in the Faculty of Humanities section of the Calendar.)

MMEDIA 4B03 SENIOR THESIS PROJECT

This course provides an opportunity to pursue individual advanced multimedia projects under the supervision of a Thesis Committee. Students will propose a multimedia project, have it approved by the Multimedia Program Committee and present their completed project publicly.

One term

Prerequisite: MMEDIA 4A03 and registration in Level IV of the Combined Honours in Multimedia program. (See Program Note under the heading Multimedia in the Faculty of Humanities section of the Calendar.)

MMEDIA 4C03 COMPUTERS AND EDUCATION

A survey of the history of instructional technology and uses of computers in education. Students review instructional materials; create, evaluate, and present an instructional application; and study effects of technology on education.

One lecture (two hours), one tutorial; one term

Prerequisite: MMEDIA 3A03

MMEDIA 4D03 THE VISUALIZATION OF SPACE

This course will introduce students to the design and theory of the visualization of space. Projects may include the digital design of fictional spaces, sculptural objects, dramatic settings, or archaeological re-creations.

One lecture (two hours), one lab; one term

Prerequisite: Registration in Level III or above of the Combined Honours in Multimedia program

COMPARATIVE LITERATURE

WEB ADDRESS: <http://www.humanities.mcmaster.ca/~complit>

Togo Salmon Hall, Room 726

Ext. 24265

Courses and programs in Comparative Literature are administered within the Office of Interdisciplinary Studies of the Faculty of Humanities. For information and counselling, please contact the Director of Comparative Literature (Ext. 24091).

Faculty as of January 15, 2007**Director**

John C. Stout

Professor

Joseph Adamson/B.A. (Trent), M.A., Ph.D. (Toronto)

Associate Professor

Jean Wilson/B.A. (McMaster), B.Ed., M.A., Ph.D. (Toronto)

Committee of Instruction

Joseph Adamson (English and Cultural Studies; Comparative Literature)

Iris Bruce (Linguistics and Languages)

Nina Kolesnikoff (Linguistics and Languages)

John C. Stout (French)

Jean Wilson (Comparative Literature; Linguistics and Languages)

Notes:

1. No language other than English is required for courses listed under Comparative Literature.
2. Not all courses are offered on an annual basis. Students should consult the timetable for available courses.

Courses *If no prerequisite is listed, the course is open.***COMP LIT 1A03 INTRODUCTION TO COMPARATIVE LITERATURE I**

Students engage in the close study of selected literary works from texts of antiquity to the beginnings of modern literature. Considerable attention is given to the development of critical skills in reading and writing.

Two lectures; one tutorial; one term

COMP LIT 1AA3 INTRODUCTION TO COMPARATIVE LITERATURE II

An introduction to comparative literary studies, through the exploration of selected works from the eighteenth century on. Considerable attention is given to the development of critical skills on reading and writing.

Two lectures; one tutorial; one term

COMP LIT 2A03 MODERN EUROPEAN LITERATURE I

A study of the central themes and ideas shaping the Enlightenment and Romanticism through the reading of representative works.

Three lectures; one term

Prerequisite: Registration in Level II or above

COMP LIT 2AA3 MODERN EUROPEAN LITERATURE II

A study of the central themes and forms of major literary movements from Romanticism to Postmodernism through the reading of representative works.

Three lectures; one term

Prerequisite: Registration in Level II or above

COMP LIT 2BB3 NORTH AND SOUTH AMERICAN LITERATURES

A comparative study of key motifs in selected North and South American literary traditions which may include magic realism, the Gothic, poetry, fantasy and metafiction.

Three lectures; one term

Prerequisite: Registration in Level II or above

COMP LIT 2CC3 WORLD LITERATURE

An introduction to recent debates on what constitutes "world literature," focusing on a broad range of key works from several different continents, languages and cultures.

Three lectures; one term

Prerequisite: Registration in Level II or above

COMP LIT 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 elements of dramatic texts written for live performance, film television and music theatre.

Lectures and group presentations (three hours); one term

Prerequisite: Three units of Level I Theatre & Film or Drama and registration in Level II or above of a Comparative Literature program

Cross-list: CMST 2P03, THTR&FLM 2C03

Antirequisite: DRAMA 2D03, 2D06

This course is administered by the School of the Arts.

COMP LIT 2E03 CONCEPTS OF CULTURE

An analysis of the development of the concept of culture from the Enlightenment to the present. Theoretical readings combined with the analysis of specific cultural texts, objects, forms and practices will allow students to trace historical and contemporary debates concerning culture.

Three hours; one term

Prerequisite: Registration in a program in Communication Studies, Comparative Literature, Cultural Studies and Critical Theory or English

Cross-list: CSCT 2M03, ENGLISH 2M03

Antirequisite: CMST 2M03

This course is administered by the Department of English and Cultural Studies.

COMP LIT 2EE3 MODERN COUNTERCULTURES

An exploration of a variety of cultural forms (e.g. literature, art, photography, film, music) produced by avant-gardes and counter-cultural groups from the mid-19th century to the present. Areas of investigation may include surrealism, futurism, the beats, the sixties, situationism and punk.

Three hours; one term

Prerequisite: Registration in a program in Communication Studies, Comparative Literature, Cultural Studies and Critical Theory or English

Cross-list: CSCT 2MM3, ENGLISH 2MM3

Antirequisite: CMST 2MM3

This course is administered by the Department of English and Cultural Studies.

COMP LIT 2F03 CONTEMPORARY CRITICAL APPROACHES TO LITERATURE

The course will offer a grounding in reading literary texts from a range of contemporary critical approaches.

Three hours; one term

Prerequisite: Registration in a program in English, Comparative Literature or permission of the Departmental Counsellor for English and Cultural Studies

Cross-list: ENGLISH 2A03

This course is administered by the Department of English and Cultural Studies.

COMP LIT 2G03 THE BIBLE AS LITERATURE

An examination of narratives from the Hebrew Bible, Intertestamental literature, and New Testament, from a literary perspective. Attention is paid to narrative features such as character, plot, irony and symbolism, as well as to the dynamics of the reading experience.

Two lectures; one tutorial; one term

Prerequisite: Registration in Level II or above

Cross-list: RELIG ST 2VV3

This course is administered by the Department of Religious Studies.

COMP LIT 2J03 TWENTIETH-CENTURY GERMAN FILM AND FICTION

A study of literary and cinematic representations and appropriations of German culture from the Weimar Republic to the present.

Three lectures; one term

Prerequisite: Registration in Level II or above

COMP LIT 2M03 GREEK AND ROMAN MYTHOLOGY

A study of the myths of Greek and Roman gods and heroes, their explanation according to theories on the nature of myths and their use by Greek and Roman authors particularly Homer and Vergil.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: CLASSICS 2D03

This course is administered by the Department of Classics.

COMP LIT 2Y03 ANCIENT COMEDY

Representative texts of the Greek and/or Roman comedic authors will be read in translation and considered in their literary, historical or social contexts. Relevant texts from other genres might also be considered.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: CLASSICS 2Y03

Antirequisite: CLASSICS 2H03

Offered in alternate years.

This course is administered by the Department of Classics.

COMP LIT 2YY3 GREEK TRAGEDY

Selected plays of the Greek tragic playwrights will be read in translation and considered in their literary, historical or social contexts.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: CLASSICS 2YY3

Offered in alternate years.

This course is administered by the Department of Classics.

COMP LIT 3AA3 THEORIES OF GENDER AND SEXUALITY

This course explores a range of theories of gender and sexuality by working through readings from the intersecting fields of feminist, queer and masculinity studies.

Three hours; one term

Prerequisite: Registration in a program in Comparative Literature, Cultural Studies and Critical Theory, English or Women's Studies

Cross-list: CSCT 3AA3, ENGLISH 3AA3, WOMEN ST 3HH3

This course is administered by the Department of English and Cultural Studies.

COMP LIT 3BB3 NORTHROP FRYE AND GENRE

This course focuses on the poetics of literary structures and genres as outlined in the seminal work of Northrop Frye.

Seminar (two hours); one term

Prerequisite: Registration in Level II or above of a Comparative Literature program

Not open to students with credit in COMP LIT 3DD3, TOPICS IN LITERARY GENRES II, if the topic was Northrop Frye and Genre.

COMP LIT 3C03 TWENTIETH-CENTURY THEATRE

An exploration of important formal and social experiments that marked twentieth-century theatre and paved the way for contemporary theatre forms. Lecture and discussion (three hours); one term
Prerequisite: Three units of Theatre & Film or Drama and registration in Level III or IV of a Comparative Literature program
Cross-list: THTR&FLM 3E03

Offered in alternate years.

This course is administered by the School of the Arts.

COMP LIT 3EE3 KAFKA AFTER KAFKA

This course examines the influence of Franz Kafka's fiction on writers, critics, and film makers of the twentieth century.

Three hours; one term

Prerequisite: Registration in Level II or above

Not open to students with credit in COMP LIT 3U03, TOPICS IN MODERN LITERATURE if the topic was Kafka after Kafka.

COMP LIT 3F03 THE METAMORPHOSES 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

COMP LIT 3FF3 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

COMP LIT 3G03 EUROPEAN DRAMA

A study of representative plays by major European dramatists from the 18th century to the present.

Two hours; one term

Prerequisite: Registration in Level II or above

COMP LIT 3H03 BIBLICAL TRADITIONS IN LITERATURE

A study of the influence of the Bible on Western literature, especially English. Approaches may include the examination of symbolism, imagery, typology, doctrinal themes and narrative structures.

Three hours; one term

Prerequisite: Registration in Level II or above

Cross-list: ENGLISH 3S03

This course is administered by the Department of English and Cultural Studies.

COMP LIT 3HH3 WORLD POETRY

Using a wide range of poetry from different cultures and historical periods as examples, this course explores the numerous characteristic features that constitute the diversity of the lyric.

Seminar (two hours); one term

Prerequisite: Registration in Level II or above of a Comparative Literature program

Not open to students with credit in COMP LIT 3D03, TOPICS IN LITERARY GENRES I, if the topic was The Lyric.

COMP LIT 3I03 TOPICS IN CLASSICAL LITERATURE

Previous topics include: The Poet and Society, Greek and Roman Elegiac and Lyric Poetry, The Legend of the Trojan War, Satire. Consult the Department concerning topic to be offered.

Three lectures; one term

Prerequisite: Registration in Level III or IV of a Comparative Literature program

Cross-list: CLASSICS 3I03

COMP LIT 3I03 may be repeated, if on a different topic, to a total of six units.

This course is administered by the Department of Classics.

COMP LIT 3J06 THE AGE OF ELIZABETH I

A consideration of this tumultuous age, galvanized by revolutions in exploration, religion, and selfhood, and ruled by a female monarch. Authors include Spenser, Sidney and women writers.

Three hours; two terms

Prerequisite: Registration in a program in Comparative Literature

Cross-list: ENGLISH 3I06

This course is administered by the Department of English and Cultural Studies.

COMP LIT 3JJ3 THE FAIRY TALE

An examination of fairy tales from a variety of cultures and historical periods. Students will also explore theories of the folktale and their implications for our understanding of other literary genres.

Seminar (two hours); one term

Prerequisite: Registration in Level II or above of a Comparative Literature program

Not open to students with credit in COMP LIT 3DD3, TOPICS IN LITERARY GENRES II, if the topic was The Fairy Tale.

COMP LIT 3L03 READING FILM

A critical examination of selected films and film genres as cultural texts, using methods drawn from film theory and cultural studies.

Three hours, plus one weekly film screening; one term

Prerequisite: Registration in Level II or above of a program in Art History, Communication Studies, Comparative Literature, Cultural Studies and Critical Theory, English or Theatre & Film Studies. It is recommended that students should already have completed one of CMST 2X03, 2X06, DRAMA 2X06, THTR&FLM 2F03

Cross-list: CMST 3CC3, CSCT 3CC3, ENGLISH 3CC3, THTR&FLM 3R03

This course is administered by the Department of English and Cultural Studies.

COMP LIT 3MM3 THE LITERATURE OF ISRAEL AND PALESTINE

Through the study of relevant literature and film, with a focus on contemporary Israeli and Arab texts, students gain a context for the exploration of conflicts in the Middle East.

Three hours; one term

Prerequisite: Registration in Level II or above

Cross-list: PEACE ST 3MM3

COMP LIT 3NN3 WOMEN IN GERMAN LITERATURE AND CULTURE

This course explores the rich literary and cultural history of women writers, filmmakers and artists from the early Middle Ages to the present in German-speaking Europe.

Three hours; one term

Prerequisite: Registration in Level II or above

Cross-list: GERMAN 3NN3, WOMEN ST 3NN3

Offered in alternate years.

This course is administered by the Department of Linguistics and Languages.

COMP LIT 3Q03 THE HISTORY OF CRITICAL THEORY

A survey of the main developments in critical theory from Plato to the end of the 19th century. Areas of investigation may include: art, aesthetics, civil society, representation, ethics and knowledge.

Three hours; one term

Prerequisite: Registration in Level III or IV of a Comparative Literature program

Cross-list: CSCT 3Q03, ENGLISH 3Q03

This course is administered by the Department of English and Cultural Studies.

COMP LIT 3QQ3 CONTEMPORARY CRITICAL THEORY

This course examines selected issues in contemporary critical theory. Areas of investigation may include: representation, power/knowledge, discourse, subjectivity, and the body.

Three hours; one term

Prerequisite: Registration in a program in Comparative Literature, Cultural Studies and Critical Theory or English. COMP LIT 3Q03, CSCT 3Q03 or ENGLISH 3Q03 is recommended.

Cross-list: CSCT 3QQ3, ENGLISH 3QQ3

This course is administered by the Department of English and Cultural Studies.

COMP LIT 3R06 POSTCOLONIAL CULTURES: THEORY AND PRACTICE

A study of contemporary texts including literature, film, art and other forms of popular culture that engage the implications of living in a postcolonial world. Close consideration will be given to issues of imperialism, globalization, race, gender, ethnicity, nation, language and representation.

Three hours; two terms

Prerequisite: Registration in Level III or IV of a Comparative Literature program

Cross-list: CSCT 3R06, ENGLISH 3R06, PEACE ST 3E06

This course is administered by the Department of English and Cultural Studies.

COMP LIT 3RR3 CRITICAL RACE STUDIES

This course examines contemporary debates in critical race theory in an attempt to critically decode the operations of race in literary and cultural texts. Three hours; one term

Prerequisite: Registration in a program in Comparative Literature, Cultural Studies and Critical Theory, English, Peace Studies or Women's Studies
Cross-list: CSCT 3A03, ENGLISH 3A03, PEACE ST 3A03, WOMEN ST 3H03
This course is administered by the Department of English and Cultural Studies.

COMP LIT 3SS3 19TH-CENTURY RUSSIAN LITERATURE

A study of the major novels by Dostoevsky and Tolstoy.

Three lectures; one term

Prerequisite: Registration in Level II or above

COMP LIT 3V03 TOPICS IN NATIONAL CINEMAS I

This course examines film in relation to nations and national contexts. Areas of investigation may include filmic production of a particular country, national belonging and transnational identities.

Two hour lecture and discussion, plus one weekly film screening; one term

Prerequisite: One of DRAMA 2B03, 2X06, THTR&FLM 1B03, 2E03, 2F03; and registration in Level III or IV of a Comparative Literature program

Cross-list: THTR&FLM 3Q03

Antirequisite: CMST 3T03

Offered on an irregular rotation basis.

This course is administered by the School of the Arts.

COMP LIT 3VV3 TOPICS IN NATIONAL CINEMAS II

This course examines film in relation to nations and national contexts. Areas of investigation include filmic production of global/local characteristics.

Two hour lecture and discussion, plus one weekly film screening; one term

Prerequisite: One of DRAMA 2B03, 2X06, THTR&FLM 1B03, 2E03, 2F03

Cross-list: THTR&FLM 3Q03

Antirequisite: CMST 3TT3, DRAMA 3TT3

Offered on an irregular rotation basis.

This course is administered by the School of the Arts.

COMP LIT 3WW3 INTERNATIONAL WOMEN WRITERS

A critical analysis of a selection of literary works by women authors from across the globe, with an emphasis on theories of gender and sexuality.

Two hours; one term

Prerequisite: Registration in Level II or above

Cross-list: WOMEN ST 3WW3

COMP LIT 3Y03 CLASSICAL LITERATURE AND BEYOND

A study of representative texts from the Greek and Roman literary traditions as well as their influence and afterlife in one or more later literary traditions.

Two hours; one term

Prerequisite: Registration in Level II or above of a program in Classics or Comparative Literature, or permission of the Director of Comparative Literature or the Chair of Classics

Cross-list: CLASSICS 3Y03

This course is administered by the Department of Classics.

COMP LIT 3YY3 OVID

Representative texts of the Latin poet Ovid will be read in translation, especially his erotic poetry and mythical stories. There will be literary analysis and later adaptations in literature and film will be considered.

Three hours; one term

Prerequisite: Six units from CLASSICS 2D03, 2E03, 2H03, 2Y03, 2YY3 or registration in Level III or above of a program in Classics

Cross-list: CLASSICS 3YY3

Offered in alternate years.

This course is administered by the Department of Classics.

COMP LIT 4A03 EUROPEAN ROMANTICISM

A study of selected literary texts of European Romanticism, including women's writing of the period. Attention is also given to Romantic aesthetic theory.

Seminar (two hours); one term

Prerequisite: Registration in Level III or IV of a Comparative Literature program

Antirequisite: COMP LIT 4AA3

COMP LIT 4D03 LITERATURE AS PEACE RESEARCH

An exploration of new ways of thinking about war, peace, human security and conflict transformation, with emphasis on a close study of selected literary texts.

Two hours; one term

Prerequisite: Registration in Level III or IV of a program in Comparative Literature or Peace Studies

Cross-list: PEACE ST 4D03

COMP LIT 4E03 TOPICS IN COMPARATIVE LITERATURE

Previous topics include: Twentieth-Century Women Writers, Literature and Ideology. Consult the Office of Interdisciplinary Studies concerning topic to be offered.

Seminar (two hours); one term

Prerequisite: Registration in Level III or IV of a Comparative Literature program

COMP LIT 4E03 may be repeated, if on a different topic, to a total of six units.

COMP LIT 4F03 PSYCHE AND CULTURE

This course explores the psychoanalytic understanding of culture with reference to three main areas: ideology, gender polarity and imaginative culture (the arts and literature).

Seminar (two hours); one term

Prerequisite: Registration in Level III or IV of a Comparative Literature program

Antirequisite: CSCT 4PC3, ENGLISH 4PC3

Not open to students with credit in COMP LIT 4C03, LITERATURE AND OTHER DISCIPLINES, if the topic was Psyche and Culture.

COMP LIT 4G03 BERLIN/VIENNA: THE CULTURAL LIFE OF A CITY

Students will embark on an interdisciplinary journey into the cultural history of a city from the 19th century to the present. Through literary texts, songs, films, works of art and architecture varied presentations of the city in high and popular culture will be examined.

Three hours; one term

Prerequisite: Registration in Level III or IV

Cross-list: GERMAN 4G03

Offered on an irregular rotation basis.

This course is administered by the Department of Linguistics and Languages.

COMP LIT 4I13 INDEPENDENT STUDY

The student will prepare, under the supervision of a faculty member, a research paper involving independent study of an approved topic.

Prerequisite: Registration in Level IV of a Comparative Literature program and permission of the Director of Comparative Literature

COMP LIT 4J03 THE SPLIT SCREEN - RECONSTRUCTING NATIONAL IDENTITIES IN WEST AND EAST GERMAN CINEMA

This course examines German film texts of the post-war period and their representation of West and East German identities. Films will be discussed within the context of important political, social and cultural developments at the time of the films' production.

Two hours plus one film screening per week; one term

Prerequisite: Registration in Level III or IV

Cross-list: GERMAN 4J03, THTR&FLM 4J03

Offered on an irregular rotation basis.

This course is administered by the Department of Linguistics and Languages.

COMP LIT 4T03 SPECIAL TOPICS

Previous topics include: Lesbian and Gay Literature, Postmodern Fiction. Consult the Office of Interdisciplinary Studies concerning topic to be offered.

Seminar (two hours); one term

Prerequisite: Registration in Level III or IV of a Comparative Literature program

COMP LIT 4T03 may be repeated, if on a different topic, to a total of six units.

COMPUTER ENGINEERING

(SEE ELECTRICAL AND COMPUTER ENGINEERING)

COMPUTER SCIENCE

(SEE COMPUTING AND SOFTWARE)

COMPUTING AND INFORMATION TECHNOLOGY

(SEE TECHNOLOGY, COMPUTING AND INFORMATION TECHNOLOGY)

COMPUTING AND SOFTWARE

WEB ADDRESS: <http://www.cas.mcmaster.ca>

Information Technology Building, Room 202

Ext. 24614

Faculty as of January 15, 2007

Acting Chair

Martin von Mohrenschildt

Professors

Ivan Bruha/Dipl. Ing. (CVUT, Prague), RNDr (Charles, Prague), Ph.D. (CVUT, Prague)

William M. Farmer/B.A. (Notre Dame), M.A., M.S., Ph.D. (Wisconsin-Madison)

Frantisek Franek/M.Sc., R.N.Dr. (Charles, Prague), Ph.D. (Toronto)

Ryszard Janicki/M.Sc. (Warsaw), Ph.D., D.Hab. (Polish Acad. Sci.)

Thomas S.E. Maibaum/B.Sc. (Toronto), Ph.D. (London), F.I.E.E., F.R.S.A., C.Eng. Sanzheng Qiao/B.S., M.S. (Shanghai Teacher's College) M.S., Ph.D. (Cornell)

Paul A. Taylor/B.Sc., Ph.D. (Univ. of Wales), P.Eng.

Tamás Terlaky/M.Sc., Ph.D. (Loránd Eötvös)

Jeffery I. Zucker/B.Sc. (Witwatersrand), Ph.D. (Stanford)

Associate Professors

Antoine Deza/M.Eng. (Ecole Nationale des Ponts et Chaussées, Paris), Ph.D. (Tokyo Institute of Technology)

Douglas G. Down/B.A.Sc., M.A.Sc. (Toronto), Ph.D. (Illinois-Urbana)

Wolfram Kahl/M.Sc. (Oxford), Dr.rer.nat. (University of the German Armed Forces, Munich)

Ridha Khedri/B.Eng. (Tunis), M.Sc., Ph.D. (Laval)

Mark S. Lawford/B.Sc. (Queen's), M.A.Sc., Ph.D. (Toronto), P.Eng.

Ned Nedialkov/B.Sc. (Sophia, Bulgaria), M.Sc., Ph.D. (Toronto)

W.F. Skipper Poehlman/B.S. (Niagara), B.Sc. (Brock), M.Sc., Ph.D. (McMaster), P.Eng.

Martin von Mohrenschildt/Dipl.Math., Dr.Sc.Math. (ETH-Zürich)

Emil Sekerinski/Dipl.Inf., Dr.rer.nat. (Karlsruhe)

Michael Soltys/B.Sc., M.Sc., Ph.D. (Toronto)

Alan Wassyng/B.Sc., B.Sc., M.Sc., Ph.D. (Witwatersrand)

Assistant Professors

Christopher Anand/B.Math. (Waterloo), M.Sc., Ph.D. (McGill)

Jacques Carrette/B. Math. (Waterloo), M.Sc. (Montreal), Ph.D. (Paris-Sud)

George Karakostas/Dipl. Eng. (Patras), M.S.A., Ph.D. (Princeton)

Ryan Leduc/B.Eng. (Victoria), M.A.Sc., Ph.D. (Toronto), P.Eng.

Kamran Sartipi/B.Sc., M.Sc. (Tehran), Ph.D. (Waterloo)

Spencer Smith/B.Eng. C.S., M.Eng., Ph.D., P.Eng. (McMaster)

COMPUTER SCIENCE ...

Department Notes:

1. The administration of the (B.Sc.) Computer Science programs is being transferred from the Faculty of Science to the Faculty of Engineering and the program will now lead to a Bachelor of Applied Science degree. Students interested in pursuing this degree in Computer Science should see the *Faculty of Engineering* section of this Calendar. The Honours Computer Science program in the Faculty of Science leading to a B.Sc. degree is being phased out and no new registrants are being accepted.
2. Students wishing to pursue a Minor in Computer Science should see the Honours Computer Science program in the *Faculty of Engineering* section of this Calendar.

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 Grade 12 U or M Mathematics credit; or one of MATH 1K03, 1M03, STATS 1L03

Antirequisite: COMP SCI 1TA3, MMEDIA 1A03

COMP SCI 1FC3 MATHEMATICS FOR COMPUTING

Introduction to logic and proof techniques; functions, relations, and sets; counting; trees and graphs; concepts are illustrated using computational tools. Three lectures, one tutorial (two hours); second term

Prerequisite: Credit or registration in one of MATH 1A03, 1M03, 1N03, 1X03, ARTS&SCI 1D06. COMP SCI 1MA3 is recommended

COMP SCI 1MA3 COMPUTER BASED PROBLEM SOLVING

A first course in computer science, focusing on the practice of problem solving, in the context of interesting software applications. Problem formulation, problem decomposition, procedural formulation of problem solution.

Three lectures, one tutorial, one lab; one term

Prerequisite: MATH 1K03 or Grade 12 Advanced Functions and Introductory Calculus U

Antirequisite: ENGINEER 1D04

Not open to students registered in the Faculty of Business.

COMP SCI 1MD3 INTRODUCTION TO PROGRAMMING

Introduction to disciplined programming; programming environments; debugging; imperative programming constructs; values and types; libraries; file input-output. Computer Science concepts are illustrated.

Three lectures, one tutorial; second term

Prerequisite: Credit or registration in one of MATH 1A03, 1M03, 1N03, 1X03, ARTS&SCI 1D06. COMP SCI 1MA3 is recommended

COMP SCI 1SA3 COMPUTING FUNDAMENTALS

Overview of the computer as a tool for problem solving with emphasis on design of sequential programs for problem solving. Topics covered include: organization of microcomputers (hardware and operating systems); data representation; communications and networks; the Internet and Web pages; application packages.

Three lectures, one tutorial; one term

Prerequisite: MATH 1K03 or Grade 12 Advanced Functions and Introductory Calculus U

Not open to students with registration in the Faculty of Business or with credit or registration in COMP SCI 1BA3, 1MA3, 1MC3.

Antirequisite: COMP SCI 1TA3, ENGINEER 1D04

COMP SCI 1TA3 ELEMENTARY COMPUTING AND COMPUTER USE

Organization of microcomputers (hardware and operating systems) and overview of computer communications; introduction to information exchange using word processing/presentation software, the Internet and Web pages; problem solving using electronic spreadsheets and database applications.

Three lectures, one tutorial; one term

Antirequisite: COMP SCI 1BA3, 1SA3, ENGINEER 1D04, MMEDIA 1A03

Not open to students with registration in the Faculty of Business or with credit or registration in COMP SCI 1MA3 1MC3 or HUMAN 2E03.

COMP SCI 2CA3 COMPUTER ARCHITECTURE AND ORGANIZATION

Computer design: RISC/CISC, instruction sets, memory hierarchy; parallelism: instruction level, software level, multi-threading; storage systems: RAID levels, errors/failures, networks, clusters.

Three lectures; second term

Prerequisite: COMP SCI 2MF3

Antirequisite: COMP SCI 3MG3, SFWR ENG 3GA3

COMP SCI 2CS3 COMMUNICATION SKILLS

Oral and written presentation skills; document types and structure; software documentation for the user; formulating and presenting proposals.

Three lectures; first term

Prerequisite: Registration in Level II or above

Antirequisite: SFWR ENG 3I03

COMP SCI 2ME3 SOFTWARE DESIGN FUNDAMENTALS

Software development models; modularization; information hiding; specification and abstraction; software requirements; software maintenance; metrics; testing theory and strategies; documentation.

Three lectures; second term

Prerequisite: COMP SCI 2SC3

Antirequisite: SFWR ENG 2AA4

COMP SCI 2MF3 DIGITAL SYSTEMS AND SYSTEMS PROGRAMMING

Basic computer technology: gates, registers, memory; machine programming; arithmetic: representations, arithmetic/logic unit, floating point systems; system component details: CPU, memory, I/O devices; pipelining.

Three lectures, one tutorial; first term

Prerequisite: COMP SCI 1MD3

Antirequisite: COMP ENG 2DI4, ELEC ENG 2DI4, SFWR ENG 2DA3, SFWR ENG 3F03

COMP SCI 2MJ3 THEORY OF COMPUTATION

Finite state machines, regular languages, regular expressions, applications of regular languages, grammars, context-free languages, models of computation, introduction to complexity theory.

Three lectures, one tutorial (two hours); first term

Prerequisite: COMP SCI 1FC3 or registration in the Mathematics and Computer Science program

COMP SCI 2OQ3 OBJECT ORIENTED PROGRAMMING

The object oriented approach to software: classes, objects, fields, methods; modelling and problem decomposition techniques using classes; concurrency, threads, synchronization, communication; inheritance; interface documentation; design documentation.

Three lectures, one tutorial; second term

Prerequisite: COMP SCI 2SC3

COMP SCI 2SC3 IMPERATIVE PROGRAMMING AND BASIC DATA STRUCTURES

Disciplined programming in the C language; problem decomposition; iteration and recursion; dynamic memory allocation; design, use and implementation of elementary fixed-size and dynamic data structures.

Three lectures, one tutorial; first term

Prerequisite: COMP SCI 1MD3

Antirequisite: COMP ENG 2SI4, ELEC ENG 2SI4, SFWR ENG 2S03

COMP SCI 3CN3 COMPUTER NETWORKS AND SECURITY

Networked computer systems: physical media, TCP/IP protocols, switching methods; net layering and components: data link; network, transport; application: wireless, ubiquitous; secure systems: protocols, perimeter defences, access control issues, retrofitting.

Three lectures, one lab; second term

Prerequisite: COMP SCI 3IS3, 3MH3

Antirequisite: SFWR ENG 4C03

COMP SCI 3DA3 DATA STRUCTURES AND ALGORITHMS

Abstract data structures; implementation of dense and sparse structures; hashing; sorting; dynamic programming; greedy algorithms; graph algorithms; complexity; organization of libraries.

Three lectures; first term

Prerequisite: Credit or registration in COMP SCI 2SC3

Antirequisite: COMP ENG 2SI4, COMP SCI 2MD3, ELEC ENG 2SI4, SFWR ENG 2C03

COMP SCI 3DB3 DATA BASES

Data models, relational databases; SQL; integrity; security; object-oriented and other databases; data storage; query processing; transactions; concurrency control; recovery; distributed and parallel database architectures.

Three lectures; second term

Prerequisite: Credit or registration in COMP SCI 2CA3 or 3MH3

Antirequisite: SFWR ENG 3H03, 4M03

COMP SCI 3EA3 SOFTWARE SPECIFICATIONS AND CORRECTNESS

Formal specifications in software development; logical formalisms; functional and relational specifications; completeness and consistency of specifications; verification; validation; presentation of information; tool supported verification.

Three lectures; first term

Prerequisite: COMP SCI 2ME3

Antirequisite: SFWR ENG 3A04

COMP SCI 3IS3 INFORMATION SECURITY

Basic principles of information security; threats and defences; cryptography; introduction to network security and security management.

Three lectures; first term

Prerequisite: Credit or registration in COMP SCI 2MJ3

COMP SCI 3MH3 OPERATING SYSTEMS

Processes and threads, synchronization and communication; scheduling, memory management; file systems; resource protection; structure of operating systems; distributed file systems; networking.

Three lectures; first term

Prerequisite: COMP SCI 2SC3

Antirequisite: COMP SCI 3SH3, 4SH3, SFWR ENG 3BB4, 3SH3

COMP SCI 3MI3 PRINCIPLES OF PROGRAMMING LANGUAGES

Design space of programming languages; abstraction and modularization concepts and mechanisms; programming in non-procedural (functional and logic) paradigms; introduction to programming language semantics.

Three lectures; second term

Prerequisite: COMP SCI 2OQ3, 2SC3

Antirequisite: SFWR ENG 3E03

COMP SCI 3SE3 DESIGN OF VISUAL PROGRAMMING ENVIRONMENTS

A study of visual programming environments: events, procedures, objects and attributes; paradigms: event-driven, object-oriented, www, markup languages; applications: graphical user interfaces, human factors, cognitive engineering and visualization techniques.

Three lectures; one term

Prerequisite: COMP SCI 2SC3

Corequisite: COMP SCI 2MD3

COMP SCI 3SH3 OPERATING SYSTEM CONCEPTS

Design principles of major components of an operating system: Management of processes, threads, memory, files, and I/O systems; network communication protocols, security, and command interpreter systems.

Three lectures and small projects; one term

Prerequisite: COMP ENG 2DI4 or ELEC ENG 2DI4; and one of COMP ENG 3SL4, SFWR ENG 3K04, 3L04, 3M04

Cross-list: SFWR ENG 3SH3

Antirequisite: COMP ENG 4SN4, COMP SCI 3MH3, 4SH3

COMP SCI 3SR3 SOFTWARE REQUIREMENTS

Requirements models; requirements gathering techniques; functional and non-functional requirements; requirements validation; requirements management; legal and ethical issues.

Three lectures; first term

Prerequisite: COMP SCI 3EA3

Antirequisite: SFWR ENG 3R03

COMP SCI 4AR3 SOFTWARE ARCHITECTURE

Software architecture concepts; architectural styles; design patterns, components, libraries, configurations; modelling languages; software re-engineering.

Three lectures; second term

Prerequisite: Credit or registration in COMP SCI 3SR3

First offered in 2008-2009.

COMP SCI 4CC3 ADVANCED OPERATING SYSTEMS

Modern operating systems: large-scale distributed to small real-time operating systems; microcomputer/mainframe interconnections; message passing techniques; networks; distributed deadlocks and shared memory models; extended file systems and shared resources.

Two lectures; one lab; one term

Prerequisite: COMP SCI 3MH3 or SFWR ENG 3BB4

COMP SCI 4CD3 DISTRIBUTED SYSTEM ARCHITECTURES (2007-2008 ONLY)

Distributed systems: real-time, agent-oriented, heterogeneous, multi-computer, multi-processor; coupling schemes: loose, tight; networking, ATM, frame relay, clustering, software protocols; communication strategies, client/server approaches.

Two lectures; one lab; one term

Prerequisite: COMP SCI 3MG3 or SFWR ENG 3G03; or credit or registration in either PHYSICS 4D06 or both PHYSICS 4DA3 and 4DB3

COMP SCI 4CD3 DISTRIBUTED COMPUTER SYSTEMS (EFFECTIVE 2008-2009)

Distributed operating systems: deadlock, casual/concurrent events, multithreading, group communications; distributed computers: multi-processors, multi-computers, middleware, reliability; distributed services: n-tier architecture, WWW systems; special systems: real time, multimedia aware, grid-computing.

Three lectures, one lab (three hours); first term

Prerequisite: Credit or registration in COMP SCI 3MH3. Completion of COMP SCI 3CN3 is recommended.

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

Antirequisite: SFWR ENG 3H03, 4M03

Last offered in 2007-2008.

COMP SCI 4HC3 HUMAN COMPUTER INTERACTION

Computer-human interface designs: principles, types, models; human factors: ergonomics, physiological issues, cognitive engineering, task analysis, hardware; GUI evaluations: usability, surveys, ethnographic; practical examples; data visualization.

Three lectures; first term

Prerequisite: Credit or registration in COMP SCI 3MH3 or SFWR ENG 3BB4

Antirequisite: SFWR ENG 4D03

First offered in 2008-2009.

COMP SCI 4IB3 ARTIFICIAL INTELLIGENCE AND KNOWLEDGE-BASED SYSTEMS

AI disciplines: perception, pattern recognition, machine learning, neural nets, image processing, scene analysis, speech processing; problem solving, production systems, backtracking, graph search techniques, planners; PROLOG. Architectures and applications of expert systems. Three lectures; one term

Prerequisite: One of COMP SCI 2MD3, SFWR ENG 2C03, 2C04

COMP SCI 4MN3 INTRODUCTION TO SCIENTIFIC COMPUTING (2007-2008 ONLY)

Principles of floating point computing; Computer number systems, floating-point arithmetics, and computational errors. Computer methods and software for scientific and engineering applications: Solving linear and nonlinear systems, data fitting, solving differential equations, and continuous optimization.

Three lectures; one term

Prerequisite: COMP SCI 3MG3, MATH 2A03, 2R03

Antirequisite: SFWR ENG 3X03

COMP SCI 4MN3 SCIENTIFIC COMPUTATION (EFFECTIVE 2008-2009)

Number representations and computer arithmetic; linear systems; linear least square; regression; root finding; Minima-Maxima; Interpolation; Integration

Three lectures; second term

Prerequisite: COMP SCI 2CA3 or 3MG3; and MATH 2A03, 2R03

Antirequisite: SFWR ENG 3X03

COMP SCI 4TB3 SYNTAX-BASED TOOLS AND COMPILERS

Lexical analysis, syntax analysis, type checking; syntax-directed translation, attribute grammars; compiler structure; implications of computer architecture; mapping of programming language concepts; code generation and optimization.

Three lectures; second term

Prerequisite: COMP SCI 3M13 or SFWR ENG 3E03

COMP SCI 4TC3 RECURSIVE FUNCTION THEORY AND COMPUTABILITY

Recursive and primitive recursive functions, computability, decidability and undecidability, Church-Turing Thesis.

Three lectures; one term

Prerequisite: COMP SCI 3M13 or permission of the instructor

Antirequisite: MATH 4S03

COMP SCI 4TD3 DESIGN AND ANALYSIS OF ALGORITHMS

Techniques for the design and analysis of algorithms, especially divide-and-conquer, greedy, and dynamic programming algorithms. An introduction to computational complexity. Analysis of particular algorithms of practical or theoretical importance in computer science.

Three lectures; one term

Prerequisite: COMP SCI 2MD3, 2MJ3; and MATH 2Q04 or 2R03

COMP SCI 4TE3 CONTINUOUS OPTIMIZATION ALGORITHMS

Fundamental algorithms and duality concepts of continuous optimization. Motivation, applicability, information requirements and computational cost of the algorithms is discussed. Practical problems will illustrate the power of continuous optimization techniques.

Three lectures; one term

Prerequisite: MATH 2R03; and one of MATH 2A03, 2M06 (or 2M03 and 2MM3) or 2Q04

Cross-list: SFWR ENG 4TE3

COMP SCI 4TF3 DATA MINING: CONCEPTS AND ALGORITHMS

Introduction to Data Mining. Fundamental concepts and main tasks: classification, association, prediction and clustering. Algorithms based on decision trees, Bayes' model, instance-based learning and numeric classifiers. Preprocessing and postprocessing.

Three lectures; one term

Prerequisite: SFWR ENG 3H03; or COMP SCI 4EB3 and one of COMMERCE 2QA3, ECON2B03, STATS 1CC3; or permission of the instructor.

COMP SCI 4WW3 WEB SYSTEMS AND WEB COMPUTING

World wide web as networks: protocols, clients/servers and social issues; programming systems: markups, scripts, styles; platform technologies; WWW services: standard systems, browser-based, security issues, examples.

Three lectures; first term

Prerequisite: Credit or registration in COMP SCI 3MH3. Completion of COMP SCI 3CN3 is recommended.

First offered in 2008-2009.

COMP SCI 4Z03 DIRECTED READINGS

Directed readings in an area of computer science of interest to the student and the instructor.

Prerequisite: Permission of the Chair of the Department and registration in Level IV of an Honours program in Computer Science. Application for permission must be received by March 31st of the academic year prior to registration.

Enrolment is limited See the heading *Limited Enrolment Courses* in the *Faculty of Science* section of the Calendar.

COMP SCI 4ZP6 CAPSTONE PROJECT

Students, in teams of two to four students, undertake a substantial project in an area of computer science by performing each step of the software life cycle. The lecture component presents an introduction to software management and project management.

Lecture component in Term 1, weekly tutorials; two terms

Prerequisite: Registration in Level IV of Honours Computer Science

SOFTWARE ENGINEERING ...**Department Note:**

All software engineering courses are open to students registered in a software engineering program, subject to prerequisite requirements. Prior permission of the Department is necessary for other students.

Since the Software Engineering program is a CEAB accredited program, Software Engineering students are not allowed to substitute any of the required courses with Engineering Science or Engineering Design content by any courses offered by a non-CEAB accredited Engineering program.

Courses**SFWR ENG 2AA4 SOFTWARE DESIGN I - SOFTWARE COMPONENT DESIGN**

Development of small software units. Precise specifications expressed using logic and discrete mathematics. Design methods and design patterns. Implementation and testing.

Three lectures, one tutorial (two hours); second term

Prerequisite: SFWR ENG 2DM3, 2S03

Corequisite: SFWR ENG 2FA3

Antirequisite: COMP SCI 2ME3, SFWR ENG 2A04

SFWR ENG 2C03 DATA STRUCTURES AND ALGORITHMS

Data structures: queues, stacks, lists, heaps, trees, balanced trees, sorting, searching, graph algorithms; general techniques of design and analysis of algorithms.

Three lectures, one tutorial (one hour); second term

Prerequisite: SFWR ENG 2DM3, 2S03

Antirequisite: COMP ENG 2SI4, COMP SCI 2MD3, 3DA3, ELEC ENG 2SI4, SFWR ENG 2C04

SFWR ENG 2DA3 DIGITAL SYSTEM PRINCIPLES AND LOGIC CO-DESIGN FOR SOFTWARE ENGINEERING

Systematic design procedures; combinatorial circuit design, design of sequential machines; redundancy, binary number representations and arithmetic, organization of large logic circuits. Introduction to logic simulators. Software/hardware co-design.

Three lectures, one lab (three hours every other week); first term

Prerequisite: Registration in a program in Software Engineering

Corequisite: SFWR ENG 2DM3

Antirequisite: COMP ENG 2DI4, COMP SCI 2MF3, ELEC ENG 2DI4, SFWR ENG 2D03

SFWR ENG 2DM3 DISCRETE MATHEMATICS AND LOGIC I

Syntax and semantics of formal languages; propositional logic; proof systems; sets, functions, relations, and algebras; graphs and trees; finite state machines; software engineering applications.

Three lectures, one tutorial (one hour); first term

Prerequisite: MATH 1H03

Antirequisite: SFWR ENG 2E03, 2F03

SFWR ENG 2FA3 DISCRETE MATHEMATICS AND LOGIC II

First-order logic; proof by induction; definition by recursion; models of computation; computational limits and complexity; higher-order logic; software engineering applications.

Three lectures, one tutorial (one hour); second term

Prerequisite: SFWR ENG 2DM3

Antirequisite: SFWR ENG 2E03, 2F03

SFWR ENG 2MX3 INTRODUCTION TO MATHEMATICAL MODELLING OF SYSTEMS

Linear systems, signals, filters; sampling theorem; state and frequency domain; simple input-output systems; the relation of discrete and continuous space; introduction to mathematical models of systems.

Three lectures, one tutorial (one hour); second term

Prerequisite: MATH 1H03, 1NN3; and registration in MATH 2M06 (or 2M03 and 2MM3) or credit in MATH 2P04

SFWR ENG 2S03 PRINCIPLES OF PROGRAMMING

Fundamental concepts of imperative programming languages; (Assertion, Assignment, Control flow, Iteration, recursion, exceptions); Data representations; Basic concepts of operating systems; Composing and analyzing small programs.

Three lectures, one tutorial (one hour); first term

Prerequisite: ENGINEER 1D04

Antirequisite: COMP ENG 2SH4, COMP SCI 2SC3

SFWR ENG 3A04 SOFTWARE DESIGN II - LARGE SYSTEM DESIGN

Software design process, design and architecture of large systems, design for change and expansion; Documentation, inspection; Incremental design; Classes and objects, structured and object oriented analysis and design; Revision and version control; Project organization.

Three lectures, one tutorial (two hours); first term

Prerequisite: SFWR ENG 2AA4, 2C03

Antirequisite: COMP SCI 3EA3

SFWR ENG 3BB4 SOFTWARE DESIGN III - CONCURRENT SYSTEM DESIGN

Processes, threads, concurrency; Synchronization mechanisms, resource management and sharing; Objects and concurrency; Design, architecture and testing of concurrent systems.

Three lectures, one tutorial (two hours); second term

Prerequisite: SFWR ENG 3A04, 3E03

Antirequisite: COMP SCI 3MH3

SFWR ENG 3DX3 DYNAMIC MODELS AND CONTROL OF PHYSICAL SYSTEMS

Modelling of dynamic continuous physical phenomena in both continuous and discrete time. Control theory, stability analysis and feedback controller design. Application of computer control to continuous processes. Data analysis, empirical modelling.

Three lectures, one tutorial (one hour); second term

Prerequisite: SFWR ENG 3X03

Antirequisite: ENGINEER 3L03

SFWR ENG 3F03 MACHINE-LEVEL COMPUTER PROGRAMMING

Use of assembler language. I/O and storage devices. Highly optimized code. Low level representation of control and data structures. Device drivers.

Three lectures, one tutorial (one hour); second term

Prerequisite: SFWR ENG 3GA3

Antirequisite: COMP ENG 3DJ4, COMP SCI 2MF3

SFWR ENG 3GA3 COMPUTER ARCHITECTURE AND GRAPHICS PROCESSORS

Measures of performance, instruction set architecture, computer arithmetic, datapath and control, pipelining, the memory hierarchy, I/O systems, basics of multiprocessor systems, multimedia extensions and graphic processors.

Three lectures, one tutorial (two hours every other week); first term

Prerequisite: SFWR ENG 2D03 or 2DA3

Antirequisite: COMP ENG 4DM4, COMP SCI 2CA3, 3MG3, SFWR ENG 3G03

SFWR ENG 3GB3 4D MODELLING FOR VIRTUAL REALITY

Design of time-evolution of/in three dimensional spaces. Dynamical systems (discrete and continuous). Physical and artificial systems. Design patterns of 4D modelling.

Three lectures, one tutorial (two hours every other week); first term

Prerequisite: MMEDIA 2BE3 and registration in Software Engineering and Game Design

SFWR ENG 3GC3 REAL-TIME ANIMATION FOR COMPUTER GAMES

Introduction to graphical languages. Reactive systems. Rendering of meshes. Rigid and soft skeletons, hard and soft skinning. Real-time forward and inverse kinematics.

Three lectures, one tutorial (two hours every other week); second term

Prerequisite: MMEDIA 2HE3, SFWR ENG 3GB3 and registration in Software Engineering and Game Design

SFWR ENG 3I03 COMMUNICATION SKILLS

Writing technical (reference) documentation and user (introductory) software documentation; document structure, scientific writing. The language of legal contracts. Oral presentation methodologies.

Three hours (lectures, discussion, group project, seminars); first term

Prerequisite: ENGINEER 1C03 or 1C04

Antirequisite: COMP SCI 2CS3

SFWR ENG 3K04 SOFTWARE DEVELOPMENT FOR COMPUTER ENGINEERING

Software design process. Professional responsibility. Using specifications. Documentation. Module Specification. Module interfaces. Module internal documentation. Coding styles. Portability. Software inspection. Software testing.

Three lectures, one lab (three hours); first term

Prerequisite: One of COMP ENG 2S14, ELEC ENG 2S14, SFWR ENG 2S03

Antirequisite: COMP SCI 3EA3

SFWR ENG 3M04 SOFTWARE DEVELOPMENT FOR ELECTRICAL ENGINEERING

Software design process. Professional responsibility. Specification. Documentation. Modular design. Module interfaces. Coding style. Inspection. Testing.

Three lectures, one lab (three hours); first term

Prerequisite: COMP ENG 2S14 or ELEC ENG 2S14

SFWR ENG 3RA3 SOFTWARE REQUIREMENTS AND SECURITY CONSIDERATIONS

Deriving software requirements from System Goals. Software requirements gathering. Critical systems requirements gathering. Security requirements. Traceability of requirements. Verification, validation, and documentation techniques. Requirements models. Software requirements quality attributes. System and acceptance testing.

Three lectures, one tutorial (one hour); first term

Prerequisite: SFWR ENG 3A04

Antirequisite: COMP SCI 4EF3, SFWR ENG 3R03, 4EF3

SFWR ENG 3S03 SOFTWARE TESTING AND MANAGEMENT

Measurement, unit testing, slicing and debugging, inspection, integration testing, regression testing; testing strategies, software metrics, software project management.

Three lectures, one tutorial (two hours every other week); second term

Prerequisite: SFWR ENG 3A04

SFWR ENG 3SH3 OPERATING SYSTEM CONCEPTS

Design principles of major components of an operating system: Management of processes, threads, memory, files, and I/O systems; network communication protocols, security and command interpreter systems.

Three lectures and small projects; second term

Prerequisite: One of COMP ENG 2D14, ELEC ENG 2D14 or SFWR ENG 2DA3; and one of SFWR ENG 2AA4, 3K04, 3M04

Cross-list: COMP SCI 3SH3

Antirequisite: COMP ENG 4SN4, COMP SCI 3MH3, 4SH3

SFWR ENG 3X03 SCIENTIFIC COMPUTATION AND MATHEMATICAL SIMULATION

Computer arithmetic, stability, sensitivity. Numerical methods for polynomial manipulation, interpolation, data fitting, integration, differentiation, solving linear and non-linear systems, ordinary differential equations and eigenvalue problems.

Three lectures, one tutorial (one hour); first term

Prerequisite: SFWR ENG 2MX3; and either MATH 2M06 (or 2M03 and 2MM3) or both MATH 2P04 and 2Q04

Antirequisite: COMP ENG 3SK4, COMP SCI 4MN3

SFWR ENG 4AA3 REAL-TIME SYSTEMS AND CONTROL APPLICATIONS

Hard and soft real-time systems. Safety classification. Fail-safe design, hazard analysis. Discrete event systems. Modes. Requirements and design specifications. Tasks and scheduling. Clock synchronization. Data acquisition. Applications in real-time control.

Three lectures, one lab (three hours every other week); first term

Prerequisite: SFWR ENG 3BB4 or 3SH3; and SFWR ENG 3DX3

Antirequisite: SFWR ENG 4A03, 4GA3

SFWR ENG 4C03 COMPUTER NETWORKS AND COMPUTER SECURITY

Physical networks, internets, the TCP/IP protocol suite, common network services. Principles of information security, computer and network security threats, defense mechanisms, encryption.

Three lectures, one lab (three hours every other week); second term

Prerequisite: SFWR ENG 3BB4

Antirequisite: COMP SCI 3CN3

SFWR ENG 4D03 DESIGN OF HUMAN COMPUTER INTERFACES
Design of user interfaces. Principles of good interface design. Human input. Displaying complex data using graphics and virtual reality. Modes and mode awareness problem. Health issues, information overload. Special purpose graphics hardware. Interface design tools; on-line help systems. Three lectures, one tutorial (one hour); first term
Prerequisite: SFWR ENG 3BB4
Antirequisite: COMP SCI 4HC3

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. Introduction to analytical system reliability. Three lectures, one tutorial (one hour); first term
Prerequisite: SFWR ENG 3BB4. STATS 3N03 or 3Y03 is recommended.

SFWR ENG 4F03 DESIGN OF PARALLEL/DISTRIBUTED COMPUTER SYSTEMS AND COMPUTATIONS
Design of multi-computer systems for computation-intensive applications and high-reliability applications, array processing systems. Application of multi-computer systems to finite element methods, simulators, optimization problems. Three lectures, one tutorial (one hour); second term
Prerequisite: SFWR ENG 3G03 or 3GA3; and SFWR ENG 3BB4

SFWR ENG 4G06 SOFTWARE DESIGN IV - CAPSTONE DESIGN PROJECT
Student teams prepare the requirements, design, documentation, and implementation of a software system taking economic, health, safety, legal, marketing factors into account. Students must demonstrate a working system and convincing test results. Software project management. Three hours (lectures, discussion, group project, seminars); two terms
Prerequisite: Registration in final level of a Software Engineering program
Antirequisite: SFWR ENG 4G03, 4GP6, 4H03

SFWR ENG 4GA3 REAL-TIME SYSTEMS AND COMPUTER GAME APPLICATIONS
Hard and soft real-time systems. Safety classification. Fail-safe design, hazard analysis. Discrete event systems. Modes. Requirements and design specifications. Tasks and scheduling. Clock synchronization. Data acquisition. Applications in real-time networking, quality of service and multimedia. Three lectures, one lab (three hours every other week); first term
Prerequisite: SFWR ENG 3BB4, 3GC3, 3DX3 and registration in Software Engineering and Game Design
Antirequisite: SFWR ENG 4A03, 4AA3

SFWR ENG 4GC3 SENSORY PERCEPTION, COGNITION AND HUMAN/COMPUTER INTERFACES FOR GAME DESIGN
Human sensory perception, learning and cognition. Game aesthetics. Precise control and feedback mechanisms. Use of music and sounds. Critical analysis of existing interfaces. Alternate input devices. Three lectures, one tutorial (three hours every other week); second term
Prerequisite: SFWR ENG 4D03 and registration in Software Engineering and Game Design

SFWR ENG 4GP6 SOFTWARE DESIGN IV - CAPSTONE COMPUTER GAME DESIGN PROJECT
Student teams prepare the requirements, design, documentation and implementation of a computer game taking economic, health, safety, cultural, legal and marketing factors into account. Students must demonstrate a working system and convincing test results. Software project management. Three hours (lectures, discussion, group project, seminar); two terms
Prerequisite: Registration in Level IV of Software Engineering and Game Design
Antirequisite: SFWR ENG 4G03, 4G06, 4H03

SFWR ENG 4J03 COMMUNICATIONS SYSTEMS
Fundamental communications concepts: information, entropy, channel capacity, codes, data compression, adaptive channel equalizers, modulation/demodulation of signals, tracking, Kalman filtering, use of specialized signal processing hardware. Software in communication systems. Three lectures one tutorial (one hour); second term
Prerequisite: SFWR ENG 2MX3. STATS 3N03 or 3Y03 is recommended.

SFWR ENG 4M03 DATABASES
Physical organization of data, file structures, need for database management systems, entity-relationship design, the relational data model, concurrent access, mechanisms for data recovery. Assorted applications. Three lectures, one tutorial (one hour); second term
Prerequisite: SFWR ENG 2E03 or 2DM3
Antirequisite: COMP SCI 3DB3, 4EB3, SFWR ENG 3H03

SFWR ENG 4O03 OPERATIONS RESEARCH
Linear programming; Integer programming, decision trees, network flow problems, graph algorithms, route planning, applications to engineering problems. Three lectures, one tutorial (one hour); second term
Prerequisite: SFWR ENG 3X03

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, one tutorial (one hour); first term
Prerequisite: 2M06 (or 2M03 and 2MM3) or 2Q04
Cross-list: COMP SCI 4TE3

CULTURAL STUDIES AND CRITICAL THEORY

Courses in Cultural Studies and Critical Theory are administered within the Department of English and Cultural Studies of the Faculty of Humanities. For information and counselling, please contact the Department of English and Cultural Studies in Chester New Hall, Room 321.

Department Notes:

- The following are courses open as electives to students registered in Level II or above of any undergraduate program.

CSCT 2J03	Contemporary Popular Culture
CSCT 3D03	Science Fiction
CSCT 3EE3	African American Literature
CSCT 3RR3	African Literature and Film
CSCT 3W03	Contemporary Native Literature in Canada (note prerequisite for this course)
CSCT 3X03	Contemporary Native Literature in the United States (note prerequisite for this course)
CSCT 3Y03	Children's Literature
CSCT 3YY3	Contemporary Youth Culture

 Please note that the Department is able to offer only a limited selection of elective courses each year.
- Courses restricted to students registered in the Cultural Studies and Critical Theory program may be available to qualified students in other programs if space permits. Students interested in such courses should request permission from the departmental counsellor.
- Level IV seminars are open only to Combined Honours Cultural Studies and Critical Theory students registered in Level IV. Enrolment will be limited and departmental permission is required. A list of seminars to be offered will be available prior to registration and balloting for seminars for the next academic year will take place in March.

Courses *If no prerequisite is listed, the course is open.*

CSCT 1B03 CULTURAL STUDIES AND VISUAL CULTURE
An introduction to cultural studies focusing on the critical and conceptual tools for the analysis of various forms of visual culture (e.g. photography, film, television, advertising, new media technologies). Considerable emphasis is placed on the development of effective writing skills. Two lectures, one tutorial; one term
Cross-list: ENGLISH 1B03

CSCT 1BB3 CULTURAL STUDIES AND CONSUMER CULTURE
An overview of the development of cultural studies as an interdisciplinary field of academic inquiry through an exploration of the history of mass and consumer culture. Considerable emphasis will be placed on the development of critical skills in reading and writing. Two lectures, one tutorial; one term
Cross-list: ENGLISH 1BB3

CSCT 2J03 CONTEMPORARY POPULAR CULTURE

This course explores the concept of popular culture through an examination of specific cultural forms, with emphasis on analytic skills informed by cultural and critical theory.

Three hours; one term

Prerequisite: Registration in Level II or above

Cross-list: ENGLISH 2J03

CSCT 2K06 STUDIES IN WOMEN WRITERS

A closely focused course on women's writing in English. The topic for the course varies, sometimes concentrating on specific issues, sometimes on an historical period or national literature. Relevant feminist theory will be a component of the course.

Three hours; two terms

Prerequisite: Registration in a program in Cultural Studies and Critical Theory or Women's Studies

Cross-list: ENGLISH 2K06, WOMEN ST 2K06

CSCT 2M03 CONCEPTS OF CULTURE

An analysis of the development of the concept of culture from the Enlightenment to the present. Theoretical readings combined with the analysis of specific cultural texts, objects, forms and practices will allow students to trace historical and contemporary debates concerning culture.

Three hours; one term

Prerequisite: Registration in a program in Communication Studies, Comparative Literature or Cultural Studies and Critical Theory

Cross-list: COMP LIT 2E03, ENGLISH 2M03

Antirequisite: CMST 2M03

CSCT 2MM3 MODERN COUNTERCULTURES

An exploration of a variety of cultural forms (e.g., literature, art, photography, film, music) produced by avant-gardes and counter-cultural groups from the mid-19th century to the present. Areas of investigation may include surrealism, futurism, the beats, the sixties, situationism and punk.

Three hours; one term

Prerequisite: Registration in a program in Communication Studies, Comparative Literature or Cultural Studies and Critical Theory

Cross-list: COMP LIT 2EE3, ENGLISH 2MM3

Antirequisite: CMST 2MM3

CSCT 2P03 MODERNITY/POSTMODERNITY/VISUALITY

This course will examine modernity and postmodernity through an exploration of a variety of theoretical discourses and representational practices, with specific reference to visual culture.

Three hours; one term

Prerequisite: Registration in a program in Cultural Studies and Critical Theory

Antirequisite: ENGLISH 2P03

CSCT 2S03 SPECTACULAR BODIES

This course examines the representations and constructions of the racialized, gendered, ethnic, or othered human body in and through contemporary cultural texts.

Three hours; one term

Prerequisite: Registration in a program in Cultural Studies and Critical Theory

Antirequisite: ENGLISH 2S03

CSCT 3A03 CRITICAL RACE STUDIES

This course examines contemporary debates in critical race theory in an attempt critically to decode the operations of race in literary and cultural texts.

Three hours; one term

Prerequisite: Registration in a program in Comparative Literature, Cultural Studies and Critical Theory, Peace Studies or Women's Studies

Cross-list: COMP LIT 3RR3, ENGLISH 3A03, PEACE ST 3A03, WOMEN ST 3H03

CSCT 3AA3 THEORIES OF GENDER AND SEXUALITY

This course explores a range of theories of gender and sexuality by working through readings from the intersecting fields of feminist, queer and masculinity studies.

Three hours; one term

Prerequisite: Registration in a program in Comparative Literature, Cultural Studies and Critical Theory or Women's Studies

Cross-list: COMP LIT 3AA3, ENGLISH 3AA3, WOMEN ST 3HH3

CSCT 3CC3 READING FILM

A critical examination of selected films and film genres as cultural texts, using methods drawn from film theory and cultural studies.

Three hours, plus one weekly film screening; one term

Prerequisite: Registration in Level II or above of a program in Art History, Communication Studies, Comparative Literature, Cultural Studies and Critical Theory or Theatre & Film Studies. It is recommended that students should already have completed THTR&FLM 2F03.

Cross-list: CMST 3CC3, COMP LIT 3L03, ENGLISH 3CC3, THTR&FLM 3R03

CSCT 3D03 SCIENCE FICTION

An examination of a number of standard science fiction tropes such as time travel, lost worlds, utopia/dystopia, totalitarian societies, alien races and post holocaust societies.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: ENGLISH 3D03

Not open to students with credit in ENGLISH 3I13, TOPICS IN PROSE, if the topic was Science Fiction.

CSCT 3EE3 AFRICAN AMERICAN LITERATURE

A study of selected texts by African American writers published since 1900, considered in the context of African American history and literary tradition.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: ENGLISH 3EE3

Not open to students with credit in ENGLISH 3I13, TOPICS IN PROSE, if the topic was African American Fiction.

CSCT 3Q03 THE HISTORY OF CRITICAL THEORY

A survey of the main developments in critical theory from Plato to the end of the 19th century. Areas of investigation may include: art, aesthetics, civil society, representation, ethics and knowledge.

Three hours; one term

Prerequisite: Registration in a program in Comparative Literature or Cultural Studies and Critical Theory

Cross-list: COMP LIT 3Q03, ENGLISH 3Q03

CSCT 3QQ3 CONTEMPORARY CRITICAL THEORY

This course examines selected issues in contemporary critical theory. Areas of investigation may include: representation, power/knowledge, discourse, subjectivity and the body.

Three hours; one term

Prerequisite: Registration in a program in Comparative Literature or Cultural Studies and Critical Theory. COMP LIT 3Q03, CSCT 3Q03 or ENGLISH 3Q03 is recommended.

Cross-list: COMP LIT 3QQ3, ENGLISH 3QQ3

CSCT 3R06 POSTCOLONIAL CULTURES: THEORY AND PRACTICE

A study of contemporary texts including literature, film, art and other forms of popular culture that engage the implications of living in a postcolonial world. Close consideration will be given to issues of imperialism, globalization, race, gender, ethnicity, nation, language and representation.

Three hours; two terms

Prerequisite: Registration in a program in Comparative Literature, Cultural Studies and Critical Theory or Peace Studies

Cross-list: COMP LIT 3R06, ENGLISH 3R06, PEACE ST 3E06

CSCT 3RR3 AFRICAN LITERATURE AND FILM

This course introduces students to a selection of literary texts and films from countries across the African continent.

Three hours; one term

Prerequisite: Registration in Level II or above

Cross-list: ENGLISH 3RR3

CSCT 3W03 CONTEMPORARY NATIVE LITERATURE IN CANADA

A study of significant works by Native writers who give voice to their experience in Canada. Issues examined include appropriation of voice, native identity, women in indigenous societies and stereotyping.

Three hours (lectures and seminars); one term

Prerequisite: Six units of Level II Indigenous Studies or six units of Level II English or permission of the instructor

Cross-list: ENGLISH 3W03, INDIG ST 3D03, PEACE ST 3W03

This course is administered by Indigenous Studies.

CSCT 3X03 CONTEMPORARY NATIVE LITERATURE IN THE UNITED STATES

A study of contemporary works by Native writers in the United States within the context of American society and Post-Modern and Post-Colonial Literary Theory.

Three hours (lectures and seminars); one term

Prerequisite: Six units of Level II Indigenous Studies or six units of Level II English or permission of the instructor

Cross-list: ENGLISH 3X03, INDIG ST 3E03, PEACE ST 3X03

This course is administered by Indigenous Studies.

CSCT 3Y03 CHILDREN'S LITERATURE

A critical evaluation of literary works from approximately 1700 to the present, written primarily for children.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: ENGLISH 3Y03

Not open to students with credit in ENGLISH 3I13, TOPICS IN PROSE, if the topic was Children's Literature.

CSCT 3YY3 CONTEMPORARY YOUTH CULTURE

An examination of contemporary youth culture through dominant representations of identity. Themes include: violence, sex/sexuality, age, gender, technology, music and dance, countercultures, subcultures, private/public space.

Three hours; one term

Prerequisite: Registration in Level II or above

Antirequisite: ENGLISH 3YY3

CSCT 4X03 HONOURS ESSAY

In consultation with members of the Cultural Studies and Critical Theory program and the English and Cultural Studies Department, students will prepare an essay on an approved topic. This course is normally substituted for three units of Level IV seminar work in the second term. Students who are interested in taking CSCT 4X03 should contact the faculty member chairing the CSCT 4X03 committee early in first term.

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Departmental permission required.

Note:

Level IV Seminars are open only to Honours students registered in Level IV of a Cultural Studies and Critical Theory or English program. Enrolment will be limited to 15 students per seminar when possible. The Department of English and Cultural Studies is able to offer only a selection of the seminars listed below every year. A list of seminars to be offered will be available prior to registration, which takes place through the Department in March.

CSCT 4AA3 AFRICAN-AMERICAN WOMEN WRITERS

A study of a selection of African-American women writers, including Hurston, Walker, Morrison and Naylor, with a consideration of gender and race in literary theory.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4AA3

Departmental permission required.

CSCT 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 a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4AS3

Departmental permission required.

CSCT 4AW3 ASIAN AMERICAN WRITING

A study of selected texts by Americans and/or Canadians of Asian origin with a focus on race, ethnicity, gender, sexuality, class, immigration, multiculturalism, transnationalism and diaspora.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4AW3

Departmental permission required.

CSCT 4BB3 BLACK POPULAR CULTURE

This course focuses on the production and reception of black popular culture (particularly the entertainment industry and professional sports) in ways that problematize the racialization of cultural forms of expression.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4BB3

Departmental permission required.

CSCT 4CB3 READING THE BESTSELLER: CONTEMPORARY BRITISH FICTION

An examination of possible critical vocabularies for the analysis of recent British fiction in light of how bestseller lists, prizes, publicity and media adaptability now shape the writing, marketing and reading of fiction.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4CB3

Departmental permission required.

CSCT 4CF3 CONTEMPORARY FICTION

A study of recent English and American fiction, with emphasis on metafiction as well as the relationship between contemporary literary theory and fiction.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4CF3

Departmental permission required.

CSCT 4CJ3 CRUSADE AND JIHAD

The medieval battles over Jerusalem semantically haunt the present and recent past, the relationship of Muslim, Christian and Jewish life and politics.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4CJ3

Departmental permission required.

CSCT 4EM3 MODERNISM AND EMPIRE

An examination of the formalistic, ideological and political relationship between British modernism and postcolonial studies through reading literary texts and cultural-historical contexts of modernism.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4EM3

Departmental permission required.

CSCT 4FR3 FANTASIES OF THE ORIENT IN EIGHTEENTH-CENTURY BRITAIN

This course explores how eighteenth-century England registered and imagined "the other" through "the Orient", as well as how the Orient shaped emerging literary genres and modes.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4FR3

Antirequisite: ENGLISH 4F03

Departmental permission required.

CSCT 4FT3 THE FAIRY TALE

A study of the fairy tale from the structuralist, psychoanalytic and sociological points of view, concentrating on the tales of the Brothers Grimm in translation and considering the importance of fairy tales in acculturation and their symbolic significance.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4FT3

Departmental permission required.

CSCT 4HC3 THE HISTORY OF CULTURAL STUDIES

A study of the history of cultural studies from its origins in the Frankfurt School, through the Birmingham Centre for Contemporary Cultural Studies, to its dispersal into distinct modes of academic practice.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4HC3

Departmental permission required.

CSCT 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 a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4ID3

Departmental permission required.

CSCT 4J03 CROSSING BORDERS: GLOBAL FEMINISMS

This course examines how women's lives are being transformed in a changing global society and the implications of women's changing places in society for feminist theory and practice.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4J03, WOMEN ST 4J03

Departmental permission required.

This course is administered by Women's Studies.

CSCT 4LM3 EIGHTEENTH-CENTURY MACHINE LIFE

This seminar will explore how metaphors and constructions of the machine pushed the boundaries of what it meant to be human during the eighteenth century.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4LM3

Departmental permission required.

CSCT 4LT3 LITERATURE AND FILM

An exploration of films as texts by paying close attention to the notion of "looking" and "gazing".

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4LT3

Departmental permission required.

CSCT 4MB3 MEMORIALIZING THE PAST: MEMORY INDUSTRY OF POST-APARTHEID SOUTH AFRICA

A study of some of the ways in which the past is re-imagined in post-1994 South African cultural texts.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4MB3

Departmental permission required.

CSCT 4MO3 MODERNISM AND THE POLITICS OF FORM

Reading of modernist texts in the light of the contested relationship of formal/technical experimentation with the politics of race, gender, colonialism and other modes of power relations.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4MO3

Departmental permission required.

CSCT 4ON3 MICHAEL ONDAATJE

This course explores various approaches to Michael Ondaatje's poetry and prose; gender, postcoloniality and interdisciplinarity. Ondaatje's engagement with film, photography, painting and music are topics of particular interest.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4ON3

Departmental permission required.

CSCT 4OP3 THE "OPRAH EFFECT"

This seminar considers the influence of Oprah Winfrey at various sites of cultural contestation: television, magazine publication, women's body images, entrepreneurship, celebrity activism, race, "self-help."

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4OP3

Departmental permission required.

CSCT 4PC3 PSYCHE AND CULTURE

This course explores the psychoanalytic understanding of culture with reference to three main areas: ideology, gender polarity and imaginative culture (the arts and literature).

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4PC3

Antirequisite: COMP LIT 4C03, 4F03

Departmental permission required.

CSCT 4RT3 TELEVISION AND CONTEMPORARY CULTURE

This seminar studies the cultural artefact called *television*, providing a comprehensive overview of various approaches to its study and the requisite theoretical tools to read this important element of contemporary culture.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4RT3

Departmental permission required.

CSCT 4SF3 SCIENCE FICTION TOMORROW OR THE DAY AFTER

This seminar will examine science fiction based in the present or near future in the context of artificial intelligence theory, economic possibilities and biology.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4SF3

Departmental permission required.

CSCT 4SS3 SHAKESPEARE AND SHAKESPEARE'S SISTERS

By examining works from different genres, this course explores the ways gender expectations shaped women's and men's contributions to popular and elite culture in early modern England.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4SS3

Departmental permission required.

CSCT 4TS3 TORTURED SUBJECTS OF ROMANTICISM

This course explores what the Romantics meant when they spoke of the "self," and how they began to rethink it as both a glowing ideal and a source of cultural antagonism and resentment.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4TS3

Departmental permission required.

CSCT 4UT3 UTOPIAN LITERATURE

A study of the genre through English literature, from its roots in Plato's Republic, through the Middle Ages and the Renaissance to contemporary literature.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4UT3

Departmental permission required.

CSCT 4WI3 WOMAN AND THE NATION IN INDIAN POPULAR CINEMA

An examination of Indian popular cinema (Bollywood) and its construction of the nation through representations of women. Themes may include: partition, religion, sexuality, minority, caste, diaspora.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4WI3

Departmental permission required.

CSCT 4WL3

GLOBALIZATION AND
POSTCOLONIAL FICTION

This course examines fictional representations of the ideology and processes of globalization, while also considering how globalization shapes the production and consumption of postcolonial culture.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4WL3

Departmental permission required.

ECONOMICS

WEB ADDRESS: <http://www.mcmaster.ca/economics/>

Kenneth Taylor Hall, Room 426

Ext. 22765

Faculty as of January 15, 2007

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Michael R. Veall

Associate Chair

Stephen R. G. Jones

Professors

Kenneth S. Chan/B.Sc. (Toronto), M.A., Ph.D. (Brown)

Martin Dooley/B.A. (Indiana), M.S., Ph.D. (Wisconsin-Madison)

Peter J. George/C.M., B.A., M.A., Ph.D. (Toronto), D.U. (Ottawa), D. Hon. C. (Lviv), D. Litt. (Nipissing), LL.D. (Toronto)

Jeremiah E. Hurley/B.A. (John Carroll), M.A., Ph.D. (Wisconsin-Madison)

Stephen R.G. Jones/B.A. (Cambridge), Ph.D. (California-Berkeley)

Atif A. Kubursi/B.A. (American University, Beirut), M.S., Ph.D. (Purdue)

John E. Leach/B.A. (Alberta), M.A., Ph.D. (Queen's)

Wayne Lewchuk/Labour Studies) M.A. (Toronto), Ph.D. (Cambridge)

Lonnie J. Magee/B. Math. (Waterloo), M.A., Ph.D. (Western Ontario)

Stuart Mestelman/B.A. (Pittsburgh), M.S., Ph.D. (Purdue)

R. Andrew Muller/B.A. (McGill), M.A., Ph.D. (Toronto)

Kenneth H. Norrie/B.A. (Saskatchewan), M.Phil., Ph.D. (Yale)

Jeffrey S. Racine/B.A., M.A. (McMaster), Ph.D. (Western Ontario)/Senator

William McMaster Chair in Econometrics

William M. Scarth/B.A. (Queen's), M.A. (Essex), Ph.D. (Toronto)

Byron G. Spencer/B.A. (Queen's), Ph.D. (Rice)

Michael R. Veall/B.A. (McMaster), M.A. (Western Ontario), Ph.D. (M.I.T.)

Associate Professors

Paul Contoyannis/B.Sc., M.Sc., Ph.D. (University of York)

Thomas F. Crossley/B.Sc. (Queen's), M.A., Ph.D. (McMaster)

Katherine Cuff/M.A. (York), B.A., Ph.D. (Queen's)

Alok Johri/B.A. (Delhi), M.A. (Delhi School of Economics), Ph.D. (Boston)

Marc-André Letendre/B.A.A. (HEC Montréal), M.A., Ph.D. (Queen's)

A. Abigail Payne/B.A. (Denison), J.D. (Cornell), Ph.D. (Princeton)/Canada Research Chair in Public Economics

Adjunct Associate Professor

Paul Grootendorst/Clinical Epidemiology and Biostatistics) B.A. (Victoria), M.A. (Queen's), Ph.D. (McMaster)

Assistant Professors

Philip DeCicca/ B.A. (Cornell), M.P.A. (Syracuse), Ph.D. (Michigan)

Michel Grignon/M.A. (ENSAE), Ph.D. (EHESS)

Seungjin Han/B.Econ. (Korea University), M.A. (McGill University), Ph.D. (Toronto)

Peter J. McCabe/A.B. (Boston College), Ph.D. (Northwestern)

Shintaro Yamaguchi/Ph.D. (Wisconsin-Madison)

Adjunct Assistant Professor

Emile Tompa/B.A. (York), M.B.A. (British Columbia), M.A. (Toronto), Ph.D. (McMaster)

Associate Members

Dean C. Mountain/Business) B.A. (McMaster), M.A., Ph.D. (Western Ontario)

Gregory L. Stoddart/Clinical Epidemiology and Biostatistics) B.A. (Western Ontario), Ph.D. (British Columbia)

Jean-Eric Tardif/Health Economics), Ph.D. (Concordia)

Department Notes:

1. Not all the Economics courses listed in this Calendar are taught every year. Students are advised to consult the timetable published by the Office of the Registrar, or the Department handbook for information on current offerings.
2. Students with credit in ECON 2X03 who transfer into Economics from other programs may substitute ECON 2X03 for ECON 2G03.
3. Students who complete ECON 2I03 are well placed to enrol in the Canadian Securities Course (a correspondence course operated by the Canadian Securities Institute which represents the licensing requirement for individuals training to become investment advisors).
4. Many graduate programs in Economics require ECON 3G03, 4T03 and 4TT3. Students interested in an M.A. in Economics are advised to consult a departmental advisor for more detailed information.

Courses

If no prerequisite is listed, the course is open.

ECON 1B03

INTRODUCTORY MICROECONOMICS

An introduction to the method and theory of microeconomics, and their application to the analysis of contemporary economic problems.

Three lectures; one term

Antirequisite: ECON 1A06

ECON 1BB3

INTRODUCTORY MACROECONOMICS

An introduction to the method and theory of macroeconomics, and their application to the analysis of contemporary economic problems.

Three lectures; one term

Antirequisite: ECON 1A06

ECON 2A03

ECONOMICS OF LABOUR-MARKET ISSUES

This course applies economic analysis to issues of importance in the labour market. Topics vary and may include: women in the Canadian labour market; discrimination in hiring and promotion; unemployment; job loss and workplace closing; work sharing.

Three lectures; one term

Prerequisite: ECON 1A06; or ECON 1B03 and 1BB3

Cross-list: LABR ST 3A03

Not open to students with credit or registration in ECON 3D03.

ECON 2B03

ANALYSIS OF ECONOMIC DATA

Application of statistical concepts to the analysis of economic data, with attention to Canadian sources. Regression analysis and the use of spreadsheets are included. Topics may also include index numbers.

Three lectures; one term

Prerequisite: ECON 1A06 or both ECON 1B03 and 1BB3; and MATH 1K03 or Grade 12 Advanced Functions and Introductory Calculus U; and one of STATS 1L03 or Grade 12 Mathematics of Data Management U

Antirequisite: COMMERCE 2QA3, ECON 3O06, GEO 2S03, HTH SCI 1F03, POL SCI 3N06, PSYCH 2G03, 2R03, 2RA3, 2RB3, 2RR3, SOC SCI 2J03, SOCIOL 2Y03, STATS 1A03

Not open to students with credit or registration in ARTS&SCI 2R06, CHEM ENG 4C03, HTH SCI 2A03, SOCIOL 3H06, STATS 1CC3, 2D03, 2MA3, 2MB3, 2R06, 3N03, 3Y03, or if COMMERCE 2QA3 is a program requirement.

ECON 2CC3

HEALTH ECONOMICS AND ITS
APPLICATION TO HEALTH POLICY

Economic analysis of health and health care, with a special emphasis on policy issues in the Canadian health care system.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

Cross-list: HEALTHST 2C03

Not open to students registered in an Economics program or with credit or registration in ECON 2G03, 2X03 or 3Z03. Students excluded from ECON 2CC3 or those wishing to do further work in Health Economics are referred to ECON 3Z03.

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. Students may be involved in academic placements within the community.

Three lectures; one term

Prerequisite: ECON 1A06; or ECON 1B03 and 1BB3

ECON 2F03

THE POLITICAL ECONOMY
OF DEVELOPMENT

Topics include trade and economic protection, financial development and investment, income distribution, and the role of globalization and international political competition.

Three lectures; one term

Prerequisite: ECON 1A06; or ECON 1B03 and 1BB3

ECON 2G03**INTERMEDIATE MICROECONOMICS I**

Elements of production and cost; price and output determination under competitive and non-competitive market structures; the role of taxes and subsidies.

Three lectures; one term

Prerequisite: ECON 1A06 or 1B03; and one of Grade 12 Advanced Functions and Introductory Calculus U, MATH 1K03 or equivalent; and credit or registration in MATH 1M03 or equivalent

Antirequisite: ECON 2X03

ECON 2GG3**INTERMEDIATE MICROECONOMICS II**

Theory of consumer choice and applications to intertemporal choice and labour supply decisions; theory of exchange, welfare economics and general equilibrium analysis.

Three lectures; one term

Prerequisite: ECON 2G03 or 2X03; and MATH 1M03 or equivalent

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 1BB3; and one of Grade 12 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.

ECON 2HH3**INTERMEDIATE INCOME AND EMPLOYMENT THEORY II**

Selected topics from macroeconomics policies, issues in unemployment and inflation in open and closed economies, components of aggregate demand and supply and economic growth.

Three lectures; one term

Prerequisite: ECON 2H03

ECON 2I03**FINANCIAL ECONOMICS**

Detailed investigation of the financial sector. Topics include the role of capital markets in facilitating investment and growth, bond markets, stock markets, financial statements and taxation.

Three lectures; one term

Prerequisite: ECON 1A06; or ECON 1B03 and 1BB3

Not open to students with credit or registration in COMMERCE 2FA3.

ECON 2J03**ENVIRONMENTAL ECONOMICS**

Allocation of environmental services: efficiency and market failure; measuring environmental benefits; environmental regulation in Canada and elsewhere: taxes, tradable permits and other instruments; further topics.

Three lectures; one term

Prerequisite: ECON 1A06 or 1B03

ECON 2K03**ECONOMIC HISTORY OF CANADA**

A survey of the changing structure of the Canadian economy from the colonial period to the present; early significance of primary production for export markets; emerging domestic markets and industrialization; government's role in promoting the development of the national economy.

Three lectures; one term

Prerequisite: ECON 1A06; or ECON 1B03 and 1BB3

ECON 2L03**PEACE, HUMAN SECURITY AND ECONOMIC DEVELOPMENT**

The methods and concepts of economic analysis applied to economic development, human security, human rights and peace and conflict resolution.

Three lectures; one term

Prerequisite: Registration in Level II or above

May not be used to satisfy Economics unit requirements by students in Economics programs or a minor in Economics, but may be used as an elective.

ECON 2N03**PUBLIC POLICY TOWARD BUSINESS**

The economic effects of federal competition policy and the regulation of business by all levels of government.

Three lectures; one term

Prerequisite: ECON 1A06 or 1B03

Antirequisite: ECON 3N03

ECON 2P03**ECONOMICS OF PROFESSIONAL SPORTS**

The application of economic principles to team and individual professional sports. Theory of sports leagues, demand for sports, the market for athletes, broadcasting rights, competition policy issues, the public finance aspects of stadium financing.

Three lectures; one term

Prerequisite: ECON 1A06 or 1B03

ECON 2T03**ECONOMICS OF TRADE UNIONISM AND LABOUR**

Topics include the economics of the labour market, of trade unionism, of work, the impact of trade unions on the labour market, economic theories of strikes and trade unions and the state.

Three lectures; one term

Prerequisite: ECON 1A06; or ECON 1B03 and 1BB3

Cross-list: LABR ST 3B03

ECON 2X03**APPLIED BUSINESS ECONOMICS**

The economic analysis of the strategy of managerial decision-making. The role of technology, costs, government intervention and market structure on output and pricing decisions.

Three lectures; one term

Prerequisite: ECON 1A06 or 1B03; and one of Grade 12 Advanced Functions and Introductory Calculus U, MATH 1K03 or equivalent; and credit or registration in MATH 1M03 or equivalent

Antirequisite: ECON 2G03

Not open to students registered in Economics programs.

ECON 3B03**PUBLIC SECTOR ECONOMICS: EXPENDITURES**

Theory and practice of public finance. Topics are selected from growth of the public sector, market failure, theory of public goods, incentive mechanisms, logic of group decisions and the political process, theory of benefit-cost analysis, intergovernmental fiscal relations, government budgeting.

Three lectures; one term

Prerequisite: ECON 2G03 or 2X03

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: ECON 2G03 or 2X03

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: ECON 2G03 or 2X03

Not open to students with credit or registration in ECON 2A03.

ECON 3F03**METHODS OF INQUIRY IN ECONOMICS**

This course develops skills for investigating a research question in economics, through workshops (eg. writing, library, internet, data), and the subsequent application of the skills to an economic issue.

Three hours; one term

Prerequisite: ECON 2B03 and registration in Level III or Level IV of an Honours Economics program

ECON 3G03**INTRODUCTION TO ADVANCED ECONOMIC THEORY**

An introduction to the application of mathematics in economic theory.

Three lectures; one term

Prerequisite: One of Grade 12 Mathematics of Data Management U, MATH 1B03 or STATS 1L03; and MATH 1M03 or equivalent; and a grade of at least C in each of ECON 2G03 (or 2X03), 2GG3, 2H03, 2HH3

Not open to students with credit or registration in MATH 2A03, 2Q04, or 2X03.

ECON 3H03**INTERNATIONAL MONETARY ECONOMICS**

Macroeconomic problems of an open economy with special reference to Canada; the international financial system and proposals for its reform. Three hours (lectures and seminars); one term

Prerequisite: ECON 2H03

ECON 3HH3**INTERNATIONAL TRADE**

Real theory of international trade; interregional and international specialization; effect of commercial and industrial policies.

Three lectures; one term

Prerequisite: ECON 2G03 or 2X03

ECON 3I03**ECONOMIC HISTORY OF THE UNITED STATES**

Economic analysis of the development of the U.S. economy. Topics include the colonial economy, slavery, transportation, income distribution, foreign trade, technical and institutional change and the Great Depression.

Three lectures; one term

Prerequisite: ECON 2G03 or 2X03. ECON 2H03 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: ECON 2G03 or 2X03; and ECON 2H03

ECON 3LL3 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: ECON 2G03 or 2X03; and ECON 2H03

ECON 3M03 INTRODUCTION TO GAME THEORY

An introduction to the theory of games, including strategic, extensive and coalitional games. Applications in economics, political science and evolutionary biology are discussed.

Three lectures; one term

Prerequisite: 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 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: ECON 2G03 or 2X03; and ECON 2H03

ECON 3S03 INDUSTRIAL ORGANIZATION

A study of the structure, conduct and performance of industrial markets.

Three lectures; one term

Prerequisite: ECON 2G03 or 2X03

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: ECON 2G03 or 2X03; and ECON 2H03

Antirequisite: ECON 3J06

ECON 3U03 ECONOMETRICS I

Elaboration of regression techniques developed in ECON 2B03. Problems of inference and interpretation in the analysis of economic data. Introduction to forecasting in economics.

Three lectures; one term

Prerequisite: ECON 2G03 or 2X03; and ECON 2H03; and ECON 2B03 or one of CHEM ENG 4C03, COMMERCE 2QA3, GEO 2S03, GEOG 2LL3, 2N03, POL SCI 2F06, 3N06, PSYCH 2G03, 2R03, 2RA3; 2RB3, 2RR3, SOC SCI 2J03, SOCIOLOGY 2Y03, 3H06, STATS 1A03, 1CC3, 2D03, 2R06 or another course that is approved by a departmental counselor as equivalent to ECON 2B03

Not open to students with credit in ECON 3O06, STATS 2MA3, 2MB3, 3D03, or 3DD3 or credit or registration in ECON 4G03.

ECON 3W03 NATURAL RESOURCES

Competitive and socially optimal management of nonrenewable resources; market failure as illustrated by mineral cartels, fisheries and forestry, including analysis of bioeconomic models.

Three hours (lectures and seminars); one term

Prerequisite: MATH 1M03 and one of ECON 2G03, 2J03, 2X03; or permission of the instructor

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: ECON 2G03 or 2X03; and ECON 2H03

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, 2G03, 2X03, HEALTHST 2C03. ECON 2B03 or another course in statistics is recommended.

ECON 4A03 HONOURS SEMINAR IN ECONOMICS

Students prepare, present and discuss papers under supervision of a faculty member. Several sections will normally be offered. Topics for each section will be announced in January.

Three hours (seminars); one term

Prerequisite: ECON 2GG3, 2HH3, 3F03; and ECON 3U03 or 3O06; and registration in an Honours Economics program

ECON 4B03 SELECTED TOPICS

Topics will vary from year to year depending on student interests and faculty availability. Students should consult the Department on topics to be offered.

Three hours; one term

Prerequisite: Permission of the Department

ECON 4G03 ECONOMETRICS II

Development of regression models appropriate to economics. Illustrations from applied micro- and macroeconomics.

Three lectures; one term

Prerequisite: ECON 2G03 or 2X03; and ECON 2H03; and at least C- in ECON 3O06 or 3U03 or an average of 4.0 in both STATS 2D03 and 2MB3 (or 2M03)

ECON 4M06 DIRECTED RESEARCH I

A reading and/or research program supervised by a Department member. A major paper is required. Interested students should consult the Department concerning admission.

Prerequisite: Permission of the Department

ECON 4N03 DIRECTED RESEARCH II

As per ECON 4M06.

Prerequisite: Permission of the Department

ECON 4T03 ADVANCED ECONOMIC THEORY I

Mathematically oriented approaches to the analysis of the behaviour of individual consumers, workers and firms.

Three lectures; one term

Prerequisite: A grade of at least C- in one of ECON 3G03, MATH 2Q04, 2X03 (or 2A03); and a grade of at least C in each of ECON 2G03 (or 2X03), 2GG3, 2H03, 2HH3

Antirequisite: ECON 3A03

ECON 4TT3 ADVANCED ECONOMIC THEORY II

Analysis of dynamic macroeconomic models including models of endogenous growth and other selected topics.

Three lectures; one term

Prerequisite: A grade of at least C- in one of ECON 3G03, MATH 2Q04, 2X03 (or 2A03); and a grade of at least C in each of ECON 2G03 (or 2X03), 2GG3, 2H03, 2HH3

Antirequisite: ECON 3AA3

ELECTRICAL AND COMPUTER ENGINEERING

WEB ADDRESS: <http://www.ece.mcmaster.ca>

Information Technology Building, Room A111

Ext. 24347

Faculty as of January 15, 2007

Chair

K. Max Wong

Associate Chair (Undergraduate Programs)

James P. Reilly

Associate Chair (Graduate Studies)

Thia Kirubarajan

Distinguished University Professor

Simon Haykin/B.Sc., Ph.D., D.Sc. (Birmingham), F.R.S.C., F.I.E.E.E.

Professors

David W. Capson/B.Sc.Eng. (New Brunswick), M.Eng., Ph.D. (McMaster), P.Eng.

M. Jamal Deen/B.Sc. (Guyana), M.S., Ph.D. (Case Western Reserve), F.I.E.E.E., F.E.I.C., F.R.S.C., Canada Research Chair in Information Technology

Wei-Ping Huang/B.S. (Shandong), M.S. (Science and Technology of China), Ph.D. (M.I.T.)

James P. Reilly/B.A.Sc. (Waterloo), M.Eng., Ph.D. (McMaster), P.Eng.
 Peter M. Smith/B.Eng. Mgt., M.Eng., Ph.D. (McMaster), P.Eng.
 Barna Szabados/Dipl.Eng. (Grenoble), M.Eng., Ph.D. (McMaster), P.Eng.
 Ted H. Szymanski/B.A.Sc., M.A.Sc., Ph.D. (Toronto), P.Eng., L.R. Wilson/
 Bell Canada Enterprises Chair in Data Communications
 Terrence D. Todd/B.A.Sc., M.A.Sc., Ph.D. (Waterloo), P.Eng., NSERC/
 RIM/CITO Chair on Pico-Cellular Wireless Internet Access Networks
 Kon Max Wong/B.Sc. (Eng.), Ph.D., D.Sc. (Eng.) (London), D.I.C. (Imperial
 College, London), P.Eng., C.Eng., F.I.E.E., F.Inst.P., F.S.S., F.I.E.E.E.,
 Canada Research Chair in Signal Processing
 X. Wu/B.Sc. (Wuhan, China), Ph.D. (Calgary), NSERC-DALSA Industrial
 Research Chair in Digital Cinema

Adjunct Professors

Laurel Carney/S.B., M.S., Ph.D. (Wisconsin)
 Robert Elliott/B.A., M.A. (Oxford), Ph.D. (Cambridge)
 Alex B. Gershman/M.Eng.Sc., Ph.D. (Nizhny Novgorod), F.I.E.E.E.
 Jim Lee/B.Sc. (Calgary), M.A.Sc. (Toronto), Ph.D. (Carleton)
 Tom (Z-Q.) Luo/B.Sc. (Peking), Ph.D. (M.I.T.), P.Eng.
 Mark Haacke/B.Sc., M.Sc., Ph.D. (Toronto)
 Ben Ong/B.Sc., Ph.D. (McGill)

Associate Professors

T. Davidson/B.Eng. (Western Australia), D. Phil. (Oxford) Canada
 Research Chair in Communication Systems
 Hubert deBruin/B.Eng., M.Eng., Ph.D. (McMaster), P.Eng.
 T.R. Field/B.A. (Cambridge), D. Phil. (Oxford)
 T. Kirubarajan/B.A., M.A. (Cambridge), M.S., Ph.D. (Connecticut) Canada
 Research Chair in Information Fusion
 X. Li/B.Sc. (Shandong), M.S. (Wuhan Research Inst. of Posts & Telecom-
 munications), Ph.D. (Northern Jiaotong) P.Eng.
 Nicola Nicolici/B.Eng. (Technical University Timisoara), Ph.D. (Southampton),
 P.Eng.
 N. Nikolova/Dipl. Ing. (Technical University of Varna), Ph.D. (University of
 Electrocommunications, Tokyo), P.Eng.
 S. Shirani/B.Sc. (Isfahan University of Technology), M.Sc. (Amirkabir
 University of Technology), Ph.D. (British Columbia), P.Eng.

Adjunct Associate Professors

Z. (Jack) Ding, B.Sc., M.A.Sc., Ph.D. (Northwestern Polytechnic University,
 P.R. China)
 Matiar Howlader/B.Eng. (Bangladesh), M.Sc., Ph.D. (Kyushu Japan)
 Qu Jin/B.Eng., M.Eng. (Dalian Maritime), Ph.D. (McMaster)

Assistant Professors

M. Bakr/B.Sc., M.Sc. (Cairo), Ph.D. (McMaster), P.Eng.
 I. Bruce/B.Eng., Ph.D. (Melbourne) Barber-Gennum Chair in Information
 Technology
 C.H. Chen/B.A.Sc. (National Central Univ., Taiwan), M.A.Sc. (Simon
 Fraser), Ph.D. (McMaster)
 T.E. Doyle/B.Sc., B.E.Sc., M.E.Sc., Ph.D. (Western Ontario), P.Eng.
 S. Dumitrescu/B.Sc., Ph.D. (Bucharest)
 Y. Haddara/B.Eng. (Memorial), M.Sc., Ph.D., P.Eng. (Stanford)
 S. Hranilovic/B.A.Sc. (Waterloo), M.A.Sc., Ph.D., P.Eng. (Toronto)
 A. Jeremic/Dipl. Ing. (Belgrade), M.Sc., Ph.D. (Illinois-Chicago)
 D. Jones/B.Sc. (Western Ontario), Ph.D. (Stanford)
 P. Koutsakis/M.Sc., Ph.D. (Technical University of Crete)
 S. Kumar/B.S. (Mysore University, India), M.S., Ph.D. (Indian Institute of
 Science), Ph.D. (Osaka)
 A. Patriciu/B.Sc., M.Sc. CompSci (Craiova, Romania), M.Sc. MechEng.,
 Ph.D. (John Hopkins)
 S. Sirouspour/B.Sc., M.Sc. (Sharif University of Technology, Iran), Ph.D.
 (British Columbia) P.Eng.
 D. Zhao/B.S. (Northern Jiaotong, Beijing), Ph.D. (Waterloo), P.Eng.

Adjunct Assistant Professors

Jun Chen/B.Eng. (Jiao Tong, Shanghai), M.Sc., Ph.D. (Cornell)
 Mihai Margarit/M.Sc. (Bucharest), Ph.D. (Simon Fraser)
 Nagula Sangary/B.Sc. (Texas A & M), M.Eng., Ph.D. (McMaster)
 Mathini Sellathurai/B.Sc. (Peradeniya), Ph.D. (McMaster)
 Derek C. Schuurman/B.A.Sc., M.A.Sc. (Waterloo), Ph.D. (McMaster)
 Nick Stranges/B.Eng., M.Eng., Ph.D. (McMaster)

Associate Members

Mehran Anvari/(Surgery) M.B., B.S. (Newcastle Upon Tyne), Ph.D. (Adelaide),
 F.R.C.S.C., F.A.C.S.
 Suzanna Becker/(Psychology) B.A., M.Sc. (Queen's), Ph.D. (Toronto)

Troy Farncombe/(Medical Imaging) B.Sc., M.Sc., Ph.D. (British Columbia)
 Jan Huizinga/(Medicine) B.Sc., M.Sc., Ph.D. (Groningen, Netherlands)
 Markad V. Kamath/(Medicine) M.S., Ph.D. (Indian Inst. of Tech., Madras),
 Ph.D. (McMaster)
 Andrew Knights/(Engineering Physics) B.Sc. (DeMontfort), Ph.D. (East Anglia)
 Michael Noseworthy/(Medical Imaging) B.Sc., M.Sc., Ph.D. (Guelph)
 Allan D. Spence/(Mechanical Engineering) B.Math., M.A.Sc. (Waterloo),
 Ph.D. (British Columbia), P.Eng.

Lecturers

Drazena Brocilo/B.Eng., M.Eng., Ph.D. (McMaster)
 M. Williams/B.Sc., Ph.D. (Imperial College, London)
 H. Zhang/B.Eng., M.Eng. (Nanjing University of Aeronautics), M.Phil.
 (Hong Kong University of Science and Technology), Ph.D. (Kiel)
 J.K. Zhang/B.S., M.S., Ph.D. (Xidian)

COMPUTER ENGINEERING ...

Courses

COMP ENG 2DI4 LOGIC DESIGN

Binary numbers and codes; Boolean algebra; combinational circuit de-
 sign; electrical properties of logic circuits; sequential circuit design; com-
 puter arithmetic; programmable logic; CPU organization and design.

Three lectures, one tutorial, one lab every other week; first term
 Prerequisite: Registration in a program in Computer Engineering, Electrical
 Engineering, Engineering Physics (Photonics Engineering Stream) or Physics
 Antirequisite: COMP SCI 2MF3, ELEC ENG 2DI4, SFWR ENG 2D03, 2D04, 2DA3

COMP ENG 2DP4 MICROPROCESSOR SYSTEMS

Introduction to computer organizations; algorithmic state machine de-
 sign; microprocessor-based system design including memory and pe-
 ripheral interfaces; interrupt systems; software development tools; ma-
 chine-level coding and programming.

Three lectures, one tutorial, one lab every other week; second term

Prerequisite: COMP ENG 2DI4 or ELEC ENG 2DI4

Antirequisite: COMP ENG 3DJ4

COMP ENG 2SH4 PRINCIPLES OF PROGRAMMING

Fundamental concepts of programming languages: (assertion, assign-
 ment, control flow, iteration, recursion, exceptions); data representa-
 tions; basic concepts of operating systems; composing and analyzing
 small programs.

Three lectures, one tutorial, one lab every other week; first term

Prerequisite: ENGINEER 1D04 and registration in a program in Electrical
 and Computer Engineering

Antirequisite: SFWR ENG 2S03

COMP ENG 2SI4 DATA STRUCTURES, ALGORITHMS AND DISCRETE MATHEMATICS

Application of logic and finite state machines programming; data types; data
 abstraction and algorithms for sorting and searching; application of graph
 algorithms and combinatorics in programming; estimating program resource
 utilization.

Three lectures, one tutorial (two hours); second term

Prerequisite: ENGINEER 1D04, COMP ENG 2SH4

Antirequisite: COMP SCI 2MD3, 2SC3, 3DA3, ELEC ENG 2SI4, SFWR ENG
 2C03, 2C04

COMP ENG 3DQ4 DIGITAL SYSTEMS DESIGN

Advanced design methods of digital systems including modelling, simula-
 tion, synthesis and verification using hardware description languages,
 timing analysis and hardware debugging; implementation of computer
 peripherals in programmable devices.

Two lectures, one tutorial, one lab (three hours) every week; first term

Prerequisite: COMP ENG 2DI4 or ELEC ENG 2DI4; and COMP ENG 2DP4 or 3DJ4

Enrolment may be limited for Electrical and Electrical and Biomedical
 engineers.

COMP ENG 3DR4 COMPUTER ORGANIZATION

Instruction set design, computer arithmetic, assembly language, control-
 ler and datapath design, cache and memory systems, input-output sys-
 tems, networks interrupts and exceptions, pipelining, performance and
 cost analysis, computer architecture history and a survey of advanced
 architectures.

Three lectures, one tutorial; second term

Prerequisite: COMP ENG 3DQ4

COMP ENG 3SK3 COMPUTER-AIDED ENGINEERING

Numerical analysis; linear and nonlinear systems; least squares and QR factorization; optimization; numerical integration and differentiation; sensitivity analysis; finite differences and finite elements; engineering applications. Three lectures, one tutorial; second term

Prerequisite: ELEC ENG 2CJ4 or 2CJ5; and MATH 2P04

Antirequisite: COMP ENG 3SK4, SFWR ENG 3X03

COMP ENG 4DK4 COMPUTER COMMUNICATION NETWORKS

Introduction to switching and communication networks; packet switching; shared media access and LANs; error control; network layer operation and the Internet; ISDN; wireless networks; performance and simulation. Three lectures, one tutorial, one lab every other week; first term

Prerequisite: ELEC ENG 3TQ4

COMP ENG 4DM4 COMPUTER ARCHITECTURE

Overview of CISC/RISC microprocessors; performance metrics; instruction set design; processor and memory acceleration techniques; pipelining; scheduling; instruction level parallelism; memory hierarchies; multiprocessor structures; storage systems; interconnection networks. Three lectures, one tutorial, one lab every other week; first term

Prerequisite: COMP ENG 3DJ4 or 3DR4

Antirequisite: SFWR ENG 3G03, 3GA3

COMP ENG 4DN4 ADVANCED INTERNET COMMUNICATIONS

Advanced internet protocols; routing, security, encryption; quality of service; ATM, RSVP, video and voice over IP; terminals, gateways and gatekeepers; wireless networks; WDM systems; optical crossconnects. Three lectures, one tutorial, one lab every other week; second term

Prerequisite: COMP ENG 4DK4

COMP ENG 4DS4 EMBEDDED SYSTEMS

Embedded processor architectures and SOC organization; EDA tools for hardware/software co-design; co-verification and testability; interfacing; co-processors, soft processors and ASIP design; real-time systems; applications. Three lectures, one tutorial, one lab every other week; second term

Prerequisite: COMP ENG 3DQ4

Enrolment may be limited for Electrical and Electrical and Biomedical engineers.

COMP ENG 4EK3 MICROELECTRONICS

CMOS and MOSFET integrated circuit design; fabrication and layout; simulation; digital and analog circuit blocks; computer-aided design and analysis; testing and verification. Two lectures, one tutorial, one lab every other week; first term

Prerequisite: ELEC ENG 3EJ4

Antirequisite: ELEC ENG 4EK3

COMP ENG 4OI5 ENGINEERING DESIGN

The design process; establishing objectives; preliminary design; planning; scheduling; decision matrices; modelling tools; economic impact; optimization methods; reliability; safety; a term project composed of small teams of students including an oral presentation and written report. Lectures, tutorials, one capstone project; first term

Prerequisite: Registration in Level IV or V of any Electrical or Computer Engineering program

Antirequisite: COMP ENG 4OI4, ELEC ENG 4OI4, 4OI5, 4BI4, 4BI5

COMP 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. Both terms

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 4OJ3

COMP ENG 4TL4 DIGITAL SIGNAL PROCESSING

Classical filter theory; DFT and FFT; FIR and IIR digital filters; effects of finite precision; implementation of DSP systems; adaptive filtering; spectral analysis, signal compression. Three lectures, one tutorial, one lab every other week; first term

Prerequisite: ELEC ENG 3TP4, 3TQ4

Corequisite: ELEC ENG 3TQ4 (For students registered in Electrical and Biomedical Engineering only)

Antirequisite: ELEC ENG 4TL4

COMP ENG 4TN3 IMAGE PROCESSING

Digital image formation and representation; filtering, enhancement and restoration; edge detection; discrete image transforms; encoding and compression; segmentation; recognition and interpretation; 3D imagery; applications. Two lectures, one tutorial, one lab every other week; second term

Prerequisite: ELEC ENG 3TP4, 3TQ4

Antirequisite: ELEC ENG 4BF3

ELECTRICAL ENGINEERING ...**Department Note:**

All students in the Electrical Engineering program initially follow a common curriculum consisting of a combination of Electrical Engineering and Computer Engineering courses. In their senior year, students are given the opportunity to customize their program by selecting from a wide range of technical electives.

All Electrical and Computer Engineering courses are open to students registered in any Electrical or Computer Engineering program or the Electrical and Biomedical Engineering program, subject to prerequisite requirements. Prior permission of the Department is necessary for students from other Engineering departments or faculties.

Courses**ELEC ENG 2CI5 INTRODUCTION TO ELECTRICAL ENGINEERING**

Current, potential difference; Kirchhoff's laws; Ohm's Law; circuit elements; mesh/nodal analysis of electrical circuits; first and second order circuits; complex arithmetic; phasors, impedance and admittance; AC power; operational amplifiers. Three lectures, one tutorial, one lab every week; first term

Prerequisite: Registration in a Computer Engineering or Electrical Engineering program

Antirequisite: ELEC ENG 2CI4

ELEC ENG 2CJ4 CIRCUITS AND SYSTEMS

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 2CI4 or 2CI5

Antirequisite: ELEC ENG 2CJ5

ELEC ENG 2EI5 ELECTRONIC DEVICES AND CIRCUITS I

Semiconductor devices and electronic circuits; electrical characteristics, principles of operation, circuit models of diodes, field-effect and bipolar transistors, and operational amplifiers; analysis and design of basic application circuits. Three lectures, one tutorial, one lab every week; second term

Prerequisite: ELEC ENG 2CI4 or 2CI5

Antirequisite: ELEC ENG 2EI4

ELEC ENG 2FH3 ELECTROMAGNETICS I

Transmission lines, electrostatics, current and conductors, the steady magnetic field. Faraday's law. Three lectures, one tutorial; second term

Prerequisite: ELEC ENG 2CI4 or 2CI5; and PHYSICS 1E03

Antirequisite: ELEC ENG 3FI4

ELEC ENG 3BA3 STRUCTURE OF BIOLOGICAL MATERIALS

Structure of proteins, nucleic acids, connective tissue and bone from molecular to microscopic levels; principles and applications of instruments for imaging identification and measurement of biological materials. Three lectures, one tutorial; first term

Prerequisite: Registration in Level III Electrical and Biomedical Engineering

ELEC ENG 3BB3 CELLULAR BIOELECTRICITY

Generation and transmission of bioelectricity in excitable cells; ionic transport in cellular membranes; propagation of electricity within and between cells; cardiac and neural physiology; measurement of extracellular fields; electrical stimulation of excitable cells. Three lectures, one tutorial; second term

Prerequisite: Registration in Level III Electrical and Biomedical Engineering

ELEC ENG 3EJ4 ELECTRONIC DEVICES AND CIRCUITS II

Analog and digital electronics; operational amplifier circuits; multistage amplifiers; oscillators; analog and digital integrated circuits; data converters; amplifier frequency response; feedback and stability; computer aids to analysis and design. Three lectures, one tutorial, one lab every other week; second term

Prerequisite: ELEC ENG 2CJ4 or 2CJ5; and ELEC ENG 2EI4 or 2EI5

ELEC ENG 3FK4 ELECTROMAGNETICS II

Electrostatics, magnetostatics, time-varying fields, uniform plane waves, plane wave reflection and dispersion, guided waves, radiation.

Three lectures, one tutorial, one lab every other week; second term

Prerequisite: ELEC ENG 2FH3

Antirequisite: ELEC ENG 3FI4

ELEC ENG 3PI4 POWER DEVICES AND SYSTEMS

Power circuits; transformers; magnetic circuits; three phase connections; single phase motors; polyphase machines; synchronous generators and motors, induction motors; dc motors; design of industrial systems.

Three lectures, one tutorial, one lab every other week; first term

Prerequisite: ELEC ENG 2CJ4 or 2CJ5; and ELEC ENG 2CI4 or 2CI5

ELEC ENG 3TP4 SIGNALS AND SYSTEMS

Time and frequency domain descriptions of continuous-time and discrete-time signals and linear systems, including convolution; Fourier transforms, impulse response and frequency response; applications to control and communication systems.

Three lectures, one tutorial, one lab every other week; first term

Prerequisite: ELEC ENG 2CJ4 or 2CJ5

Antirequisite: MECH ENG 4R03

ELEC ENG 3TQ4 PROBABILITY AND RANDOM PROCESSES

Probability theory, random variables, expectations; random processes, autocorrelation, power spectral densities; filtering of random processes; noise in communication systems.

Three lectures, one tutorial, one lab every other week; first term

Prerequisite: MATH 2P04

ELEC ENG 3TR4 COMMUNICATION SYSTEMS

Review of continuous-time signals and systems; analysis and implementation of amplitude modulation (DSB-SC, SSB), phase and frequency modulation schemes; digital modulation; noise performance.

Three lectures, one tutorial, one lab every other week; second term

Prerequisite: ELEC ENG 3TP4, 3TQ4; or ENG PHYS 3W04

ELEC ENG 4BC3 MODELLING OF BIOLOGICAL SYSTEMS

Introduction to mathematical and engineering methods for describing and predicting the behaviour of biological systems; including sensory receptors, neuromuscular and biomechanical systems; statistical models of biological function; kinetic models of biological thermodynamics.

Three lectures, one tutorial; first term

Prerequisite: Registration in Level IV Electrical and Biomedical Engineering

ELEC ENG 4BD4 BIOMEDICAL INSTRUMENTATION

Generation and nature of bioelectric potentials; electrodes and other transducers; principles of instrumentation; electrical safety; neuromuscular and cardiovascular instrumentation; ultrasonics and other medical imaging.

Three lectures, one tutorial, one lab every other week; second term

Prerequisite: One of ELEC ENG 3EJ4, ENGINEER 3N03 or PHYSICS 3B06

Antirequisite: ELEC ENG 4EL3

ELEC ENG 4BE4 MEDICAL ROBOTICS

Fundamentals of robotics and telerobotics; feedback from the environment using sensors and machine vision; application of robotics to medicine and surgery.

Three lectures, one tutorial, one lab every other week; second term

Prerequisite: Registration in Level IV Electrical and Biomedical Engineering

ELEC ENG 4BF3 MEDICAL IMAGE PROCESSING

Physical principles of medical image formation; imaging technology for X-ray, ultrasound, magnetic resonance; image quality descriptions and enhancement; 3D imagery.

Two lectures, one tutorial, one lab every other week; second term

Prerequisite: ELEC ENG 3TQ4

Antirequisite: COMP ENG 4TN3

ELEC ENG 4BI5 BIOMEDICAL DESIGN PROJECT

The design process; establishing objectives; preliminary design; planning; scheduling; decision matrices; modelling tools; economic impact; optimization methods; reliability; safety; a term project composed of small teams of students including an oral presentation and written report.

Three lectures, two tutorials, one capstone project; first term

Prerequisite: Registration in Level IV Electrical and Biomedical Engineering

Antirequisite: COMP ENG 4OI4, 4OI5, ELEC ENG 4BI4, 4OI4, 4OI5

ELEC ENG 4CL4 CONTROL SYSTEM DESIGN

Design of linear control systems using classical and state-space techniques; performance limitation; sampled-data control; nonlinear systems; multi-input multi-output control systems.

Three lectures, one tutorial, one lab every other week; second term

Prerequisite: ELEC ENG 3TP4

ELEC ENG 4EM3 PHOTONIC DEVICES AND SYSTEMS

Fundamentals of light. Optical fibers and their propagation characteristics. Lasers and photo-diodes. Optical amplifiers and modulators. Photonic networks.

Two lectures, one tutorial, one lab every other week; second term

Prerequisite: ELEC ENG 3EJ4

ELEC ENG 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 or 3FK4

ELEC ENG 4OI5 ENGINEERING DESIGN

The design process; establishing objectives; preliminary design; planning; scheduling; decision matrices; modelling tools; economic impact; optimization methods; reliability; safety; a term project composed of small teams of students including an oral presentation and written report.

Lectures, tutorials, one capstone project; second term

Prerequisite: Registration in Level IV or V of any Electrical or Computer Engineering program

Antirequisite: COMP ENG 4OI4, 4OI5, ELEC ENG 4BI4, 4BI5, 4OI4

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.

Both terms

Prerequisite: Prior arrangement with an Electrical and Computer Engineering faculty member, inclusion on the Dean's Honour List, registration in Level IV or V or permission of the instructor

Antirequisite: COMP ENG 4OJ3

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; second 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; modelling and simulation; economics and management; fault prediction and management.

Three lectures, one tutorial, one lab every other week; first term

Prerequisite: ELEC ENG 3PI4

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 3TR4

ENGINEERING (GENERAL)

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

Note:

Enrolment in these courses is limited to students registered in an Engineering program.

Courses *If no prerequisite is listed, the course is open.***ENGINEER 1A00 SAFETY TRAINING**

Introduction to safety guidelines at McMaster University, acceptable safety conduct and positive safety attitudes and practices in laboratories and Workplace Hazardous Materials Information System (WHMIS).

One hour, first week; first term

Prerequisite: Registration in any Engineering program

Antirequisite: ENG TECH 1A00, NURSING 1A00, SCIENCE 1A00.

This course must be successfully completed before registering in Level II Engineering.

ENGINEER 1C03 ENGINEERING DESIGN AND GRAPHICS

Graphical visualization and communication; technical sketching, 2D and 3D computer-aided design; use of solid modelling software.

One lecture, one tutorial (two hours), one lab (three hours); first or second term
Prerequisite: Registration in any Engineering program

Antirequisite: ENGINEER 1C04

ENGINEER 1D04 ENGINEERING COMPUTATION

Development and analysis of simple algorithms. Implementation of algorithms in computer programming language. Design and testing of computer programs.

One lecture, one tutorial (three hours), one lab (two hours); first or second term

Prerequisite: Registration in any Engineering program

Antirequisite: COMP SCI 1MA3, 1MC3, 1SA3, 1TA3

ENGINEER 1EE0 INTRODUCTION TO THE ENGINEERING CO-OP PROGRAM

Orientation to Engineering Co-op programs, self-assessment exercises, job and employer research, cover letter and resume writing, interviewing skills and work place professionalism.

Five sessions; first or second term

Prerequisite: Registration in a Co-op program in the Faculty of Engineering

Not open to students in their final level.

ENGINEER 1P03 INTRODUCTION TO PROFESSIONAL ENGINEERING

Introduction to professional engineering including ethics, health and safety, roles and responsibilities to society, engineering communication; design skills; group design projects.

One lecture first term; one lecture, one tutorial (two hours) second term; both terms

Prerequisite: Registration in any Engineering program

ENGINEER 2C03 ELECTRICITY, THERMOPHYSICS AND ENERGY

An exposure of electrical and thermophysics fundamentals having civil engineering applications. Topics: electrostatics, electric currents, circuits and transients, electrical power engineering, energy efficiency, heat transfer mechanisms.

Two lectures, one tutorial (two hours); first term

Prerequisite: PHYSICS 1E03 and registration in MATH 2M06 (or 2M03 and 2MM3)

Not offered in 2007-2008.

ENGINEER 2EE0 FOUR MONTH CO-OP EXPERIENCE I

Minimum of 15 weeks of full time employment in a professional environment. Credit may also be earned through successful completion of one UROP - Undergraduate Research Opportunities Program (Level I and II students only).

Prerequisite: ENGINEER 1EE0

Not open to students in their final level.

ENGINEER 2H03 THERMODYNAMICS

An introduction to thermodynamics and its statistical basis at the microscopic level, with applications to problems originating in a modern laboratory or engineering environment.

Three lectures; second term

Prerequisite: Registration in Level II or above of any Engineering program except Engineering Physics or Photonics Engineering

Antirequisite: ENGINEER 2V04, ENG PHYS 2H04, MECH ENG 2W04, PHYSICS 2H04

ENGINEER 2MM3 ELECTRICAL CIRCUITS AND POWER

Fundamentals of electromechanical energy conversion. Motors and generators, transformers, single and polyphase power circuits, synchronous and induction machines, power measurements.

Two lectures and one lab or tutorial; first or second term

Prerequisite: PHYSICS 1E03; and registration in either MATH 2M06 (or 2M03 and 2MM3) or both MATH 2P04 and 2Q04

Antirequisite: ENGINEER 3M03

ENGINEER 2P04 ENGINEERING MECHANICS 'A'

Principles of statics as applied to deformable solid bodies. Stress and strain, elastic behaviour of simple members under axial force, bending and torsion. Principal stresses; deflection of beams; statical indeterminacy.

Three lectures, plus one unit comprising tutorials or lectures devoted to applications, at the discretion of the instructor; first term

Prerequisite: PHYSICS 1D03

Antirequisite: MECH ENG 2P04

ENGINEER 3EE0 FOUR MONTH CO-OP EXPERIENCE II

Minimum of 15 weeks of full time employment in a professional environment. Credit may also be earned through successful completion of one UROP - Undergraduate Research Opportunities Program (Level I and II students only).

Prerequisite: ENGINEER 2EE0

Not open to students in their final level.

ENGINEER 3K03 INTRODUCTION TO THERMODYNAMICS AND HEAT TRANSFER

Fundamentals of thermodynamics. Principles of conductive, radiant and convective heat transfer. Examples from chemical, mechanical and electrical systems.

Three lectures; first term

Prerequisite: Completion of Level II of any Software Engineering program

ENGINEER 3N03 ELECTRONICS AND INSTRUMENTATION

Semiconductor devices; diodes, transistors and silicon-controlled rectifiers. Transistor characteristic and load lines. Amplifier circuits with and without feedback. Rectifier and passive filter circuits. Operational amplifiers and active filters. Digital circuits, Microcomputers, Interfacing.

Two lectures, one tutorial (two hours) or one lab (three hours); second term

Prerequisite: One of ENGINEER 2M04, 2MM3 or 3M03

ENGINEER 3PM3 INTERNATIONAL PROJECT MANAGEMENT

Emphasis is on challenges and solutions of international project management. Topics include cultural difference and the role of information and communication technologies.

Two lectures, one tutorial (two hours); one term

Prerequisite: Registration in an Engineering and International Studies program

First offered in 2008-2009.

ENGINEER 4A03 ENGINEERING AND SOCIAL RESPONSIBILITY

The historical development of the engineering profession's concern for social responsibility. Engineering as a cultural activity. The scope and limitations of engineering ethics. The role of the engineering profession in the social control of technological change.

Two lectures, one tutorial; second term

Prerequisite: Registration in Level III or above of any Engineering program except Engineering and Society

Antirequisite: ENGINEER 4H03, ENG PHYS 2S03, 4C03

ENGINEER 4B03 ENGINEERING ECONOMICS

Engineering criteria for decision-making. Money flow. Financial ventures. Personal financing. Total project investment. Production and operations costs. Economic analysis. Financial attractiveness.

Three hours (lectures, applications, discussions); second term

Prerequisite: Registration in Level IV or V of an Engineering program

Antirequisite: CHEM ENG 4N04, ENGINEER 2B03

Not open to students registered in an Engineering and Management program.

ENGINEER 4EA0 EIGHT MONTH CO-OP EXPERIENCE

Eight months of full time employment in a professional environment.

Prerequisite: ENGINEER 1EE0

Not open to students in their final level.

ENGINEER 4EB0 TWELVE MONTH CO-OP EXPERIENCE

Twelve months of full time employment in a professional environment.

Prerequisite: ENGINEER 1EE0

Not open to students in their final level.

ENGINEER 4EC0 SIXTEEN MONTH CO-OP EXPERIENCE

Sixteen months of full time employment in a professional environment.

Prerequisite: ENGINEER 1EE0

Not open to students in their final level.

ENGINEER 4EE0 FOUR MONTH CO-OP EXPERIENCE III

Minimum of 15 weeks of full time employment in a professional environment.

Prerequisite: ENGINEER 3EE0

Not open to students in their final level.

ENGINEER 4H03 ENGINEERING: ITS HISTORY AND CONTEMPORARY CONTEXT

History of engineering from antiquity to modern times, with special emphasis on scientific technology. Cultural significance of engineering to civilization. Nature and problems of industrial technology. Benefits and risks of technological progress. Engineering as a learned profession.

Three lectures; first term

Prerequisite: Registration in Level III, IV, or V of any Engineering program except Engineering and Society

Antirequisite: ENGINEER 4A03, ENG PHYS 2S03, 4C03

ENGINEER 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 4SC3 INTERNATIONAL SUPPLY CHAIN MANAGEMENT

Supply chain activities in international business: supply chain network design, global sourcing, demand planning, inventory management and global logistics.

Two lectures, one tutorial (two hours); one term

Prerequisite: Registration in an Engineering and International Studies program
First offered in 2009-2010.

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 dewaterings and disinfection.

Two lectures, one tutorial (two hours); second term

Prerequisite: One of CHEM ENG 3O04, CIV ENG 3M04 or MECH ENG 3O04; and registration in Level IV or above of any Engineering program

ENGINEERING AND MANAGEMENT

WEB ADDRESS: <http://www.eng.mcmaster.ca/engandmgmt/>

John Hodgins Engineering Building, Room A214-K

Ext. 27009

The Engineering and Management Programs are described in the *Faculty of Engineering* section in this Calendar. These programs are administered jointly by the Faculty of Business and the Faculty of Engineering and lead to the B.Eng.Mgt. degree. An Industrial Advisory Council also participates in the education process.

Program Director

John W. Medcof/B.A. (New Brunswick), M.A., Ph.D. (Toronto)

Notes:

1. COMMERCE 4BK3 is strongly recommended as a Commerce elective for Engineering and Management students.
2. Engineering and Management students planning to later enter an accelerated M.B.A. program are advised to take COMMERCE 4QH3 as one of their Commerce electives.

Courses *If no prerequisite is listed, the course is open.***ENGN MGT 2AA2 COMMUNICATION SKILLS**

Writing skills: interpersonal communications, business letters, formal reports. Speaking, listening and presentation skills: oral communications, speeches, technical presentations. Communication technology.

One lecture, one tutorial (two hours); one term

Prerequisite: Registration in any Engineering and Management program

ENGN MGT 3AA1 PROJECT MANAGEMENT AND TEAMWORK SKILLS

Project Management: project phases; project scheduling/scheduling software; project monitoring, teamwork evaluation. Teamwork Skills: working in groups, communications in groups. Leadership: leading a group, negotiating.

One seminar/class; one term

Prerequisite: One of CHEM ENG 2G03, CIV ENG 2I03 or ENGN MGT 2AA2; and registration in any Engineering and Management program

ENGN MGT 4A01 ENGINEERING AND MANAGEMENT REPORT

Students prepare a written report and make an oral presentation on an engineering and management problem encountered during summer work experience. Written and oral communications are assessed. Guidelines must be obtained from the Program Director before the end of Level III.

One seminar/class; one term

Prerequisite: ENGN MGT 3AA1 and registration in any Engineering and Management program

ENGN MGT 5B03 ENGINEERING AND MANAGEMENT PROJECTS

Capstone course: Students work in multidisciplinary teams to solve an integrated engineering and business problem in an organization. Project management skills are taught and project management software is used. One lecture, two tutorials (two hours); one term

Prerequisite: ENGN MGT 4A01 and registration in any Engineering and Management program

ENGINEERING AND SOCIETY

WEB ADDRESS: <http://www.eng.mcmaster.ca/engandsoc/>

John Hodgins Engineering Building, Room A214-D

Ext. 27679

The Engineering and Society Programs are described in the *Faculty of Engineering* section in this Calendar. These programs lead to the B.Eng.Society degree.

Program Director

B. Baetz/(Civil Engineering) B.A.Sc., M.A.Sc. (Toronto), Ph.D. (Duke), P.Eng.

Operating Committee, as of July 1, 2006:

Chair

B. Baetz (Civil Engineering)

M. Elbestawi (Dean of Engineering)

P.M. Smith (Associate Dean of Engineering)

I. Bruce (Electrical and Computer Engineering)

D. Conochie (Materials Science and Engineering)

K. Garay (Women's Studies)

A. Kitai (Engineering Physics) - Term 2

A. Knights (Engineering Physics) - Term 1

J. Main (Civil Engineering (Structural/Geotechnical) and Society, Student)

J. Peng (Computing and Software)

K. Sharma (Civil Engineering (Structural/Geotechnical) and Society, Student)

H. Sheardown (Chemical Engineering)

E. Sorensen (Engineering Physics and Society, Student)

B. Statham (Engineering Physics and Society, Student)

S. Veldhuis (Mechanical Engineering)

J. Wagenaar (Engineering Physics and Society, Student)

Courses *If no prerequisite is listed, the course is open.***ENGSOCT 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 teaching how to use the university and community resources in research, how to write a research paper, and how to express ideas orally. The theme for 2007-2008 is sustainable society.

Three hours (lectures, discussion, group work); second term

Prerequisite: Registration in any Engineering and Society program

ENGSOCT 2Y03 CASE STUDIES IN HISTORY AND TECHNOLOGY

History and philosophy of technology, from antiquity to modern times, with a special emphasis on the cultural aspects of technology, are addressed on a case study basis.

Three hours (lectures, discussion, group work); first term

Prerequisite: Registration in any Engineering and Society program

ENGSOCT 3X03 INQUIRY IN AN ENGINEERING CONTEXT II

This inquiry course builds on the skills developed in previous courses, focusing on a specific issue related to the role of engineering and technology in society. The course is devoted to the study of one topic such as: automation and employment, technology and the quality of life, the deteriorating environment, or the information society.

Three hours (lectures, discussion, group presentations); first term

Prerequisite: ENGSOCT 2X03

ENGSOCT 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: ENGSOCT 2Y03

**ENGSOCTY 3Z03 PREVENTIVE ENGINEERING:
ENVIRONMENTAL PERSPECTIVES**

The basic concepts of preventive engineering are studied and applied to specific case studies. The focus is on sustainability and the natural environment.

Three hours (lectures, discussion, group projects); second term
Prerequisite: Registration in Level III or IV of an Engineering and Society program or the Honours Environmental Science (B.Sc.) Program

ENGSOCTY 4X03 INQUIRY IN AN ENGINEERING CONTEXT III

Under the supervision of a faculty member, students write an inquiry paper and present their findings orally. Topics for inquiry must bear on the relation of technology to society and have implications for the practising 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); second term
Prerequisite: Registration in Level V of an Engineering and Society program

ENGINEERING PHYSICS

WEB ADDRESS: <http://engphys.mcmaster.ca/>

John Hodgins Engineering Building, Room A315

Ext. 24545

Faculty as of January 15, 2007**Chair**

Paul E. Jessop

Professors

Alexander A. Berezin/B.Sc., M.Sc., Ph.D. (Leningrad State)
Daniel T. Cassidy/B.Eng. (McMaster), M.Sc. (Queen's), Ph.D. (McMaster), P.Eng.
William J. Garland/B.Eng., M.Eng., Ph.D. (McMaster), P.Eng.
Harold K. Haugen/B.Sc. (Acadia), M.Eng. (McMaster), Ph.D. (Aarhus)
Paul E. Jessop/B.Sc. (Waterloo), M.A., Ph.D. (Harvard), P.Eng.
Adrian H. Kitai/B.Eng. (McMaster), Ph.D. (Cornell), P.Eng.
Rafael N. Kleiman/SB (MIT), Ph.D. (Cornell)
John C. Luxat/B.Sc. (Cape Town), Ph.D. (Windsor), P.Eng.
Peter Mascher/M.Eng., Ph.D. (Technical University of Graz), P.Eng.
John S. Preston/B.Eng. (McMaster), M.Sc., Ph.D. (Toronto), P.Eng.
David A. Thompson/B.Sc., Ph.D. (Reading), C.Eng.
Chang Q. Xu/B.Sc., M.Sc. (University of Science and Technology of China), D.Eng. (Tokyo)

Adjunct Professors

Denis J. Corr/B.Sc., Ph.D. (Queen's, Belfast)
David P. Jackson/B.Sc., M.A., M.A.Sc., Ph.D. (Toronto)
Nikola K. Popov/B.Eng. (Kiril and Metodij), M.Sc. (Belgrade), Ph.D. (Zagreb)
Victor G. Snell/B.Sc. (Manitoba), M.Sc., Ph.D. (Toronto)

Associate Professor

David R. Novog/B.Sc. Eng. (Manitoba), M.Eng., Ph.D. (McMaster)

Adjunct Associate Professor

Glenn D. Harvel/B.Eng., M.Eng., Ph.D. (McMaster)

Assistant Professors

Andrew P. Knights/B.Sc. (DeMontfort), Ph.D. (East Anglia)
Ray R. LaPierre/B.Sc. (Dalhousie), M.Eng., Ph.D. (McMaster)
Qiyin Fang/B.S. (Nankai), M.S., Ph.D. (East Carolina)

Associate Members

Chan Y. Ching/(Mechanical Engineering) B.S. (Peradeniya), Ph.D. (Syracuse)
M. Jamal Deen/(Electrical and Computer Engineering) B.Sc. (Guyana), M.Sc., Ph.D. (Case Western Reserve)
Yaser M. Haddara/(Electrical and Computer Engineering) B.Eng. (Memorial), Ph.D. (Stanford)
Joseph E. Hayward/(Radiology) B.Eng., M.Eng., Ph.D. (McMaster)

Fred M. Hoppe/(Mathematics and Statistics) B.Sc. (Toronto), M.Sc. (Weizmann Institute of Science), M.A., Ph.D. (Princeton)
Jan Dirk Huizinga/(Medicine) B.Sc., M.Sc., Ph.D. (Groningen)
Peter Krusel/(Chemistry) Dipl. Chem. (FSU-Jena), Ph.D. (California-San Diego)
Marilyn F. Lightstone/(Mechanical Engineering) B.A.Sc. (Queen's), M.A.Sc., Ph.D. (Waterloo), P.Eng.
Rafik O. Loutfy/(Chemical Engineering) B.Sc., M.Sc. (Ain Shams), Ph.D. (Western Ontario), M.B.A. (Toronto)
Skipper Poehlman/(Computing and Software) B.S. (Niagara), B.Sc. (Bröck), M.Sc., Ph.D. (McMaster), P.Eng.
Kalaichelvi Saravanamuttu/(Chemistry) B.Sc., Ph.D. (McGill)

Department Note:

All Engineering Physics courses are open to students registered in Engineering Physics unless otherwise stated. Prior permission of the Department is necessary for students from other engineering departments and other faculties.

Courses *If no prerequisite is listed, the course is open.***ENG PHYS 2A04 ELECTRICITY AND MAGNETISM**

Development of electromagnetic theory - electrostatics, charge, Gauss's Law, electric energy, DC circuits, magnetic fields, Ampère's law, AC circuits. Development of Maxwell's equations via vector calculus.

Three lectures, one tutorial, one lab (three hours); every other week; first term

Prerequisite: PHYSICS 1E03 and credit or registration in MATH 2P04

Antirequisite: ENG PHYS 2A03

ENG PHYS 2E04 ANALOG AND DIGITAL CIRCUITS

Design and analysis of analog and digital electrical circuits - component analysis, circuit analysis and theorems, binary numbers, Boolean analysis and digital circuit design.

Three lectures, one lab (three hours); second term

Prerequisite: ENG PHYS 2A03 or 2A04

ENG PHYS 2H04 THERMODYNAMICS

An introduction to thermodynamics and its statistical basis at the microscopic level, with applications to problems originating in a modern laboratory or engineering environment.

Three lectures, one tutorial; one lab every other week; second term

Prerequisite: Registration in Level II Engineering Physics

Cross-list: PHYSICS 2H04

Antirequisite: ENGINEER 2H03, 2V04, MATLS 2B03

ENG PHYS 2QM3 INTRODUCTION TO QUANTUM MECHANICS

Wave-particle duality, uncertainty principle, Hydrogen atom, Schrödinger Equation for 1D systems, barriers and tunnelling, probability, properties of insulators, semiconductors and metals. Examples from experiments.

Three lectures, one tutorial; second term

Prerequisite: Registration in an Engineering Physics or Materials Engineering program

**ENG PHYS 2S03 ENGINEERING PHYSICS AND
EMERGING TECHNOLOGIES**

An inquiry-based course on the societal impact of emerging technologies associated with Engineering Physics. Topics include alternative energy sources, nuclear power, new information technologies, and new developments in biomedical engineering.

Two lectures first term, one lecture second term; both terms

Prerequisite: Registration in an Engineering Physics program

Antirequisite: ENGINEER 4A03, 4H03

ENG PHYS 3A03 APPLICATIONS OF PHOTONICS

This course will provide an introduction to industrial, commercial and medical applications of photonics. Will include lecture-based instruction and design projects.

Two lectures, one lab; first term

Prerequisite: Credit or registration in ENG PHYS 3E03

ENG PHYS 3D03 PRINCIPLES OF NUCLEAR ENGINEERING

Introduction to fission and fusion energy systems. Energetics of nuclear reactions, interactions of radiation with matter, radioactivity, design and operating principles of fission and fusion reactors.

Three lectures, two labs (three hours each); second term

Prerequisite: Registration in Level III or above of any program in Engineering or Physics

ENG PHYS 3E03 FUNDAMENTALS OF PHYSICAL OPTICS

Reflection and refraction; geometrical optics; interference and diffraction; optical constants of media; optical-design software; introduction to design of optical systems.

Two lectures, one tutorial, one lab (three hours every other week); first term

Prerequisite: ENG PHYS 2A03 or 2A04; and ENG PHYS 2E04

ENG PHYS 3ES3 INTRODUCTION TO ENERGY SYSTEMS

A survey course on energy systems with emphasis on the analytic tools needed to evaluate them in terms of performance, resources and environmental sustainability, costs, and other relevant factors over their life cycles. Three lectures; first term

Prerequisite: Registration in an Engineering Physics program

ENG PHYS 3F03 ADVANCED APPLICATIONS OF QUANTUM MECHANICS

Application of quantum mechanics to the electronic, optical and mechanical behaviour of materials.

Three lectures; first term

Prerequisite: ENG PHYS 2QM3 or PHYSICS 3M03

Antirequisite: ENG PHYS 3F04

ENG PHYS 3G03 OPTICAL INSTRUMENTATION

Design of optical equipment (including reflective and refractive optical systems, interferometers and spectrometers). Optical sources and power measurements. Detectors (photographic, photoelectric, etc.), including use in the infrared and ultraviolet, and at low intensity levels.

Three lectures; second term

Prerequisite: ENG PHYS 3E03 or PHYSICS 3N03

Antirequisite: ENG PHYS 4G03, PHOTONIC 4G03

ENG PHYS 3MD3 INTRODUCTION TO MICROSYSTEM DEVICES

New materials, phenomena, and platforms for the design, fabrication, and application of modern and emerging technologies. Included MicroElectroMechanicalSystems (MEMS), microfluidic, electronic, and photonic devices.

Three lectures; first term

Prerequisite: Registration in an Engineering Physics program

ENG PHYS 3O04 INTRODUCTION TO FLUID MECHANICS AND HEAT TRANSFER

Fluid properties and statics are introduced. Basic equations of continuity, energy and momentum for internal and external flows are discussed. Similitude, dimensional analysis, measuring devices, fluid machinery and electromagnetic flow. Conduction and convection heat transfer.

Two lectures, one tutorial, one lab (three hours every other week); first term

Prerequisite: Credit or registration in MATH 2M06 (or 2M03 and 2MM3); or MATH 2P04 and 2Q04

Antirequisite: ENG PHYS 3O03

ENG PHYS 3PN4 SEMICONDUCTOR JUNCTION DEVICES

Electronic properties of semiconductors: non-equilibrium carrier conditions; steady state and non-steady state; p-n junctions; Schottky diodes; bipolar junction transistors. Detailed coverage of a range of diodes including photodiodes, solar cells, light emitting diodes, zener diodes, and avalanche diodes.

Three lectures, four labs (three hours each); second term

Prerequisite: ENG PHYS 3F04 or credit or registration in ENG PHYS 3F03

Antirequisite: ENG PHYS 3PN3, 4E03

ENG PHYS 3W04 ACQUISITION AND ANALYSIS OF EXPERIMENTAL INFORMATION

A systems approach to measurement in which synthesis of topics such as Fourier transforms, signal processing and enhancement, data reduction, modelling and simulation is undertaken.

Two lectures; both terms

Prerequisite: Registration in Level III or above of any Engineering or Science program

ENG PHYS 3X03 HUMAN PHYSIOLOGY

Basic introduction and working knowledge of the human body. Includes study of the cellular level of organization.

Three lectures; second term

Prerequisite: Completion of a minimum of 30 units above Level I in any Engineering program

Antirequisite: BIOLOGY 2A03, 3U03, 3U06, 3UU3, 4G06

ENG PHYS 4A06 DESIGN AND SYNTHESIS PROJECT

Design and synthesis projects supervised by a faculty member in the Department of Engineering Physics.

Two labs (three hours); both terms

Prerequisite: Registration in the final level of an Engineering Physics program

Antirequisite: ENG PHYS 4A04

ENG PHYS 4D03 NUCLEAR REACTOR ANALYSIS

Introduction to nuclear energy; nuclear physics and chain reactions; reactor statics and kinetics; multigroup analysis, core thermalhydraulics; reactor design.

Three lectures (including field trip); first term

Prerequisite: ENG PHYS 3D03

ENG PHYS 4ES3 SPECIAL TOPICS IN ENERGY SYSTEMS

Various topics will be examined and critically evaluated to consolidate the student's knowledge and analytical skills in the area of energy systems.

Three lectures; second term

Prerequisite: ENG PHYS 3ES3

ENG PHYS 4F03 ADVANCED SOLID STATE DEVICES

Electronic properties of field effect devices; electronic and optical properties of advanced devices and integrated circuits. Student projects will allow supplemental coverage of devices of particular interest to the class.

Three lectures; first term

Prerequisite: Credit or registration in one of ENG PHYS 3PN3, 3PN4 or 4E03

ENG PHYS 4H04 SPECIAL STUDIES IN ENGINEERING PHYSICS

A special program of studies to be arranged by mutual consent of a professor and the student with approval of the department chair, to carry out experiments and/or theoretical investigations. A written report and oral defence are required.

Two tutorials, one lab (three hours); both terms

Prerequisite: Registration in final level of an Engineering Physics program and a CA of at least 9.5

ENG PHYS 4I03 INTRODUCTION TO BIOPHOTONICS

This is a survey course on basic principles of light interaction with biological systems and specific biomedical applications of photonics.

Three lectures; second term

Prerequisite: ENG PHYS 3E03 or PHYSICS 3N03

Cross-list: MED PHYS 4I03

ENG PHYS 4K03 OPTICAL COMMUNICATIONS SYSTEMS

Propagation of light in an optical fiber. Semiconductor lasers and detectors for optical communications. Analogue and digital coding. Signal to noise considerations. System design.

Three lectures; first term

Prerequisite: Registration in Level IV or V of any Engineering or Physics program

Antirequisite: PHOTONIC 4K03

ENG PHYS 4L04 INDUSTRIAL MONITORING AND DETECTION TECHNIQUES

Single and two-phase flow diagnostics and monitoring techniques for industrial and power plant operations; radiation monitoring; pollutant monitoring and analyses; nuclear instrumentation for industrial processes.

Two lectures, four labs; both terms

Prerequisite: Registration in Level IV or V of any Engineering Physics program or permission of the instructor

Antirequisite: ENG PHYS 4L03

ENG PHYS 4MD4 ADVANCED MATERIALS AND NEXT-GENERATION DEVICES

This course explores the relationship between material properties and device performance. In particular, the design challenges associated with employing properties such as magneto-resistance, superconductivity, and piezoelectricity in devices will be studied.

Two lectures; both terms

Prerequisite: ENG PHYS 3F03 or 3F04; and credit or registration in one of ENG PHYS 3PN3, 3PN4 or 4E03

ENG PHYS 4NE3 ADVANCED NUCLEAR ENGINEERING

Energy generation and conversion, heat transfer and transport in a nuclear reactor. Characteristics and performance of nuclear fuels. Thermal margins and safety limits. Aging of core structural materials. Structural integrity of components.

Three lectures; second term

Prerequisite: ENG PHYS 3D03

ENG PHYS 4P03 NUCLEAR POWER PLANT SYSTEMS AND OPERATION

Systems and overall unit operations relevant to nuclear power plants; includes all major reactor and process systems; nuclear power plant simulator; self-study using interactive CD-ROM.

One term

Prerequisite: Registration in Level IV or above of any Engineering program

ENG PHYS 4S04 LASERS AND ELECTRO-OPTICS

Basic properties of electromagnetic radiation. Optical modulation and detection. Non-linear optics. Multiple-beam interference and coherence. Optical resonators. Laser systems.

Two lectures; both terms

Prerequisite: ENG PHYS 3E03 or PHYSICS 3N03

Antirequisite: PHOTONIC 4S04

ENG PHYS 4U04 MODERN AND APPLIED PHYSICS LABORATORY

Selected advanced experiments in two areas of applied physics, chosen from among: lasers and optical communications; microelectronic devices; computer systems; nuclear engineering.

Two labs (three hours); both terms

Prerequisite: ENG PHYS 3W04; and PHYSICS 3B06 or both PHYSICS 3BA3 and 3BB3

ENG PHYS 4Z03 SEMICONDUCTOR MANUFACTURING TECHNOLOGY

Detailed description of fabrication technologies used in the semiconductor industry; computer modelling of device fabrication; analysis of device performance.

Two classroom-based lectures, one computer cluster-based lecture; second term

Prerequisite: ENG PHYS 3F03 or 3F04

ENGINEERING TECHNOLOGY (GENERAL)

(SEE TECHNOLOGY, ENGINEERING TECHNOLOGY)

ENGLISH AND CULTURAL STUDIES

WEB ADDRESS: <http://www.humanities.mcmaster.ca/~english/>

Chester New Hall, Room 321

Ext. 24491

Faculty as of January 15, 2007**Chair**

Mary O'Connor

Acting Chair (Until June 30, 2007)

Donald Goellnicht

Distinguished University Professor

James King/B.A. (Toronto), M.A., Ph.D. (Princeton), F.R.S.C.

Professors

Joseph Adamson/B.A. (Trent), M.A., Ph.D. (Toronto)

David L. Clark/B.A., M.A., Ph.D. (Western Ontario)

Henry Giroux/B.S. (Maine), M.A. (Appalachian State), D. Arts (Carnegie-Mellon)/Global Television Network Chair in Communications

Donald C. Goellnicht/B.A. (Queen's), M.A., Ph.D. (McMaster)

Ronald Granofsky/B.A. (Trent), M.A. (Canterbury), Ph.D. (Queen's)

Mary E. O'Connor/B.A. (McGill), M.A., Ph.D. (Toronto)

Helen M. Ostovich/B.A., M.A., Ph.D. (Toronto)

Mary Silcox/B.A. (Western Ontario), M.A., Ph.D. (Queen's)

Peter Walmsley/B.A., M.A. (Toronto), Ph.D. (Cambridge)

Lorraine M. York/B.A., M.A., Ph.D. (McMaster)

Associate Professors

Sarah Brophy/B.A. (Wilfrid Laurier), M.A., Ph.D. (McMaster)

Daniel Coleman/B.Ed., M.A. (Regina), Ph.D. (Alberta), Canada Research Chair

Jeffery Donaldson/B.A., M.A., Ph.D. (Toronto)

Catherine Grisé/B.A. (Trent), M.A., Ph.D. (Western Ontario)

Melinda Gough/B.A. (McGill), M.A., Ph.D. (Yale)

Roger L. Hyman/B.A. (York), M.A., Ph.D. (Toronto)

Grace Kehler/B.A. (Regina), M.A., Ph.D. (Western Ontario)

Susie O'Brien/B.A. (Queen's), M.A. (Queensland), Ph.D. (Queen's)

Anne Savage/B.A. (Calgary), Ph.D. (London)

Imre Szeman/B.A. (Queen's), M.A. (Western Ontario), Ph.D. (Duke), Senator William McMaster Chair in Globalization and Cultural Studies

Assistant Professors

Chandrima Chakraborty/B.A. (Calcutta), M.A., M.Phil. (Jawaharlal Nehru), Ph.D. (York)

Jacques Khalip/B.A., M.A. (McGill), Ph.D. (Duke)

Saikat Majumdar/B.A. (Calcutta), M.A. (Jadavpur), M.F.A. (Bowling Green State), Ph.D. (Rutgers)

Julie Park/B.A. (Bryn Mawr), M.A., Ph.D. (Princeton)

Susan Searls Giroux/B.A., M.A.T. (Miami University-Oxford, Ohio), Ph.D. (Pennsylvania State)

Helene Strauss/B.A., M.A. (University of the Free State), Ph.D. (Western Ontario)

Department Notes:

1. The following are courses open as electives to students registered in Level II or above of any undergraduate program.

ENGLISH 2C03 Contemporary Canadian Fiction

ENGLISH 2E03 Twentieth-Century British Literature

ENGLISH 2F03 Studies in American Literature

ENGLISH 2J03 Contemporary Popular Culture

ENGLISH 2L03 Shakespeare: Selected Plays

ENGLISH 2N03 Feminist Utopias

ENGLISH 2R03 Monsters and Magic

ENGLISH 3D03 Science Fiction

ENGLISH 3DD3 Contemporary Canadian Drama

ENGLISH 3EE3 African American Literature

ENGLISH 3H03 Jane Austen

ENGLISH 3RR3 African Literature and Film

ENGLISH 3S03 Biblical Traditions in Literature

ENGLISH 3U03 Neanderthals and Nukes

ENGLISH 3W03 Contemporary Native Literature in Canada

(note prerequisite for this course)

ENGLISH 3X03 Contemporary Native Literature in the United States

(note prerequisite for this course)

ENGLISH 3Y03 Children's Literature

Please note that the Department is able to offer only a limited selection of elective courses each year.

2. Courses restricted to students registered in programs in English may be available to qualified students in other programs if space permits. Students interested in such courses should request permission from the departmental counsellor.

3. Level IV seminars are open only to Honours students registered in Level IV of an English program. Enrolment will be limited to 15 students per seminar when possible. A list of seminars to be offered will be available prior to registration and balloting for seminars for the next academic year will take place in March.

Courses If no prerequisite is listed, the course is open.**ENGLISH 1A03 LITERATURE IN ENGLISH: SHORTER GENRES**

A selection of shorter literary texts (short stories, poems, essays) will be studied. Students will be introduced to the elements of various genres and to a variety of interpretive approaches. Considerable emphasis will be placed on the development of critical skills in reading and writing. Two lectures, one tutorial; one term

ENGLISH 1AA3 LITERATURE IN ENGLISH: LONGER GENRES

A selection of longer literary texts - novels and plays - will be studied. Students will be introduced to the elements of the various genres and to a variety of interpretive approaches. Considerable emphasis will be placed on the development of critical skills in reading and writing.

Two lectures, one tutorial; one term

ENGLISH 1B03 CULTURAL STUDIES AND VISUAL CULTURE

An introduction to cultural studies focusing on the critical and conceptual tools for the analysis of various forms of visual culture (e.g., photography, film, television, advertising, new media technologies). Considerable emphasis is placed on the development of effective writing skills.

Two lectures, one tutorial; one term

Cross-list: CSCT 1B03

ENGLISH 1BB3 CULTURAL STUDIES AND CONSUMER CULTURE

An overview of the development of cultural studies as an interdisciplinary field of academic inquiry through an exploration of the history of mass and consumer culture. Considerable emphasis will be placed on the development of critical skills in reading and writing.

Two lectures, one tutorial; one term

Cross-list: CSCT 1BB3

ENGLISH 1C06 A HISTORY OF ENGLISH LITERATURE

A survey centering on the history of English literature from its origins to the present providing a grounding in literary historical periods, genres, and critical approaches to works by canonical and non-canonical authors. Emphasis will be placed on critical skills in reading and writing.

Two lectures, one tutorial; two terms

ENGLISH 2A03**CONTEMPORARY CRITICAL
APPROACHES TO LITERATURE**

This course will offer a grounding in reading literary texts from a range of contemporary critical approaches.

Three hours; one term

Prerequisite: Registration in a program in English or Comparative Literature
Cross-list: COMP LIT 2F03

ENGLISH 2B06**THE DEVELOPMENT OF ENGLISH DRAMA**

English drama from the medieval period to the close of the 18th century (excluding Shakespeare).

Three hours; two terms

Prerequisite: Registration in a program in English. Students registered in a program in Theatre & Film may apply to the Department for permission to take this course.

ENGLISH 2C03**CONTEMPORARY CANADIAN FICTION**

A study of the themes and structure of the contemporary Canadian novel, usually with emphasis on the relationship between Canada's cultural patterns and its literature.

Three hours; one term

Prerequisite: Registration in Level II or above

Not open to students with credit or registration in ENGLISH 2G06.

ENGLISH 2D03**CREATIVE WRITING INQUIRY**

A creative writing seminar and workshop based on the Inquiry model of self-directed research and collaboration. Students will exercise their creative talents in a variety of genres and work independently and in groups to develop critical skills and problem solving techniques.

Three hours; one term

Prerequisite: Registration in a program in English

ENGLISH 2E03**TWENTIETH-CENTURY BRITISH LITERATURE**

A study of selected works of twentieth-century British Literature with an emphasis on the historical, intellectual, ideological and aesthetic contexts.

Three hours; one term

Prerequisite: Registration in Level II or above

Not open to students with credit or registration in ENGLISH 2I06.

ENGLISH 2F03**STUDIES IN AMERICAN LITERATURE**

A study of some of the most important writers who developed American literature as a distinctive mode of writing in English.

Three hours; one term

Prerequisite: Registration in Level II or above

Not open to students with credit in ENGLISH 2H06 or credit or registration in ENGLISH 2X06 or 2Y06.

ENGLISH 2G06**CANADIAN LITERATURE**

Major aspects of the development of Canadian literature from the late 18th century to the mid-20th century. French-Canadian work in translation will be used for comparative purposes.

Three hours; two terms

Prerequisite: Registration in a program in English.

ENGLISH 2I06**MODERN BRITISH LITERATURE**

A study of representative literature by British writers of the 20th century. Through criticism of poems, plays, and fiction, an attempt is made to relate modern British literature to its social, intellectual and cultural context.

Three hours; two terms

Prerequisite: Registration in a program in English

ENGLISH 2J03**CONTEMPORARY POPULAR CULTURE**

This course explores the concept of popular culture through an examination of specific cultural forms, with emphasis on analytic skills informed by cultural and critical theory.

Three hours; one term

Prerequisite: Registration in Level II or above

Cross-list: CSCT 2J03

ENGLISH 2K06**STUDIES IN WOMEN WRITERS**

A closely focused course on women's writing in English. The topic for the course varies, sometimes concentrating on specific issues, sometimes on an historical period or national literature. Relevant feminist theory will be a component of the course.

Three hours; two terms

Prerequisite: Registration in a program in English or Women's Studies

Cross-list: CSCT 2K06, WOMEN ST 2K06

ENGLISH 2L03**SHAKESPEARE: SELECTED PLAYS**

A study of a representative selection of plays.

Three hours; one term

Prerequisite: Registration in Level II or above

Not open to students with credit or registration in ENGLISH 3K06.

ENGLISH 2M03**CONCEPTS OF CULTURE**

An analysis of the development of the concept of culture from the Enlightenment to the present. Theoretical readings combined with the analysis of specific cultural texts, objects, forms, and practices will allow students to trace historical and contemporary debates concerning culture.

Three hours; one term

Prerequisite: Registration in a program in Communication Studies, Comparative Literature or English

Cross-list: COMP LIT 2E03, CSCT 2M03

Antirequisite: CMST 2M03

ENGLISH 2MM3**MODERN COUNTERCULTURES**

An exploration of a variety of cultural forms (e.g. literature, art, photography, film, music) produced by avant-gardes and counter-cultural groups from the mid-19th century to the present. Areas of investigation may include surrealism, futurism, the beats, the sixties, situationism and punk.

Three hours; one term

Prerequisite: Registration in a program in Communication Studies, Comparative Literature or English

Cross-list: COMP LIT 2EE3, CSCT 2MM3

Antirequisite: CMST 2MM3

ENGLISH 2N03**FEMINIST UTOPIAS**

An examination of literary texts offering women's visions of social change.

Three hours (seminar and discussion); one term

Prerequisite: Registration in Level II or above. WOMEN ST 1A06 (or 1A03 and 1AA3) is recommended.

Cross-list: WOMEN ST 2L03

This course is administered by Women's Studies.

ENGLISH 2R03**MONSTERS AND MAGIC**

An examination of texts that explore the monstrous and magical, from *Beowulf* to the 17th century, considering their relationship to their own and our culture. Early texts will be read in modern versions.

Three hours; one term

Prerequisite: Registration in Level II or above

ENGLISH 2X06**AMERICAN LITERATURE:
COLONIZATION, REVOLUTION AND SLAVERY**

A survey of significant American texts from the origins of the tradition to the late nineteenth Century.

Three hours; two terms

Prerequisite: Registration in a program in English

Antirequisite: ENGLISH 2H06

ENGLISH 2Y06**AMERICAN LITERATURE:
POSTBELLUM, MODERN AND CONTEMPORARY**

A survey of significant American texts from roughly 1865 to the present. Texts will be selected from a variety of ethno-cultural traditions.

Three hours; two terms

Prerequisite: Registration in a program in English

Antirequisite: ENGLISH 2H06

ENGLISH 3A03**CRITICAL RACE STUDIES**

This course examines contemporary debates in critical race theory in an attempt to critically decode the operations of race in literary and cultural texts.

Three hours; one term

Prerequisite: Registration in a program in Comparative Literature, English, Peace Studies or Women's Studies

Cross-list: COMP LIT 3RR3, CSCT 3A03, PEACE ST 3A03, WOMEN ST 3H03

ENGLISH 3AA3**THEORIES OF GENDER AND SEXUALITY**

This course explores a range of theories of gender and sexuality by working through readings from the intersecting fields of feminist, queer, and masculinity studies.

Three hours; one term

Prerequisite: Registration in a program in Comparative Literature, English or Women's Studies

Cross-list: COMP LIT 3AA3, CSCT 3AA3, WOMEN ST 3HH3

ENGLISH 3C06**MEDIEVAL LITERATURE IN ENGLAND,
1200-1500**

Middle English literature in a range of genres, such as romance, lyric and chronicle, will be studied in the context of medieval English culture.

Three hours; two terms

Prerequisite: Registration in a program in English

ENGLISH 3CC3 READING FILM

A critical examination of selected films and film genres as cultural texts, using methods drawn from film theory and cultural studies.

Three hours; plus one weekly film screening; one term

Prerequisite: Registration in Level II or above of a program in Art History, Communication Studies, Comparative Literature, English or Theatre & Film Studies. It is recommended that students should already have completed THTR&FLM 2F03.

Cross-list: CMST 3CC3, COMP LIT 3L03, CSCT 3CC3, THTR&FLM 3R03

ENGLISH 3D03 SCIENCE FICTION

An examination of a number of standard science fiction tropes such as time travel, lost worlds, utopia/dystopia, totalitarian societies, alien races, and post holocaust societies.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: CSCT 3D03

Not open to students with credit in ENGLISH 3I13, TOPICS IN PROSE, if the topic was Science Fiction.

ENGLISH 3DD3 CONTEMPORARY CANADIAN DRAMA

A course on current Canadian drama focusing on Canadian dilemmas, readings of international politics, philosophical questions, innovation in staging, and performance histories.

Three lectures; one term

Prerequisite: Registration in Level II or above

Not open to students with credit in ENGLISH 3XX3, TOPICS IN DRAMA, if the topic was Contemporary Canadian Drama.

ENGLISH 3EE3 AFRICAN AMERICAN LITERATURE

A study of selected texts by African American writers published since 1900, considered in the context of African American history and literary tradition.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: CSCT 3EE3

Not open to students with credit in ENGLISH 3I13: TOPICS IN PROSE, if the topic was African American Fiction.

ENGLISH 3G06 STUDIES IN EIGHTEENTH-CENTURY BRITISH LITERATURE AND CULTURE

A study of English literature during the period 1660-1800, with special attention to works by Dryden, Swift, Pope and Johnson.

Three hours; two terms

Prerequisite: Registration in a program in English

ENGLISH 3H03 JANE AUSTEN

A critical evaluation of a selection of Jane Austen's work with a focus on exploring late eighteenth- and early nineteenth-century British culture.

Three lectures; one term

Prerequisite: Registration in Level II or above

Not open to students with credit in ENGLISH 3I13, TOPICS IN PROSE, if the topic was Jane Austen.

ENGLISH 3I06 THE AGE OF ELIZABETH I

A consideration of this tumultuous age, galvanized by revolutions in exploration, religion, and selfhood, and ruled by a female monarch. Authors include Spenser, Sidney and women writers.

Three hours; two terms

Prerequisite: Registration in a program in Comparative Literature or English

Cross-list: COMP LIT 3J06

ENGLISH 3J03 THE HISTORY OF ENGLISH

This course covers the emergence of English from the Indo-European language group and the major changes which mark its evolution into a global language of the present.

Three hours; one term

Prerequisite: Registration in a program in English

Antirequisite: ENGLISH 3J06

ENGLISH 3JJ3 THEORIES OF LANGUAGE

This course will introduce language theories of origin and nature in their cultural contexts, including those which are now being invented.

Three hours; one term

Prerequisite: Registration in a program in English

Antirequisite: ENGLISH 3J06

ENGLISH 3K06 SHAKESPEARE

An extensive critical reading and discussion of selected plays.

Three hours; two terms

Prerequisite: Registration in a program in English. Students registered in a program in Theatre & Film Studies may apply to the Department for permission to take this course.

ENGLISH 3L06 THE EARLIEST ENGLISH LANGUAGE AND LITERATURE

Old English language and literature will be studied in the context of Anglo-Saxon culture, translation theory and practice.

Three hours; two terms

Prerequisite: Registration in a program in English

ENGLISH 3M06 STUDIES IN NINETEENTH-CENTURY BRITISH LITERATURE AND CULTURE

A study of selected texts, genres, and issues of Nineteenth-Century British Literature, including reference to relevant social and political contexts.

Three hours; two terms

Prerequisite: Registration in a program in English

ENGLISH 3N06 THE BRITISH NOVEL

This course will trace the history of English fiction to the 20th century and will focus on the varieties of narrative forms, while also exploring the intellectual, cultural and psychological contexts of fiction.

Three hours; two terms

Prerequisite: Registration in a program in English

ENGLISH 3Q03 THE HISTORY OF CRITICAL THEORY

A survey of the main developments in critical theory from Plato to the end of the 19th century. Areas of investigation may include: art, aesthetics, civil society, representation, ethics, and knowledge.

Three hours; one term

Prerequisite: Registration in a program in Comparative Literature or English

Cross-list: COMP LIT 3Q03, CSCT 3Q03

ENGLISH 3QQ3 CONTEMPORARY CRITICAL THEORY

This course examines selected issues in contemporary critical theory. Areas of investigation may include: representation, power/knowledge, discourse, subjectivity, and the body.

Three hours; one term

Prerequisite: Registration in a program in Comparative Literature or English. COMP LIT 3Q03, CSCT 3Q03 or ENGLISH 3Q03 is recommended.

Cross-list: COMP LIT 3QQ3, CSCT 3QQ3

ENGLISH 3R06 POSTCOLONIAL CULTURES: THEORY AND PRACTICE

A study of contemporary texts including literature, film, art and other forms of popular culture that engage the implications of living in a postcolonial world. Close consideration will be given to issues of imperialism, globalization, race, gender, ethnicity, nation, language and representation.

Three hours; two terms

Prerequisite: Registration in a program in Comparative Literature, English or Peace Studies

Cross-list: COMP LIT 3R06, CSCT 3R06, PEACE ST 3E06

ENGLISH 3RR3 AFRICAN LITERATURE AND FILM

This course introduces students to a selection of literary texts and films from countries across the African continent.

Three hours; one term

Prerequisite: Registration in Level II or above

Cross-list: CSCT 3RR3

ENGLISH 3S03 BIBLICAL TRADITIONS IN LITERATURE

A study of the influence of the Bible on Western literature, especially English. Approaches may include the examination of symbolism, imagery, typology, doctrinal themes and narrative structures.

Three hours; one term

Prerequisite: Registration in Level II or above

Cross-list: COMP LIT 3H03

ENGLISH 3U03 NEANDERTHALS AND NUKES

An exploration of the emerging world view after World War II through a consideration of approximately six British novels.

Three lectures; one term

Prerequisite: Registration in Level II or above

Not open to students with credit in ENGLISH 3I13, TOPICS IN PROSE, if the topic was The British Novel After World War II.

ENGLISH 3V06 STUDIES IN 17TH-CENTURY LITERATURE

A detailed examination of poets and prose-writers of the period, with emphasis on the poetry of Donne, the "metaphysical school", Jonson and Milton.

Three hours; two terms

Prerequisite: Registration in a program in English

ENGLISH 3W03 CONTEMPORARY NATIVE LITERATURE IN CANADA

A study of significant works by Native writers who give voice to their experience in Canada. Issues examined include appropriation of voice, native identity, women in indigenous societies, and stereotyping.

Three hours (lectures and seminars); one term

Prerequisite: Six units of Level II Indigenous Studies or six units of Level II English or permission of the instructor

Cross-list: CSCT 3W03, INDIG ST 3D03, PEACE ST 3W03

This course is administered by Indigenous Studies.

ENGLISH 3X03 CONTEMPORARY NATIVE LITERATURE IN THE UNITED STATES

A study of contemporary works by Native writers in the United States within the context of American society and Post-Modern and Post-Colonial Literary Theory.

Three hours (lectures and seminars); one term

Prerequisite: Six units of Level II Indigenous Studies or six units of Level II English or permission of the instructor

Cross-list: CSCT 3X03, INDIG ST 3E03, PEACE ST 3X03

This course is administered by Indigenous Studies.

ENGLISH 3Y03 CHILDREN'S LITERATURE

A critical evaluation of literary works from approximately 1700 to the present written primarily for children.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: CSCT 3Y03

Not open to students with credit in ENGLISH 3I13, TOPICS IN PROSE, if the topic was Children's Literature.

ENGLISH 4X03 HONOURS ESSAY

In consultation with members of the English Department, students will prepare an essay on an approved topic. This course is normally substituted for three units of Level IV seminar work in the second term. Students who are interested in taking 4X03 should contact the faculty member chairing the 4X03 committee early in the first term.

Prerequisite: Registration in Level IV of an Honours program in English
Departmental permission required.

Note:

Level IV seminars are open only to Honours students registered in Level IV of an English program. Enrolment will be limited to 15 students per seminar when possible. The Department is able to offer only a selection of the seminars listed below every year. A list of seminars to be offered will be available prior to registration, which takes place through the Department in March.

ENGLISH 4AA3 AFRICAN-AMERICAN WOMEN WRITERS

A study of a selection of African-American women writers, including Hurston, Walker, Morrison and Naylor, with a consideration of gender and race in literary theory.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English

Cross-list: CSCT 4AA3

Departmental permission required.

ENGLISH 4AS3 THE AESTHETICS OF SEX IN THE 1890s

This course will focus on the ideologically related struggles of 1890s men and women to express radical forms of sexuality in literature and on the aesthetics and politics that enforced divisions along gender lines.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English

Cross-list: CSCT 4AS3

Departmental permission required.

ENGLISH 4AW3 ASIAN AMERICAN WRITING

A study of selected texts by Americans and/or Canadians of Asian origin with a focus on race, ethnicity, gender, sexuality, class, immigration, multiculturalism, transnationalism and diaspora.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English

Cross-list: CSCT 4AW3

Departmental permission required.

ENGLISH 4BB3 BLACK POPULAR CULTURE

This course focuses on the production and reception of black popular culture (particularly the entertainment industry and professional sports) in ways that problematize the racialization of cultural forms of expression.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English

Cross-list: CSCT 4BB3

Departmental permission is required.

ENGLISH 4BL3 THE BIBLE AND LITERATURE

A critical discussion of the Bible's overall narrative structure, the typological correspondences between Old and New Testaments and the use made of the Bible by poets and other artists.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
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 program in English

Cross-list: CSCT 4CB3

Departmental permission required.

ENGLISH 4CF3 CONTEMPORARY FICTION

A study of recent English and American fiction, with emphasis on metafiction as well as the relationship between contemporary literary theory and fiction.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English

Cross-list: CSCT 4CF3

Departmental permission required.

ENGLISH 4CJ3 CRUSADE AND JIHAD

The medieval battles over Jerusalem semantically haunt the present and recent past, the relationship of Muslim, Christian and Jewish life and politics.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English

Cross-list: CSCT 4CJ3

Departmental permission required.

ENGLISH 4EM3 MODERNISM AND EMPIRE

An examination of the formalistic, ideological and political relationship between British modernism and postcolonial studies through reading literary texts and cultural-historical contexts of modernism.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English

Cross-list: CSCT 4EM3

Departmental permission required.

ENGLISH 4FR3 FANTASIES OF THE ORIENT IN EIGHTEENTH-CENTURY BRITAIN

This course explores how eighteenth-century England registered and imagined "the other" through "the Orient", as well as how the Orient shaped emerging literary genres and modes.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English

Cross-list: CSCT 4FR3

Antirequisite: ENGLISH 4F03

Departmental permission required.

ENGLISH 4FT3 THE FAIRY TALE

A study of the fairy tale from the structuralist, psychoanalytic, and sociological points of view, concentrating on the tales of the Brothers Grimm in translation and considering the importance of fairy tales in acculturation and their symbolic significance.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English

Cross-list: CSCT 4FT3

Departmental permission required.

ENGLISH 4FW3 FORMS OF CREATIVE WRITING

This seminar will combine a hands-on study of form with an opportunity for students to exercise and focus their own creative energies. In any given year, the course will concentrate on either verse or fictional form.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English

Departmental permission required.

ENGLISH 4GW3 GOOD WOMEN, BAD GIRLS

This seminar explores representations of feminine virtue and vice with examples drawn from early sagas, epics, tales, hagiography, drama, miracle stories, and romance

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English

Departmental permission required.

ENGLISH 4HC3 THE HISTORY OF CULTURAL STUDIES

A study of the history of cultural studies from its origins in the Frankfurt School, through the Birmingham Centre for Contemporary Cultural Studies, to its dispersal into distinct modes of academic practice.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
Cross-list: CSCT 4HC3

Departmental permission required.

ENGLISH 4HL3 CANADIAN HOLOCAUST NOVELS

An examination of selected Canadian novels that respond to the Holocaust. Aesthetic and ethical issues involved in such responses will also be discussed.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
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 program in English
Cross-list: CSCT 4ID3

Departmental permission required.

ENGLISH 4J03 CROSSING BORDERS: GLOBAL FEMINISMS

Examines how women's lives are being transformed in a changing global society and the implications of women's changing places in society for feminist theory and practice

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
Cross-list: CSCT 4J03, WOMEN ST 4J03

Departmental permission required.

This course is administered by Women's Studies.

ENGLISH 4LM3 EIGHTEENTH-CENTURY MACHINE LIFE

This seminar will explore how metaphors and constructions of the machine pushed the boundaries of what it meant to be human during the eighteenth century.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
Cross-list: CSCT 4LM3

Departmental permission required.

ENGLISH 4LT3 LITERATURE AND FILM

An exploration of films as texts by paying close attention to the notion of "looking" and "gazing".

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
Cross-list: CSCT 4LT3

Departmental permission required.

ENGLISH 4MB3 MEMORIALIZING THE PAST: MEMORY INDUSTRY OF POST-APARTHEID SOUTH AFRICA

A study of some of the ways in which the past is re-imagined in post-1994 South African cultural texts.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
Cross-list: CSCT 4MB3

Departmental permission required.

ENGLISH 4MO3 MODERNISM AND THE POLITICS OF FORM

Reading of modernist texts in the light of the contested relationship of formal/technical experimentation with the politics of race, gender, colonialism and other modes of power relations.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
Cross-list: CSCT 4MO3

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 program in English
Departmental permission required.

ENGLISH 4ON3 MICHAEL ONDAATJE

This course explores various approaches to Michael Ondaatje's poetry and prose; gender, postcoloniality, and interdisciplinarity (Ondaatje's engagement with film, photography, painting and music) are topics of particular interest.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
Cross-list: CSCT 4ON3

Departmental permission required.

ENGLISH 4OP3 THE "OPRAH EFFECT"

This seminar considers the influence of Oprah Winfrey at various sites of cultural contestation: television, magazine publication, women's body images, entrepreneurship, celebrity activism, race, "self-help."

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
Cross-list: CSCT 4OP3

Departmental permission required.

ENGLISH 4PC3 PSYCHE AND CULTURE

This course explores the psychoanalytic understanding of culture with reference to three main areas: ideology, gender polarity, and imaginative culture (the arts and literature).

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
Cross-list: CSCT 4PC3

Antirequisite: COMP LIT 4C03, 4F03

Departmental permission required.

ENGLISH 4QM3 SHAKESPEARE'S APPRENTICESHIP: MORAL PLAYS AND THE QUEEN'S MEN

This course will examine some of the popular plays the young Shakespeare would have seen, focusing on playing spaces, character types and cultural attitudes.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
Departmental permission required.

ENGLISH 4RM3 LITERARY REPRESENTATIONS OF MADNESS

This course will seek a partial answer to the question of how writers represent madness by examining texts from the 17th to the 20th centuries. Particular attention will be paid to the role of social pressures behind the transformation of concepts of madness.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
Departmental permission required.

ENGLISH 4RT3 TELEVISION AND CONTEMPORARY CULTURE

This seminar studies the cultural artefact called "television," providing a comprehensive overview of various approaches to its study and the requisite theoretical tools to "read" this important element of contemporary culture.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
Cross-list: CSCT 4RT3

Departmental permission required.

ENGLISH 4SC3 WOMEN WRITERS OF THE 16TH AND 17TH CENTURIES

This seminar explores a variety of works written by women in 16th- and 17th-century England, with a consideration of their literary and cultural contexts, and the construction of female identity.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
Departmental permission required.

ENGLISH 4SF3 SCIENCE FICTION TOMORROW OR THE DAY AFTER

This seminar will examine science fiction based in the present or near future in the context of artificial intelligence theory, economic possibilities and biology.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
Cross-list: CSCT 4SF3

Departmental permission required.

ENGLISH 4SS3 SHAKESPEARE AND SHAKESPEARE'S SISTERS

By examining works from different genres, this course explores the ways gender expectations shaped women's and men's contributions to popular and elite culture in early modern England.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
Cross-list: CSCT 4SS3

Departmental permission required.

ENGLISH 4TS3 TORTURED SUBJECTS OF ROMANTICISM

This course explores what the Romantics meant when they spoke of the "self" and how they began to rethink it as both a glowing ideal and a source of cultural antagonism and resentment.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
Cross-list: CSCT 4TS3

Departmental permission required.

ENGLISH 4UT3 UTOPIAN LITERATURE

A study of the genre through English literature, from its roots in Plato's Republic, through the Middle Ages and the Renaissance to contemporary literature.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
Cross-list: CSCT 4UT3

Departmental permission required.

ENGLISH 4WC3 THE WITCHCRAFT CONTROVERSY IN PRINT AND ON STAGE, 1565-1656

An exploration of conflicting attitudes toward witches in England and Scotland, questioning ideological assumptions about gender, class, education, health, social welfare, marriage, and sexuality.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
Departmental permission required.

ENGLISH 4WI3 WOMAN AND THE NATION IN INDIAN POPULAR CINEMA

An examination of Indian popular cinema (Bollywood) and its construction of the nation through representations of women. Themes may include: partition, religion, sexuality, minority, caste, diaspora.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
Cross-list: CSCT 4WI3

Departmental permission required.

ENGLISH 4WL3 GLOBALIZATION AND POSTCOLONIAL FICTION

This course examines fictional representations of the ideology and processes of globalization, while also considering how globalization shapes the production and consumption of postcolonial culture.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
Cross-list: CSCT 4WL3

Departmental permission required.

ENGLISH 4WW3 WOMEN WRITERS OF THE EIGHTEENTH CENTURY

An exploration of poetry and fiction written by women in the 18th century, with particular attention to the social and philosophical concerns of these writers.

Seminar (two hours); one term

Prerequisite: Registration in Level IV of an Honours program in English
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 and subsurface waters with a focus on the human impacts on these processes.

Two lectures, one tutorial, one lab (one hour); second term

ENVIR SC 1B03 THE LIVING ENVIRONMENT

Characteristics of the biosphere and introduction to major environmental processes and issues.

Two lectures, one tutorial, one lab (two hours); second term

Prerequisite: Credit or registration in SCIENCE 1A00

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 one day field trip will be held.

Two lectures, one tutorial, one lab (two hours); first term

FRENCH

WEB ADDRESS: <http://www.humanities.mcmaster.ca/~french>

Togo Salmon Hall, Room 612

Ext. 24470

Faculty as of January 15, 2007**Chair**

Michael Kliffer

Professors

Marie-Madeleine Ahmed/L.ès L., M.ès L., D. de l'U (Paris-Sorbonne)

Caroline Bayard/L.ès L., M.ès L. (Toulouse), M.A., Ph.D. (Toronto)

Suzanne Crosta/B.A., M.A. (McMaster), Ph.D. (Toronto)

Madeleine Jeay/L.ès L. (Bordeaux), M.A., Ph.D. (Montréal)

William F. Hanley/B.A. (Toronto), M.ès L. (Paris-Sorbonne), D.Phil. (Oxford)

Associate Professors

Michael Kliffer/B.A. (British Columbia), M.A. (Michigan), Ph.D. (Cornell)

Gabriel Moyal/B.A. (McGill), M.A., Ph.D. (Toronto)

Anna St. Leger Lucas/B.A. (Nottingham), M.A. Ph.D. (British Columbia)

Alexandre Sévigny/B.A. (York), M.A., Ph.D. (Toronto)

John C. Stout/B.A. (British Columbia), Ph.D. (Princeton)

Assistant Professors

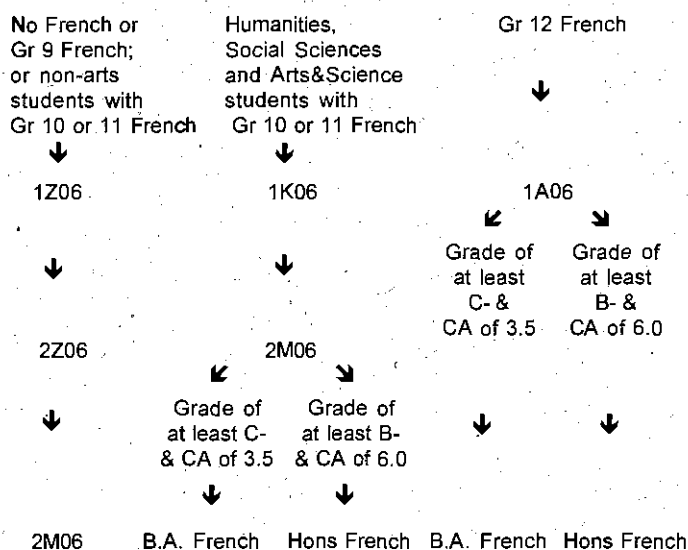
Stéphanie Posthumus/B.A. (Calvin College), M.A. (Queen's), Ph.D. (Western Ontario)

Jane A.C. Rush/B.A. (Toronto), M.A., Ph.D. (California-Los Angeles)

Muriel Walker/L.ès L., M.ès L. (Bordeaux), M.A., Ph.D. (Toronto)

Program Coordinator, Continuing Education

Hélène Gallier-Morgan, D.U.E.L., L.ès L., M.ès L., D.E.A. (Paris-Sorbonne)

ENTRY INTO LEVEL I COURSES AND FRENCH PROGRAMS

Courses If no prerequisite is listed, the course is open.

FRENCH 1A06 INTRODUCTION TO FRENCH STUDIES: ADVANCED LEVEL

Review of grammar, oral and written practice, and introduction to literary analysis.

Four hours (including one oral French tutorial); two terms

Prerequisite: Grade 12 French U (core, immersion or français). The Department reserves the right to place students in the course most appropriate to their abilities. Immersion students should register in this course.

Antirequisite: FRENCH 1K06, 1N06, 1Z06, 2M06

FRENCH 1K06 INTERMEDIATE FRENCH

Intensive review of basic structures and vocabulary to develop proficiency in oral and written French. The sequel to this course is FRENCH 2M06.

Five hours (including two tutorials); two terms

Prerequisite: Grade 10 or 11 French and registration in a program in the Faculty of Humanities or Social Sciences or the Arts & Science program. The Department reserves the right to place students in the course most appropriate to their abilities. Immersion students and Francophones may not register in this course

Antirequisite: FRENCH 1A06, 1N06, 1Z06, 2Z06, Grade 12 French U
Not open to students with credit or registration in FRENCH 2M06.

FRENCH 1Z06 BEGINNER'S INTENSIVE FRENCH I

An intensive course for developing basic skills in both written and spoken French. The normal sequel to this course is FRENCH 2Z06.

Five hours (including three computer labs); two terms

Prerequisite: This course is designed for students with Grade 9 French or less and for students with Grade 10 or 11 French who are registered in Faculties other than Humanities or Social Sciences or the Arts & Science program

Antirequisite: Grade 12 French U, FRENCH 1A06, 1K06. Not open to Francophones.

Students with prior knowledge of the language, as determined by a placement test, may be required to enrol in an appropriate alternative.

FRENCH 2B03 FRENCH LANGUAGE PRACTICE I

A course designed to improve competence in oral and written expression. Written proficiency includes the study of vocabulary, grammar and composition. The oral component will stress listening, comprehension and conversational proficiency.

Four hours (including one oral French tutorial); one term

Prerequisite: One of FRENCH 1A06, 1N06 or 2M06

Antirequisite: FRENCH 2A03, 4R06

FRENCH 2BB3 FRENCH LANGUAGE PRACTICE II

Continuation of FRENCH 2B03.

Four hours (including one oral French tutorial); one term.

Prerequisite: FRENCH 2B03 with a grade of at least C-

Antirequisite: FRENCH 2A03, 4R06

FRENCH 2E03 LITERATURE OF QUEBEC

Selected novels, plays, and poems representative of the main currents of Quebec Literature.

Three hours; one term

Prerequisite: One of FRENCH 1A06, 1N06 or 2M06

FRENCH 2F03 SURVEY OF FRENCH LITERATURE

Examination of a representative sampling of texts from various periods and genres.

Three hours; one term

Prerequisite: One of FRENCH 1A06, 1N06 or 2M06

FRENCH 2G03 FRENCH LANGUAGE PRACTICE: ELEMENTARY TRANSLATION

An introduction to translation techniques (French to English and English to French) and to the use of pertinent reference material.

Three hours; one term

Prerequisite: A grade of at least B- in FRENCH 1A06 or 2M06 or B+ in FRENCH 1N06

FRENCH 2H03 INTRODUCTION TO FRENCH LINGUISTICS I

A view of language as system (Saussure, Jakobson, Martinet). Descriptive vs. prescriptive approaches to language studies will be considered, with stress on the French-speaking world. Speech sounds (phonetics) and their systematic patterning (phonology), mainly with application to French, will also be examined.

Three hours; one term

Prerequisite: One of FRENCH 1A06, 1N06 or 2M06

FRENCH 2J03 19TH-CENTURY FRENCH LITERATURE I

Aspects of the development of 19th century French literature up to 1848.

Three hours; one term

Prerequisite: One of FRENCH 1A06, 1N06 or 2M06

FRENCH 2JJ3 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: One of FRENCH 1K06, 1N06 or 2Z06

Antirequisite: FRENCH 1A06

Not open to students with credit or registration in FRENCH 2B03.

FRENCH 2N03 INTRODUCTION TO THE CIVILIZATION OF FRANCE

The study of contemporary France through a selection of texts and audiovisual materials.

Three hours; one term

Prerequisite: One of FRENCH 1A06, 1N06 or 2M06

FRENCH 2Z06 BEGINNER'S INTENSIVE FRENCH II

A sequel to FRENCH 1Z06. Review of grammatical structures. Expansion of vocabulary. Conversation practice. Study of texts with class discussions. The normal sequel to this course is FRENCH 2M06. This course cannot be applied toward a Minor in French.

Five hours (including three computer labs); two terms

Prerequisite: FRENCH 1Z06

Antirequisite: FRENCH 1K06, 1N06

Not open to students with credit or registration in FRENCH 1A06, 1B06, 2B03, 2M06.

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 3AA3 THE MODERN FRENCH-CANADIAN NOVEL

Representative novels by contemporary authors with emphasis upon the relationship between technique and meaning.

Three hours; one term

Prerequisite: Six units of French above Level I, excluding FRENCH 2M06 and 2Z06

FRENCH 3C03 FRENCH LANGUAGE PRACTICE: WRITTEN

Advanced grammar and composition; introduction to stylistics.

Three hours; one term

Prerequisite: A grade of at least C- in FRENCH 2BB3

Antirequisite: FRENCH 4R06

FRENCH 3CC3 FRENCH LANGUAGE PRACTICE: INTERMEDIATE TRANSLATION

A course designed for the systematic translation of texts from English to French, including comparative stylistics, with special reference to problems in the translation of texts of a general nature.

Three hours; one term

Prerequisite: A grade of at least B- in each of FRENCH 2BB3 and 2G03; or registration in Level III or IV of the Honours Linguistic Cognitive Science program. Students not registered in a program in French should have communicative competence in French.

FRENCH 3F03 FRENCH LANGUAGE PRACTICE: FRENCH CIVILIZATION AND CULTURE

An introduction to contemporary French society through oral discussions and presentations.

Three hours; one term

Prerequisite: FRENCH 2BB3. Not available to Francophone students with native fluency.

FRENCH 3GG3 FRENCH LANGUAGE PRACTICE: TRANSLATION FROM FRENCH TO ENGLISH

The emphasis will be on inferencing strategies and stylistic comparisons between the two languages. Translation materials will be drawn from contemporary magazines such as L'Express, Le Nouvel Observateur and L'Actualité.

Three hours; one term

Prerequisite: FRENCH 2G03

FRENCH 3H03 INTRODUCTION TO FRENCH LINGUISTICS II

The study of word formation (morphology), sentence structure (syntax) and meaning (semantics). Contemporary French will be the primary data for all three components. Both functional and formal approaches will be examined.

Three hours; one term

Prerequisite: FRENCH 2B03. 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 3KK3**REVOLUTIONARY LITERATURE
BEFORE THE REVOLUTION:
VOLTAIRE, ROUSSEAU, AND BEAUMARCHAIS**

Texts representing the main aspects of Enlightenment thought and literature from *Candide* to the Revolution.

Three hours; one term

Prerequisite: Six units of French above Level I, excluding FRENCH 2M06 and 2Z06

FRENCH 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 3QQ3**17TH-CENTURY FRENCH LITERATURE II**

A consideration of selected themes as they appear in the works of major French writers of the 17th century.

Three hours; one term

Prerequisite: Six units of French above Level I, excluding FRENCH 2M06 and 2Z06

FRENCH 3SS3**STUDIES IN MEDIEVAL
LANGUAGE AND CIVILIZATION**

An exploration of the particular characteristics of Old French through a selection of Medieval texts representative of the civilization of the period (chivalry, courtly love, feasts and rituals).

Three hours; one term

Prerequisite: FRENCH 2BB3

Alternates with FRENCH 3A03.

FRENCH 3W03**20TH-CENTURY FRENCH LITERATURE I**

Aspects of the development of 20th-century literature to the end of the Second World War.

Three hours; one term

Prerequisite: Six units of French above Level I, excluding FRENCH 2M06 and 2Z06

Antirequisite: FRENCH 2W03

FRENCH 3WW3**20TH-CENTURY FRENCH LITERATURE II**

Aspects of the development of 20th-century literature since the Second World War.

Three hours; one term

Prerequisite: Six units of French above Level I, excluding FRENCH 2M06 and 2Z06

Antirequisite: FRENCH 2WW3, 4WW3

FRENCH 3Y03**21ST-CENTURY FRENCH LITERATURE**

Study of a selection of French literary texts published in the 21st century and an introduction to the problems associated with studying contemporary literature.

Three hours; one term

Prerequisite: Six units of French above Level I, excluding FRENCH 2M06 and 2Z06

FRENCH 3Z03**AFRICAN AND CARIBBEAN
FRENCH LITERATURES**

An introduction to French African and Caribbean literatures.

Three hours; one term

Prerequisite: One of FRENCH 1A06, 2M06 or registration in a French program

FRENCH 4A03**FRENCH LANGUAGE PRACTICE**

Advanced stylistics and composition.

Three hours; one term

Prerequisite: A grade of at least B- in FRENCH 3C03 and registration in an Honours program in French

FRENCH 4BB3**FRENCH LANGUAGE PRACTICE:
ADVANCED TRANSLATION**

Practice in the translation into French of texts of a specialized nature (e.g., administration, business, politics).

Three hours; one term

Prerequisite: FRENCH 3C03, 3CC3; or registration in Level III or IV of the Honours Linguistic Cognitive Science program. Students not registered in a program in French should have communicative competence in French.

FRENCH 4D03**SCIENCE AND LITERATURE**

Study of a selection of French literary texts that integrate scientific discourse as a way of questioning representations of the other, self, history and reality.

Seminar (two hours); one term

Prerequisite: Six units of French above Level I, excluding FRENCH 2M06 and 2Z06

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 and cognitive scientific factors.

Seminar (two hours); one term

Prerequisite: FRENCH 2H03 or registration in Level III or IV of the Honours Linguistic Cognitive Science program. Students not registered in a program in French should have communicative competence in French.

FRENCH 4F03**TOPICS IN 18TH-CENTURY
FRENCH LITERATURE**

Previous topics include: Voltaire, Theatre and Performance. Consult the Department concerning topic to be offered.

Seminar (two hours); one term

Prerequisite: 12 units of French above Level I, excluding FRENCH 2M06 and 2Z06

FRENCH 4F03 may be repeated, if on a different topic, to a total of six units.

FRENCH 4H03**TOPICS IN LINGUISTICS**

Previous topics include: Lexicology, Pragmatics, Sociolinguistics. Consult the Department concerning topic to be offered.

Seminar (two hours); one term

Prerequisite: FRENCH 2H03 or registration in Level III or IV of the Honours Linguistic Cognitive Science program. Students not registered in a program in French should have communicative competence in French.

FRENCH 4H03 may be repeated, if on a different topic, to a total of six units.

FRENCH 4I03**TOPICS IN FRENCH POETRY**

Previous topics include: Poets and Humour, Love Poetry, Women Poets, Poètes maudits. Consult the Department concerning topic to be offered.

Seminar (two hours); one term

Prerequisite: 12 units of French above Level I, excluding FRENCH 2M06 and 2Z06

FRENCH 4I03 may be repeated, if on a different topic, to a total of six units.

FRENCH 4II3**FRENCH SOCIOLINGUISTICS**

The study of linguistic variations within French-speaking communities with special emphasis on sociolinguistic issues arising in multilingual societies (Africa, America, Europe...).

Three lectures; one term

Prerequisite: FRENCH 2H03

FRENCH 4J03**FRENCH LITERATURE OF THE RENAISSANCE**

Characteristic themes of Renaissance humanism as they appear in the works of Rabelais, Montaigne, and selected poets.

Three hours; one term

Prerequisite: 12 units of French above Level I, excluding FRENCH 2M06 and 2Z06

FRENCH 4LL3**TOPICS IN FRENCH AFRICAN AND
CARIBBEAN FRENCH LITERATURES**

Previous topics include: Contemporary Caribbean Writers, Literature of Senegal. Consult the Department concerning topic to be offered.

Seminar (two hours); one term

Prerequisite: 12 units of French above Level I, excluding FRENCH 2M06 and 2Z06

FRENCH 4LL3 may be repeated, if on a different topic, to a total of six units.

FRENCH 4MM3**SEX, VIOLENCE AND ELEGANCE:
THE 18TH-CENTURY NOVEL**

A study of the genesis and themes of representative 18th-century novels.

Seminar (two hours); one term

Prerequisite: 12 units of French above Level I, excluding FRENCH 2M06 and 2Z06

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 2Z06

FRENCH 4N03 may be repeated, if on a different topic, to a total of six units.

FRENCH 4R06**FRENCH READING COURSE
(TAUGHT IN ENGLISH)**

Students intending to enter graduate programs will be provided with reading skills and techniques which will enable them to comprehend academic texts. Reading materials are selected to practice textual analysis, study grammatical usage and aid in vocabulary development. Credit obtained in this course may be accepted in fulfilment of the second language reading requirement for graduate programs.

Four hours, four days per week; one term

Offered during the first term of summer session only.

Prerequisite: FRENCH 1Z06 and registration in any Level IV Honours Program or permission of the French Department
Antirequisite: FRENCH 2B03, 2BB3, 3C03

Not open to students registered in a program in French.

FRENCH 4S03 MEDIEVAL LITERATURE

A study of selected texts of Medieval French Literature: songs and poetry of the troubadours and trouvères, Arthurian romance, comic and satiric narratives. Modern French translations will be used.

Three hours; one term

Prerequisite: FRENCH 2BB3

FRENCH 4T03 INDEPENDENT STUDY

The student will prepare under the supervision of a faculty member a research paper involving independent research in an area of study in which the student has already demonstrated a high level of basic knowledge.

Prerequisite: Registration in Level IV of an Honours program in French and permission of the FRENCH 4T03 Committee

FRENCH 4U03 TOPICS IN FRENCH-CANADIAN LITERATURE

Previous topics include: Fiction and Postmodern Cultural Theories, Women Writers of Quebec. Consult the Department concerning topic to be offered.

Seminar (two hours); one term

Prerequisite: 12 units of French above Level I, excluding FRENCH 2M06 and 2Z06

FRENCH 4U03 may be repeated, if on a different topic, to a total of six units.

FRENCH 4V03 CROSS-PERIOD THEMES

Topics may include: Erotic Literature, Literary Influences Underlying Psychoanalysis, Varying Practices in Literary Translation Across the Centuries. Consult the Department concerning topic to be offered.

Seminar (two hours); one term

Prerequisite: 12 units of French above Level I, excluding FRENCH 2M06 and 2Z06

FRENCH 4V03 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 2Z06; or registration in Level III or IV of the Honours Linguistic Cognitive Science program. Students not registered in a program in French should have communicative competence in French.

FRENCH 4Y03 TOPICS IN 20TH-CENTURY FRENCH LITERATURE

Previous topics include: Women's Writing, The Essay, Gay and Lesbian Novel in France. Consult the Department concerning topic to be offered.

Seminar (two hours); one term

Prerequisite: 12 units of French above Level I, excluding FRENCH 2M06 and 2Z06

FRENCH 4Y03 may be repeated, if on a different topic, to a total of six units.

GENERAL TECHNOLOGY

(SEE TECHNOLOGY, GENERAL TECHNOLOGY)

GEOGRAPHY AND EARTH SCIENCES

WEB ADDRESS: <http://www.science.mcmaster.ca/geo/>

Burke Science Building, Room 235

Ext. 24535

Faculty as of January 15, 2007

Director

John J. Drake

Associate Director

Richard S. Harris

Distinguished University Professor

John D. Eyles/B.A., M.Sc. (L.S.E.), Ph.D. (London)

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)

Susan J. Elliott/M.A. Ph.D. (McMaster)

Carolyn H. Eyles/B.Sc. (East Anglia), M.Sc., Ph.D. (Toronto)

Frederick L. Hall/A.B. (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 Liaw/B.S. (National Taiwan), M.A. (Kansas State), Ph.D. (Clark)

William A. Morris/B.Sc. (Leeds), Ph.D. (Open University)

Bruce Newbold/B.A., Ph.D. (McMaster)

W. Jack Rink/B.Sc., Ph.D. (Florida State)

Ming-ko Woo/M.A. (Hong Kong), Ph.D. (British Columbia)

Associate Professors

Altat Arain/B.E. (Pakistan), M.S., Ph.D. (Arizona)

Joe Boyce/B.Sc. (McMaster), M.Sc., Ph.D. (Toronto)

Paulin Coulibaly/B.A.Sc., M.A.Sc. (Nice), Ph.D. (Laval)

Darren Gröcke/B.Sc. (Adelaide), M.Sc. (Monash), D.Phil. (Oxford)

Eduard Reinhardt/B.A., Ph.D. (Carleton)

Darren Scott/B.A. (St. Mary's), M.A. (Western Ontario), Ph.D. (McMaster)

James Smith/B.Sc., M.Sc. (Guelph), Ph.D. (Waterloo)

J. Michael Waddington/M.Sc., Ph.D. (York)

Lesley A. Warren/B.Sc., Ph.D. (Toronto)

Allison Williams/M.A. (Toronto), Ph.D. (York)

Robert D. Wilton/B.A. (Hull), M.A., Ph.D. (Southern California)

Assistant Professors

Antonio Paez/B.Sc. (Mexico), M.Sc., Ph.D. (Tohoku)

Greg Slater/B.Sc., M.Sc., Ph.D. (Toronto)/Canada Research Chair

Associate Members

Gavin Andrews/(Health, Aging and Society) B.A. (Wales), Ph.D. (Nottingham)

Sarah Dickson/(Civil Engineering) B.A.Sc., Ph.D. (Waterloo), P.Eng.

Lynne Lohfeld/(Clinical Epidemiology & Biostatistics) B.A. (William

Smith), M.S. (Wisconsin), Ph.D. (Connecticut)

Susan Vajoczki/(Social Sciences) M.Sc. (McMaster)

John C. Weaver/(History) B.A. (Queen's), M.A., Ph.D. (Duke)

Lecturer

Walter Peace/M.A., Ph.D. (McMaster)

School Notes:

1. The Honours Earth and Environmental Sciences programs allow students to select a specialist stream in geochemistry (formerly biogeoscience), geosciences or hydrosciences at the end of Level II. Specialist streams aim to fulfill the academic requirements for professional registration of Geoscientists in Ontario. Students should seek academic advice from the School during March counselling in Level II to ensure that their course choices are appropriate.
2. Course codes including the letter H indicate a non-science course.
3. Students are advised that not all courses will be offered in every year.

Courses

If no prerequisite is listed, the course is open.

GEO 1HS3

GEOGRAPHY OF THE HUMAN ENVIRONMENT

Introduction to human-environment relations and spatial analysis with special emphasis on urban, social, health and cultural environments.

Two lectures, one lab (one hour); first term and second term

GEO 1HU3

URBAN ECONOMIC GEOGRAPHY

Basic principles in spatial analysis and location theory applied to the changing urban, economic and environmental patterns of development and urbanization at the local, national and international scale.

Two lectures, one lab (one hour); second term

GEO 2A03

INTRODUCTION TO ENVIRONMENTAL ISSUES

An introduction to issues, perspectives and models in environmental studies at local, regional, national and international scales.

Two lectures, one lab (two hours); one term

Prerequisite: One of 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 2GG3**NATURAL DISASTERS**

A study of natural processes including plate tectonics, earthquakes, volcanoes, landslides, river erosion and climate change and their impacts on human populations.

Three lectures; one term

Prerequisite: Registration in Level II or above

GEO 2HA3**LOCATIONAL ANALYSIS**

Spatial location theory and spatial analysis methods as related to the siting of resource, manufacturing, and service activities.

Two lectures, one lab (two hours); one term

Prerequisite: GEO 1HS3 or 1HU3

GEO 2HB3**URBAN ECONOMIC GEOGRAPHY**

Economic-geographical analysis applied to urban problems at different scales of aggregation. Topics include urbanization, urban spatial structure, major urban externalities and urban size.

Two lectures; one lab (two hours); one term

Prerequisite: GEO 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

Prerequisite: Registration in Level II or above

GEO 2HD3**URBAN HISTORICAL GEOGRAPHY**

The historical development of cities with particular reference to old world origins, and focusing on North America since 1850.

Two lectures, one lab (two hours); one term

GEO 2HG3**POPULATION, SOCIETIES, AGING AND THE ENVIRONMENT**

Differential growth of human populations and their changing age and sex structures with an emphasis on birth and death processes. The connections between population structures and processes and various aspects of environments and societies including aging, are emphasized.

Three lectures; one term

Prerequisite: Registration in Level II or above

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 (one hour); one term

Prerequisite: GEO 1HS3 or 1HU3

Antirequisite: ANTHROP 2Z03, CMST 2A03, GERONTOL 2C03, HEALTHST 2B03, SOCIOL 2Z03

GEO 2HU3**THE UNITED STATES OF AMERICA**

The physical and economic geography of the United States.

Three lectures; one term

Prerequisite: Registration in Level II or above

GEO 2HY3**CITIES IN A CHANGING WORLD**

Key themes, perspectives and concepts in urban social geography are examined. Emphasis is placed on the relationship between processes of economic, political and cultural change and people's everyday lives in urban settlements.

Two lectures, one lab (one hour); one term

Prerequisite: GEO 1HS3 or 1HU3

GEO 2I03**GIS AND DIGITAL CARTOGRAPHY**

An introduction to the principles and techniques underlying the use of a GIS (Geographic Information Systems) for storing, managing, analyzing and visualizing "geographic" data. Cartographic principles are also introduced emphasizing the production of effective thematic maps using a GIS.

Two lectures, one lab (two hours); one term

Prerequisite: One of MATH 1AA3, 1B03, 1D03, SOC SCI 2J03, STATS 1CC3

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 (three hours); one term

Prerequisite: ENVIR SC 1G03

GEO 2MM3**GEMSTONES: ORIGINS AND CHARACTERISTICS**

An examination of gemstones focusing on their geologic origin, mineralogy, colour, chemistry, economic value and historical significance.

Three lectures; one term

Prerequisite: Registration in Level II or above

GEO 2Q03**INTRODUCTION TO ENVIRONMENTAL GEOCHEMISTRY**

Chemical principles applied to the understanding of processes in aquatic and environmental systems.

Two lectures, one lab (three hours); one term

Prerequisite: CHEM 1A03

GEO 2W03**PHYSICAL HYDROLOGY: SURFACE**

Hydrological processes including precipitation, snowmelt, slope runoff, streamflow and hydrological data analysis.

Two lectures, one lab (two hours); one term

Prerequisite: One of MATH 1AA3, 1B03, 1D03, SOC SCI 2J03, STATS 1CC3; and one of ENVIR SC 1A03, 1B03, 1G03

GEO 2WW3**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

Prerequisite: Registration in Level II or above

GEO 3A03**ENVIRONMENTAL POLICY AND PLANNING**

A theoretical and practical exploration of environmental policy, planning and decision-making, as well as the relationships between science, society, and policy design.

Two lectures, one lab (two hours); one term

Prerequisite: GEO 2A03; or registration in an Honours Biology, an Engineering and Society program or an Honours program in the School of Geography and Earth Sciences

GEO 3AA3**GEOSCIENCE EXPLORERS AND ADVENTURERS**

An examination of the discoveries made by geoscience explorers of modern times including those made on the moon and mars, in the deep and shallow seas, and in the landscapes inhabited by the earliest life forms, dinosaurs and the first humans.

Three lectures; one term

Prerequisite: Registration in Level III or above

GEO 3CC3**EARTH'S CHANGING CLIMATE**

The earth's climatic history including natural causes of past climate change and human influences on climate will be explored.

Three lectures; one term

Prerequisite: Registration in Level III or above

GEO 3DD3**GEOARCHAEOLOGY OF THE UNDERWATER REALM**

Methods in underwater exploration; geoarchaeological record of human interaction with the marine environment and the effects of climate and sea level changes.

Three lectures; one term

Prerequisite: Registration in Level III or above

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 3FE3 FIELD CAMP

A field camp to introduce students to field equipment and methodologies used by earth and environmental scientists. Most of this course occurs outside the regular academic term, usually the two weeks preceding the start of term in September; details and applications are available in March. Students enrolling in this course must pay both the incidental fees as prescribed by the School and the regular tuition fees.

Prerequisite: GEO 2E03 and registration in Level III or above of an Honours program in the School of Geography and Earth Sciences

GEO 3HD3 TRANSPORTATION GEOGRAPHY

Principles and techniques applied to understanding, predicting and optimizing movement for transportation systems at various geographical scales. Problems arising from movement are also discussed.

Two lectures, one lab (two hours); one term

Prerequisite: One of ECON 1A06, 1B03, GEO 1HS3, 1HU3

GEO 3HE3 ENVIRONMENTAL AND NATURAL RESOURCE MANAGEMENT

An introduction to the methods and tools of resource management and economics, focusing on the development of resource systems and the environmental implications.

Three lectures; one term

Prerequisite: GEO 1HU3

GEO 3HF3 FIELD STUDY IN HUMAN GEOGRAPHY

Introduction to field research in Human Geography, usually in the Hamilton area.

Two lectures (two hours); one term

Prerequisite: GEO 2HR3 and registration in Level III or above of an Honours program in the School of Geography and Earth Sciences

GEO 3HG3 POPULATION DISTRIBUTION AND MIGRATION

Introduction of important theories, models and facts in the fields of population distribution and internal and international migration processes.

One lecture (three hours); one term

Prerequisite: GEO 1HS3 or 1HU3; and one of COMMERCE 2QA3, HTH SCI 1F03, 2A03, KINESIOL 3C03, MATH 1AA3, 1B03, 1D03, SOC SCI 2J03, STATS 1A03, 1CC3; and registration in Level III or above

GEO 3HH3 GEOGRAPHY OF HEALTH AND HEALTH CARE

An understanding of traditions in health geography and an exploration of the determinants of health including the social environment, the physical environment and health care services.

Three lectures; one term

Prerequisite: GEO 1HS3 or 1HU3

GEO 3HJ3 GEOGRAPHY OF JAPAN

Human and physical geography of Japan with emphasis on historical, international, demographic and economic aspects.

One lecture (three hours); one term

Prerequisite: Registration in Level III or above

GEO 3HR3 GEOGRAPHY OF A SELECTED WORLD REGION

The study of an area outside of North America which will include topics in physical and human geography.

Three lectures; one term

GEO 3HR3 may be repeated, if on a different topic, with permission of the School of Geography and Earth Sciences.

GEO 3HT3 GEOGRAPHY OF PLANNING

A review of historical and contemporary approaches to city and regional planning problems.

One lecture (three hours); one term

Prerequisite: One of GEO 2HA3, 2HB3, 2HY3

GEO 3HU3 URBAN ISSUES IN THEORY AND PRACTICE

Critical evaluation of the role that volunteerism and the non-profit sector play in responding to social and environmental problems facing contemporary urban society. Students will undertake a ten-week (four hours per week) volunteer placement. Details and application for the course are available in October.

One lecture (two hours), week placement commitment; one term

Prerequisite: Registration in Level III of an Honours B.A. program in the School of Geography and Earth Sciences

GEO 3HZ3 URBAN SOCIAL GEOGRAPHY

The social geography of North American cities. Topics include commuting, segregation, inner-city gentrification, suburban development.

Lectures and seminars (two hours, twice weekly); one term

Prerequisite: GEO 2HD3. GEO 2HR3 and 2HY3 are recommended.

GEO 3I03 APPLIED GIS (GEOGRAPHIC INFORMATION SYSTEMS)

Advanced principles and techniques in GIS applied to real-world problems. Two lectures, one lab (two hours); one term

Prerequisite: A minimum grade of C+ in GEO 2I03

GEO 3IN3 INTERNSHIP IN EARTH AND ENVIRONMENTAL SCIENCES

The integration of academic learning with an employment or a volunteer experience, providing students the opportunity to explore careers and develop linkages between classroom knowledge and professional practice. Students are responsible to arrange a suitable internship and agreement of the supervisor.

This course is evaluated on a Pass/Fail basis.

Normally, students complete 130 hours of academic work through the duration of the employment or volunteer experience.

Prerequisite: Registration in Level III or above of an Honours Earth and Environmental Sciences program and permission of the internship coordinator. Completion of SCIENCE 2C00 is strongly recommended.

Prerequisite (Beginning 2008-2009): SCIENCE 2C00; and registration in Level III or above of an Honours Earth and Environmental Sciences program; and permission of the internship coordinator

Note: Students participating in this course must be authorized to work in Canada (International students must provide proof of work authorization permit). Students intending to enrol in this course must submit an application to the internship coordinator two months prior to registration. Application forms are available from the School of Geography and Earth Sciences main office.

GEO 3J03 CLIMATE CHANGE AND ECOSYSTEM IMPACTS

Past, present and future climate change is examined in terms of the underlying physical and global biogeochemical processes. The Kyoto Protocol and impacts of climate change on ecosystems are examined.

Two lectures, one lab (two hours); one term

Prerequisite: One of BIOLOGY 2F03, GEO 2B03, 2C03

Antirequisite: GEO 3B03

GEO 3K03 PETROLOGY

Introduction to igneous and metamorphic petrology, including thin section examination of rock suites, use of phase diagrams in petrology, and discussion of petrogenesis.

Two lectures, one lab (three hours); one term

Prerequisite: GEO 2K03

GEO 3L03 PHYSICAL AND CHEMICAL PROCESSES IN FRESHWATER ENVIRONMENTS

A multidisciplinary course emphasizing the interactions of chemical, physical, geological and biological factors in controlling the chemical distribution, composition and structure of freshwater systems. A mandatory weekend field trip will be held in September. Students enrolling in this course must pay both the incidental fees as prescribed by the School and regular tuition fees.

Two lectures, one lab (four hours), one term

Prerequisite: GEO 2Q03; and one of GEO 2E03, 2G03, 2W03; and permission of the School of Geography and Earth Sciences. Application must be received by March 31st of the academic year prior to registration.

Antirequisite: GEO 4L03

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

GEO 3O03 ORGANIC CONTAMINANTS IN THE ENVIRONMENT

Primary factors controlling the distribution, transport and fate of organic compounds in the environment. Topics include sources, partitioning processes (sorption, volatilization, dissolution), transport, degradation (biotic, abiotic), and analytical techniques.

Two lectures, one lab (three hours), one term

Prerequisite: GEO 2Q03 or registration in an Honours Chemistry program

GEO 3P03 ENVIRONMENTAL PALEONTOLOGY

Paleontology as a paleoenvironmental indicator; important fossil groups, paleoecology and taphonomy will be emphasized.

Two lectures, one lab (three hours); one term

Prerequisite: GEO 2E03

GEO 3Q03 ENVIRONMENTAL RECONSTRUCTION USING STABLE ISOTOPES

Principles of stable isotope geochemistry and its application to modern and fossil environmental reconstructions. Topics include isotope stratigraphy and its application to palaeoclimatology, palaeoceanography and palaeobiology.

Two lectures, one lab (three hours); one term

Prerequisite: GEO 2E03, 2Q03

GEO 3R03 RESEARCH DESIGN AND DISSEMINATION

Description of some of the changed and changing paradigms in the discipline; formulation of a research proposal; communication of research results.

Two lectures, one lab (two hours); one term

Prerequisite: Registration in Level III or above of an Honours program in the School of Geography and Earth Sciences

GEO 3RR3 CANADIAN NATURAL RESOURCES

An introduction to the natural resources from the different regions of Canada, their environmental and societal importance, and the issues related to them.

Three lectures; one term

Prerequisite: Registration in Level III or above

GEO 3S03 GEOSTATISTICS

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 1CC3

GEO 3U03 ENVIRONMENTAL SYSTEMS

Use of simple numerical models applied to solving environmental problems related to anthropogenic perturbations. Introduction to STELLA numerical simulator, statement of the problem and "what if" scenarios.

One lecture (three hours); one term

Prerequisite: MATH 1A03, 1D03; and registration in B.Sc. Geoscience, or any Level III Honours program in the Faculties of Science and Engineering
Antirequisite: CIV ENG 2J04

GEO 3V03 ENVIRONMENTAL GEOPHYSICS

Introduction to principles and applications of geophysics in groundwater and environmental investigations. Practical demonstrations in magnetics, gravity, shallow seismic, radar, borehole logging, surface EM and electrical methods.

Two lectures, one lab (three hours); one term

Prerequisite: ENVIR SC 1G03, PHYSICS 1B03

GEO 3W03 PHYSICAL HYDROGEOLOGY

Mechanisms and processes of water movement in the subsurface including the saturated zone (groundwater) and the unsaturated zone (soil water).

Two lectures, one lab (three hours); one term

Prerequisite: One of GEO 2B03, 2G03, 2W03; and one of MATH 1A03, 1B03, 1D03, 1K03, 1M03, 1N03

GEO 3Y03 REMOTE SENSING

Aerial photography. Passive and active satellite direction systems. Image processing and interpretation procedures. Application to resource exploration and environmental management.

Two lectures, one lab (two hours); one term

Prerequisite: GEO 2I03

GEO 3Z03 STRUCTURAL GEOLOGY

Introduction to mapping and geometric description of geologic structures and analysis of stress and strain in the subsurface.

Two lectures, one lab (three hours); one term

Prerequisite: GEO 2E03

GEO 4A03 ENVIRONMENTAL ASSESSMENT

Technical and policy issues involved in the production and the appraisal of environmental impact assessments.

Two lectures, one lab; one term

Prerequisite: GEO 2A03; or registration in Honours Biology, a Civil Engineering program, an Engineering and Society program or an Honours program in the School of Geography and Earth Sciences

GEO 4B03 WATERSHED ECOHYDROLOGY

A course that emphasizes a watershed ecosystems approach to interactions of hydrological, ecological and biogeochemical processes in the study of the natural ecohydrological function and response to disturbance of stream, riparian and wetland ecosystems. A mandatory field trip will occur.

One lecture (two hours), one lab (two hours); one term

Prerequisite: One of GEO 2W03, 3B03, 3J03

GEO 4C03 ADVANCED PHYSICAL CLIMATOLOGY

This course develops energy and mass exchange processes in the near surface layer, the lower atmosphere and at the earth-atmosphere interface. Sensitivities of these processes to environmental change and feedback mechanisms are examined. Seminars and individual presentations are emphasized.

One lecture (two hours), one lab (two hours); one term

Prerequisite: GEO 2C03 or 2W03

GEO 4CC3 REVIEW PAPER

The student will conduct a comprehensive review of a selected topic. The review paper is due before the final examination period.

One seminar (two hours); first term

Prerequisite: GEO 3R03 and registration in Level IV of an Honours program in the School of Geography and Earth Sciences

Antirequisite: GEO 4R06

GEO 4D03 ANALYSIS OF TRANSPORTATION SYSTEM

An introduction to the use of models in transportation planning. Topics include data issues, the four-stage approach to modelling transportation systems, discrete choice models and contextual factors such as land use.

Three lectures, one lab (two hours); one term

Prerequisite: GEO 3HD3

Cross-list: CIV ENG 4H03

GEO 4E03 COASTAL ENVIRONMENTS

Coastal systems and their response to sea level change with an emphasis on the Holocene. A mandatory local field trip to collect data followed by laboratory analysis will be included.

Three lectures, one lab (three hours); one term

Prerequisite: GEO 3E03

GEO 4FE3 FIELD COURSE

Detailed study of a particular aspect of physical geography, earth sciences or environmental science in the field. Held immediately after the end of Level III or prior to Fall registration in Level IV; report to be submitted before the end of first term. Various topics and locations: details announced in March. Students enrolling in this course must pay both the incidental fees, as prescribed by the School, and the regular tuition fees.

Prerequisite: Registration in Level III or above of an Honours B.Sc. program in the School of Geography and Earth Sciences

GEO 4FF3 TOPICS OF FIELD RESEARCH

Selected topics in field research in the Earth Sciences. Topics may vary from year to year, and the timing of the course will depend on the offerings. Details will be posted in the School. Students enrolling in this course must pay the incidental fees, as prescribed by the School, and the regular tuition fees.

Prerequisite: Registration in Level III or above of an Honours B.Sc. program and permission of the instructor

GEO 4FF3 may be repeated, if on a different topic, with the permission of the School of Geography and Earth Sciences.

GEO 4G03 GLACIAL SEDIMENTS AND ENVIRONMENTS

The development and movement of glaciers, glacial depositional processes and sedimentary successions in terrestrial, lacustrine and marine environments.

Two lectures, one lab (two hours); one term

Prerequisite: GEO 2E03 or 2G03

Antirequisite: GEO 3G03

GEO 4HF3 FIELD RESEARCH IN THE HUMAN ENVIRONMENT

Selected topics in field research in human geography and environmental studies. Topics may vary from year to year, and the timing of the course will depend on the offerings. Students enrolling in this course must pay the incidental fees, as prescribed by the School, and the regular tuition fees.

Prerequisite: Registration in Level III or above of an Honours program in the School of Geography and Earth Sciences and permission of the instructor

GEO 4HH3 ENVIRONMENT AND HEALTH

Models and methods for research and policy on environment and health. One lecture/seminar (three hours); one term

Prerequisite: One of GEO 3A03, 3HH3 or permission of the instructor

Cross-list: HEALTHST 4E03

GEO 4HT3 URBAN PLACES AND URBAN DREAMS

The ideas of planning visionaries and the designs of city planners will be explored as responses to forces shaping cities and regions.

Three lectures; one term

Prerequisite: One of GEO 2HD3, 2HY3, 3HT3

GEO 4HY3 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 4HZ3**URBAN HOUSING**

The geography of housing, including the effects of land development, construction, municipal planning and public policy on the urban landscape of housing and homelessness.

One lecture/seminar; one term

Prerequisite: GEO 3HZ3

GEO 4I03**ADVANCED GIS****(GEOGRAPHIC INFORMATION SYSTEMS)**

Advanced methods in GIS using ARC/INFO. Topics will include raster based analysis, working with linear features, surface modelling and AML programming.

Three lectures, one lab (two hours); one term

Prerequisite: GEO 3I03

GEO 4IN3**THESIS INTERNSHIP**

The integration of academic learning allowing the student to explore careers and the development of linkages between classroom knowledge and professional practice. Students are responsible to arrange a suitable internship and agreement of the supervisor. Normally, completed prior to GEO 4R06.

This course is evaluated on a Pass/Fail basis.

Normally, students complete 130 hours of academic work through the duration of the employment or volunteer experience.

Prerequisite: Registration in Level IV or above of an Honours program in the School of Geography and Earth Sciences; and permission of the internship coordinator. Completion of SCIENCE 2C00 is strongly recommended.

Prerequisite (Beginning 2008-2009): SCIENCE 2C00; and registration in Level III or above of an Honours Earth and Environmental Sciences program; and permission of the internship coordinator

Note: Students participating in this course must be authorized to work in Canada (International students must provide proof of work authorization permit). Students intending to enrol in this course must submit an application to the internship coordinator by March 1 of the academic year prior to registration. Application forms are available from the School of Geography and Earth Sciences main office.

GEO 4J03**BASIN ANALYSIS**

Focus on the evolution of sedimentary basins in a global context, based upon their structural and stratigraphic styles. Factors that affect basin evolution such as sea-level change, sediment supply and climate will be discussed. A review of the principles of sequence stratigraphy and its application to geologists, mining and petroleum exploration will be explored.

Two lectures, one lab (three hours); one term

Prerequisite: GEO 2E03, 3E03, 3Z03

GEO 4Q03**ENVIRONMENTAL ISOTOPE GEOCHEMISTRY**

Application of isotopic analysis to answer current questions in earth sciences, geochemistry, hydrogeology and microbiology. Topics include analytical techniques, principles of isotopic fractionation and applications of light and transition metal isotopes to environmental systems.

Two lectures, one lab (three hours); one term

Prerequisite: GEO 3Q03

GEO 4Q03**SEDIMENTARY GEOCHRONOLOGY**

Geological age determination techniques for the near-surface sedimentary record focusing on the last five million years of earth history. Geochemical perspectives on the fundamentals of radioactive decay and radiation effects in datable minerals.

Two lectures, one tutorial; one term

Prerequisite: GEO 3Q03

GEO 4R06**SENIOR THESIS**

Students will select research topics and prepare a thesis either individually or in teams.

One seminar (two hours); two terms

Prerequisite: Registration in Level IV or above in an Honours program in the School of Geography and Earth Sciences; and a SA in the previous session of 8.5 or higher; and permission of the instructor. Students intending to enrol in this course must submit an application to the instructor by March 1 of the academic year prior to registration. Application forms are available from the School of Geography and Earth Sciences main office after February 1. Students will be informed of acceptance of their application on March 15 subject to fulfillment of the SA requirement.

Antirequisite: GEO 4CC3
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

GEO 4S03**SPATIAL STATISTICS**

This course explores concepts and methods in visualisation, exploration and modelling of point pattern, spatially continuous data and 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.

Two lectures, one lab (two hours); one term

Prerequisite: GEO 2E03 and credit or registration in GEO 3K03

GEO 4W03**HYDROLOGIC MODELLING**

Principles of numerical modelling and examination of selected hydrologic models including deterministic, conceptual and statistical models.

Two lectures, one lab (two hours); one term

Prerequisite: GEO 2W03 or 3W03

GEO 4WW3**CONTAMINANT HYDROGEOLOGY**

Physical and chemical aspects of the fate and transport of contaminants in soils and groundwater, including multiphase flow.

Two lectures, one lab (two hours); one term

Prerequisite: Credit or registration in GEO 3W03

GEO 4Z03**EXPLORATION GEOPHYSICS**

Principles of subsurface exploration using seismic, magnetic and borehole geophysical methods. Applications in geological research and oil and gas exploration.

Two lectures, one lab (two hours); one term

Prerequisite: GEO 2E03, 3V03

Antirequisite: GEO 4ZZ3

GERMAN

(SEE LINGUISTICS AND LANGUAGES, GERMAN)

GERONTOLOGY

(SEE HEALTH, AGING AND SOCIETY)

GREEK

(SEE CLASSICS, GREEK)

HEALTH, AGING AND SOCIETY

WEB ADDRESS: <http://www.socsci.mcmaster.ca/has-dept>

Kenneth Taylor Hall, Room 226

Ext. 24449

Faculty as of January 15, 2007**Chair**

Gavin Andrews

Professors

Gavin Andrews/B.A. (Wales), Ph.D. (Nottingham)

Margaret A. Denton/(Sociology) B.A., M.A., Ph.D. (McMaster)

Associate Professors

Ivy Bourgeault/(Sociology) B.Sc. (Alberta) M.Sc., Ph.D. (Toronto)

Anju Joshi/B.A., M.A. (Dalhousie)

Fiona Miller/B.I.S. (Waterloo), M.A. (Victoria), Ph.D. (York)

Adjunct Associate Professors

Sherry Dupuis/(Waterloo) B.Mus. (Queen's), M.A. (Waterloo), Ph.D. (Guelph)

Catherine Ward-Griffin/(Western Ontario) B.Sc.N., M.Sc.N. (Western Ontario), Ph.D. (Toronto)

Assistant Professors

Lori Campbell/(Sociology) B.A., M.A. (Western Ontario), Ph.D. (Guelph)

Alina Gildiner/(Political Science) B.Sc., M.Sc., Ph.D. (Toronto)

James Gillett/(Sociology) B.A. (Calgary), M.A., Ph.D. (McMaster)

Michel Grignon/(Economics) M.A. (ENSAE), Ph.D. (EHESS)

Martin Hering/(Political Science) B.A., M.A. (Philipps-Universität Marburg, Germany), Ph.D. (Johns Hopkins)

Celia Rothenberg/(*Religious Studies*) B.A. (Wellesley), M.A. (Oxford), Ph.D. (Toronto)

Chris Sinding/(*Social Work*) B.A. (Western Ontario), M.A. (McMaster), Ph.D. (Toronto)

Associate Members

Jane Aronson/(*Social Work*) B.Sc. (New University of Ulster), B.S.W., M.S.W. (McGill), Ph.D. (Toronto)

Alan G. Bishop/(*English and Cultural Studies*) B.A. (Rhodes, S. Africa), M.A., D.Phil. (Oxford)

Roy Cain/(*Social Work*) B.S.W., M.S.W., Ph.D. (McGill)

David Clark/(*English and Cultural Studies*) B.A., M.A., Ph.D. (Western Ontario)

Laurie C. Doering/(*Pathology and Molecular Medicine*) B.Sc. (Queen's), M.Sc., Ph.D. (Saskatchewan)

James W. Gladstone/(*Social Work*) B.A. (McGill), M.S.W. (British Columbia), Ph.D. (Toronto)

Jeremiah E. Hurley/(*Economics*) B.A. (John Carroll), M.A., Ph.D. (Wisconsin-Madison)

Carrie McAiney/(*Psychiatry and Behavioural Neurosciences*) B.A., M.A., Ph.D. (Waterloo)

Colin McMullan/(*Geography and Earth Sciences*) B.A. (Brock), Ph.D. (McMaster)

Christina Moffat/(*Anthropology*) B.Sc. (Toronto), B.A., Ph.D. (McMaster)

Jenny Ploeg/(*Nursing*) B.Sc.N., M.Sc.N. (Western Ontario), Ph.D. (Toronto), R.N.

Ellen B. Ryan/(*Psychiatry*), B.A., Ph.D. (McMaster)

Byron G. Spencer/(*Economics*) B.A. (Queen's), Ph.D. (Rice)

David Wright/(*History/Psychiatry*) B.A., M.A. (McGill), D.Phil. (Oxford)

GERONTOLOGY ...

Notes:

1. Not all Gerontology courses may be offered every year. Students are advised to contact the Department of Health, Aging and Society after May 1 to determine which courses will be offered in the following academic year.
2. Gerontology students are strongly recommended to complete GERONTOL 2E03 prior to GERONTOL 3B03.
3. GERONTOL 2B03, 2F03, 2HG3, 3F03, 3H03, 3J03, 3K03, 3L03, 3M03, 3N03 and 3S03 are available for students enrolled in a non-Gerontology program. Space for non-Gerontology students is limited and priority sequence for registration will be:
 - a) students completing the Minor in Gerontology
 - b) students registered in a Health Studies program
 - c) all other students.
4. Students completing a Minor in Gerontology must contact the Department of Health, Aging and Society to request permission for their Fall/Winter Gerontology courses by May 31.

Courses If no prerequisite is listed, the course is open.

GERONTOL 1A03 AGING AND SOCIETY

Examines issues in aging from a multidisciplinary perspective including such topics as: myths and stereotypes of aging, social ties in later life and the aging of the Canadian population. Provides a deeper understanding of aging and the changing body, mind and self, as well as the meaning and experiences, challenges and opportunities of aging and later life.

Three hours (lectures, inquiry and experiential components); one term
Antirequisite: GERONTOL 1A06

GERONTOL 2B03 THE AGING BODY

An examination of age-related changes in biology and physiology of the human body.

Three hours (lectures); one term

Prerequisite: GERONTOL 1A03 or 1A06

Not open to students with credit or registration in KINESIOL 4SS3.

GERONTOL 2C03 RESEARCH METHODS IN SOCIAL GERONTOLOGY

A systematic investigation of research methods in social gerontology. Topics covered include research design, measurement, techniques of data collection and data analysis. Special attention will be given to how research methods may be applied in the study of aging. This course uses an inquiry based approach.

Three hours (lectures and practice); one term

Prerequisite: Registration in any Gerontology program

Antirequisite: ANTHROP 2Z03, CMST 2A03, GEO 2HR3, GERONTOL 3C03, HEALTHST 2B03, SOCIOL 2Z03

GERONTOL 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 program; or admission to the Minor in Gerontology and permission of the Department. (See Note 4 above.)
Antirequisite: GERONTOL 2A03, 2AA3

GERONTOL 2E03 COMMUNICATION AND COUNSELLING WITH OLDER ADULTS

Focuses on the unique communication and counselling needs of older adults. Explores various communication issues and approaches and enables students to apply client-centred communication techniques.

Three hours (lectures and discussion, includes experiential component); one term

Prerequisite: Registration in any Gerontology program. (See Note 2 above.)

Antirequisite: GERONTOL 4B03

GERONTOL 2F03 AGING AND HEALTH CARE SYSTEMS

This course examines the available international evidence on the impact of aging on health and long-term care expenditures and organization, as well as the choices various societies are making around issues of aging, health, and long-term care; and the equity issues such choices raise.

Three hours (lectures and discussion); one term

Prerequisite: GERONTOL 1A03 or 1A06

This course may be taken by undergraduate students registered in a non-Gerontology program. However, enrolment for such students is limited. Priority will be given to students completing a Minor in Gerontology or registered in a Health Studies program.

Not open to students with credit in GERONTOL 3I03, if the topic was Aging and Health Care Systems.

GERONTOL 3B03 GERONTOLOGY FIELD OBSERVATION

Directed observation of 40 hours in an approved field setting and a weekly seminar focusing on integration of theoretical knowledge and field experience.

Approximately four hours field observation per week, and two hours weekly seminar; one term

Prerequisite: Registration in Level III or IV of any Gerontology program. (See Note 2 above.)

GERONTOL 3BB3 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: GERONTOL 3B03 and registration in Level III or IV of any Gerontology program and permission of the instructor. (See Note 2 above.)

GERONTOL 3D03 THE AGING MIND

An examination of psychological aspects of aging: sensation, perception, attention, memory, intelligence, communication, personality, attitudes and mental health.

Three hours (lectures and discussion); one term

Prerequisite: Registration in any Gerontology program; or one of GERONTOL 1A03, 1A06 and registration in any Health Studies program; or admission to the Minor in Gerontology and permission of the Director. (See Note 4 above.)

Not open to students with credit in PSYCH 3DD3.

GERONTOL 3E03 INDEPENDENT STUDY IN GERONTOLOGY I

The student will select a topic in gerontology for an in-depth investigation under the supervision of a faculty member and write a paper. This investigation could take several forms such as library research, field study, or a supervised experience in an applied setting.

The study will normally extend over two terms.

Prerequisite: Registration in Level III or IV of any Gerontology program and permission of the Chair of the Department.

GERONTOL 3E03 may be repeated, if on a different topic, to a total of six units.

GERONTOL 3H03 DIVERSITY AND AGING

Examines issues in gerontology related to the diversity of contemporary western societies. Aspects of diversity such as ethnicity, race, culture, disability, gender, sexual orientation, rural and urban life, and social class will be addressed.

Three hours (lectures and discussions; includes experiential components); one term

Prerequisite: GERONTOL 1A03 or 1A06

This course may be taken as elective credit by undergraduate students registered in a non-Gerontology program. However, enrolment for such students is limited.

GERONTOL 3I03 SPECIAL TOPICS IN GERONTOLOGY

Topics may vary from year to year. Students should consult the Department of Health, Aging and Society prior to registration, concerning topics to be examined.

Three hours (lectures and discussion); one term

Prerequisite: Registration in any Gerontology program

GERONTOL 3I03 may be repeated, if on a different topic, to a total of six units.

GERONTOL 3J03 AGING, WORK, RETIREMENT AND PENSIONS

An examination of the issues and concepts related to work, retirement and pensions and their implications for aging individuals and society.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level III or IV of any Gerontology program; or with permission of the instructor, registration in a Labour Studies program or GERONTOL 1A03 or 1A06 and registration in Level II or above of any program

This course may be taken as elective credit by undergraduate students registered in a non-Gerontology program. However, enrolment for such students is limited.

GERONTOL 3K03 IMAGES OF AGING

Explores themes in aging through critical analysis of representations in English literature, selected works of art, music, painting, photography and film, but with emphasis on English literature. Themes may include institutionalization, loss of autonomy, loneliness, intergenerational and other relations.

Three hours (lectures and discussion); one term

Prerequisite: GERONTOL 1A03 or 1A06

Not open to students with credit in GERONTOL 3I03, if the topic was Images of Aging.

This course may be taken as elective credit by undergraduate students registered in a non-Gerontology program. However, enrolment for such students is limited.

GERONTOL 3L03 LONG-TERM CARE HOMES: ISSUES AND CHALLENGES

Examines issues and challenges of humanizing care for older adults living in long term care homes. Topics include structure and organization of long-term care homes, current trends, policies, programs and gaps. Concepts and approaches to enhance quality of care and quality of life will also be discussed.

Three hours (lectures and discussion); one term

Prerequisite: GERONTOL 1A03 or 1A06

This course may be taken by undergraduate students registered in a non-Gerontology program. However, enrolment for such students is limited. Priority will be given to students completing a Minor in Gerontology or registered in a Health Studies program.

Not open to students with credit in GERONTOL 3I03, if the topic was Long-term Care Facilities: Issues and Challenges.

GERONTOL 3M03 AGING IN A FAMILY CONTEXT

Examines a diversity of topics related to family relationships and life transitions of older adults from a life course parental perspective. Topics may include diversity in families, marital status and parent status, adult child/parent relationships, sibling ties, and grandparent/grandchild relationships.

Three hours (lectures and discussions, includes experiential components); one term

Prerequisite: GERONTOL 1A03 or 1A06

Antirequisite: SOCIOL 3CC3

Not open to students with credit in GERONTOL 4C03, if the topic was Aging in a Family Context.

This course may be taken as elective credit by undergraduate students registered in a non-Gerontology program. However, enrolment for such students is limited.

GERONTOL 3N03 AGING AND MENTAL HEALTH

This course will examine the topic of mental health from a variety of perspectives. Terms, definitions, theories, assessment protocols and interventions related to mental health in older adults will be explored.

Three hours (lectures and discussion); one term

Prerequisite: GERONTOL 1A03 or 1A06

Not open to students with credit in GERONTOL 4C03, if the topic was Aging and Mental Health.

This course may be taken as elective credit by undergraduate students registered in a non-Gerontology program. However, enrolment for such students is limited.

GERONTOL 3R03 RESEARCH METHODS IN SOCIAL GERONTOLOGY II

An advanced systematic investigation of research methods in social gerontology. Topics include research design, measurement, data collection and analysis. Special attention will be given to how research methods may be applied in the study of aging. This course uses an inquiry based approach.

Prerequisite: GERONTOL 2C03 and registration in Level III or IV of any Gerontology program

Antirequisite: HEALTHST 3G03, SOCIOL 3I03, 3O03

GERONTOL 3S03 APPLIED TOPICS IN GERONTOLOGY

Topics may vary from year to year. Possible topics include care management, ethical issues in aging, interventions for dementia, living environments, or program evaluation.

Three hours (lectures and discussion); one term

Prerequisite: GERONTOL 1A03 or 1A06

GERONTOL 3S03 may be repeated, if on a different topic, to a total of six units

This course may be taken as elective credit by undergraduate students registered in a non-Gerontology program. However, enrolment for such students is limited.

GERONTOL 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: GERONTOL 2C03 (or 3C03), 3R03 (or 3G03 or another approved statistics course) and registration in Level IV of any Honours Gerontology program; or GERONTOL 2C03 (or 3C03), 3R03 (or 3G03 or another approved statistics course) and registration in Level III of any B.A. Gerontology program and permission of the Chair of the Department

GERONTOL 4G03 INDEPENDENT STUDY IN GERONTOLOGY II

The student will select a topic in gerontology for an in-depth investigation under the supervision of a faculty member and write a paper. This investigation could take several forms such as library research, field study, or a supervised experience in an applied setting.

Prerequisite: Registration in Level III or IV of any Gerontology program and permission of the supervising instructor

GERONTOL 4I03 AGING AND HEALTH

Addresses the biological, psychological and socio-political factors influencing the health of elderly persons from a broad national and international perspective.

Three hours (problem-based tutorial); one term

Prerequisite: Registration in Level IV of any Honours Gerontology or Honours Health Studies program or registration in Level III of any B.A. Gerontology program

This course may be taken by undergraduate students registered in an Honours Health Studies program. However, enrolment for such students is limited.

Not open to students with credit in GERONTOL 4D03, if the topic was Aging and Health.

GERONTOL 4J03 AGING AND DISABILITY

Multidisciplinary models of successful aging are applied to older adults with mobility, sensory, and cognitive impairments. Psychological, communication, and spiritual issues are emphasized.

Three hours (seminar); one term

Prerequisite: Registration in Level IV of any Honours Gerontology program

Not open to students with credit in GERONTOL 4C03, if the topic was Aging and Disability.

GERONTOL 4K03 ISSUES IN THE SOCIAL ASPECTS OF AGING

An advanced exploration of social aspects of aging including gender and health, family relationships and retirement.

Three hours (seminar); one term

Prerequisite: Registration in any Gerontology program

Antirequisite: SOCIOL 4PP3

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 (problem-based tutorial); one term

Prerequisite: Registration in Level IV of any Honours Gerontology program or registration in Level III of any B.A. Gerontology Program; and permission of the instructor

Antirequisite: POL SCI 4A03, SOC WORK 4A03, 4L03, 4V03

HEALTH STUDIES ...**Notes:**

1. HEALTHST 2C03, 2D03, 2E03, 2H03, 2HG3 and 3Y03 may be taken as electives by students enrolled in Level II and above of a non-Health Studies program.
2. HEALTHST 3D03, 3E03, 3F03, 3H03 and 3HH3 may be taken as electives by students enrolled in Level III and above of a non-Health Studies program. Space for such students is limited.

Courses *If no prerequisite is listed, the course is open.***HEALTHST 1A03 INTRODUCTION TO HEALTH STUDIES**

An introduction to the key themes and questions concerning health and health care from within social sciences perspectives.

Three hours (lectures and tutorials); one term

Antirequisite: HEALTHST 1E03, 1S03, HTH SCI 3B03, SOC SCI 1H03

Not open to students in a Nursing or Midwifery program.

HEALTHST 2AA3 SOCIAL IDENTITY, HEALTH AND ILLNESS

A critical exploration of the role of class, race, gender, ability and age in patterns of health and illness.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above of a Health Studies or Gerontology program

Antirequisite: HEALTHST 2A03

This course may be taken by students enrolled in a Gerontology program. However, enrolment for such students is limited.

HEALTHST 2AN3 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

Prerequisite: Three units of Level I Anthropology or HEALTHST 1A03

Cross-list: ANTHROP 2AN3

This course is administered by the Department of Anthropology.

HEALTHST 2B03 RESEARCH METHODS IN HEALTH STUDIES

A review of the major methodological approaches used in health studies research. The course will examine methods such as historical, qualitative, quantitative, and narrative.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above of a Health Studies program

Antirequisite: ANTHROP 2Z03, CMST 2A03, GEO 2HR3, GERONTOL 2C03, SOCIOL 2Z03

HEALTHST 2C03 HEALTH ECONOMICS AND ITS APPLICATION TO HEALTH POLICY

Economic analyses of health and health care, with a special emphasis on policy issues in the Canadian health care system.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

Cross-list: ECON 2CC3

Not open to students registered in an Economics program or with credit or registration in ECON 2G03, 2X03 or 3Z03.

This course is administered by the Department of Economics.

HEALTHST 2D03 MENTAL HEALTH

An examination of mental health and illness from different social, cultural and historical perspectives, including consideration of changing notions of diagnosis, treatment and prevention.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

Antirequisite: HISTORY 3V03

HEALTHST 2E03 HEALTH, ILLNESS AND THE BODY

This course draws on a range of theoretical perspectives to consider the social construction, regulation, control, and experience of the body as it relates to health and illness.

Three hours (lectures and discussion); one term

Prerequisite: One of HEALTHST 1A03, 1E03, 1S03 or SOC SCI 1H03; and registration in Level II or above

HEALTHST 2H03 SOCIAL ASPECTS OF REPRODUCTION

An interdisciplinary course exploring birth and reproduction. Topics may include: social determinants of reproductive health, fertility and birthing rituals, reproductive ethics, policy and technologies.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level II or above

Cross-list: HTH SCI 2I03, WOMEN ST 2H03

HEALTHST 2HG3 POPULATION, SOCIETIES, AGING AND THE ENVIRONMENT

Differential growth of human populations and their changing age and sex structures with an emphasis on birth and death processes. The connections between population structures and processes and various aspects of environments and societies including aging, are emphasized.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: GEO 2HG3, GERONTOL 2HG3

This course is administered by the School of Geography and Earth Sciences.

HEALTHST 3AA3 STATE, CIVIL SOCIETY AND HEALTH

This course explores how states, citizens, and civil society act and interact in the definition and pursuit of health.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level III or above of a Health Studies or Gerontology program

Antirequisite: HEALTHST 3A03

This course may be taken by students enrolled in a Gerontology program. However, enrolment for such students is limited.

HEALTHST 3C03 OCCUPATIONAL HEALTH AND SAFETY

An analysis of issues and problems associated with occupational health and safety in Canada and other industrialized countries. Topics will be examined from social, political, economic, legal and medical perspectives.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level III or above of a Health Studies or Labour Studies program

Cross-list: LABR ST 3D03

This course is administered by Labour Studies.

HEALTHST 3CC3 HEALTH AND ENVIRONMENT: ANTHROPOLOGICAL APPROACHES

Examination of the ways in which humans alter and cope with their environment. Topics include: health inequalities, nutrition, population, urbanization, resource utilization, and industrial pollution.

Three hours (lectures and discussion); one term

Prerequisite: Three units of Level I Anthropology or HEALTHST 1A03, and registration in Level III or IV of any program. ANTHROP 2E03 is strongly recommended.

Cross-list: ANTHROP 3C03

This course is administered by The Department of Anthropology.

HEALTHST 3D03 DISABILITIES AND CHRONIC ILLNESS

An examination of issues relating to disabilities and chronic illness.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level III or above

HEALTHST 3E03 ETHICAL ISSUES

Ethical issues of current relevance to debates in health and health care. Topics will vary from year to year.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level III or above

Antirequisite: HTH SCI 3L03

Priority will be given to students registered in a Health Studies program.

HEALTHST 3F03 SELECTED TOPICS IN HEALTH STUDIES I

Topics may vary from year to year.

Three hours (lectures and discussion); one term

Prerequisite: One of HEALTHST 1A03, 1E03, 1S03; and registration in Level III or above

Priority will be given to students registered in a Health Studies program.

HEALTHST 3F03 may be repeated, if on a different topic, to a total of six units.

HEALTHST 3G03 APPLIED METHODS IN HEALTH STUDIES RESEARCH

A review of applied research methods in Health Studies. The course will consider issues in program evaluation, community needs assessments and community-based research. Students may be involved in academic placements within the community.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level III or above of a Health Studies program

Antirequisite: GERONTOL 3R03

HEALTHST 3H03 HEALTH CONSUMERISM

This course examines the meaning of consumerism, consumer health groups, and the impact of consumerism on health care and health policy.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level III or above

Priority will be given to students registered in a Health Studies program.

HEALTHST 3HH3 GEOGRAPHY OF HEALTH AND HEALTH CARE
An understanding of traditions in health geography and an exploration of the determinants of health including the social environment, the physical environment and health care services.

Three lectures; one term

Prerequisite: GEO 1HS3 or 1HU3

Cross-list: GEO 3HH3

This course is administered by the School of Geography and Earth Sciences.

HEALTHST 3I03 INDEPENDENT STUDY
Independent research supervised by a faculty member.
One term

Prerequisite: Registration in Level III or above of a Health Studies program and permission of the Chair of Health, Aging and Society

HEALTHST 3K03 THE NEW PUBLIC HEALTH: HEALTH PROMOTION AND POPULATION HEALTH IN CANADA

Introduce students to the diverse theoretical, policy, and practical dimensions of health promotion and population health approaches in Canada. Three hours (lectures and discussion); one term

Prerequisite: Registration in Level III or above of a Health Studies program.

HEALTHST 3M03 HEALTH POLICY IN A CHANGING WORLD
This course examines major models of health care and policy systems, and the key ideas and instruments that underlie health policy in selected countries such as Canada.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level III or above of any Health Studies or Political Science program

Cross-list: POL SCI 3M03

This course is administered by the Department of Political Science.

HEALTHST 3Y03 DEATH, DISEASE AND DEGENERATION: A HISTORY OF HEALTH AND HEALTH CARE IN CANADA

Explores the history of health and health care in Canada, from the first Western European settlements to the present day.

Two lectures one small group session (one hour); one term

Prerequisite: Registration in Level II or above

Cross-list: HTH SCI 3Y03, HISTORY 3Y03

This course is administered by the Bachelor of Health Sciences (Honours) program.

HEALTHST 3YY3 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 (lectures and discussion); one term

Cross-list: ANTHROP 3Y03

This course is administered by the Department of Anthropology.

HEALTHST 4A03 RESEARCH SEMINAR

Systematic inquiry of a selected topic in a problem-based seminar. Students will identify a health issue, formulate questions, conduct research and present findings.

Three hours (seminar); one term

Prerequisite: Registration in Level IV of any Honours Health Studies program

HEALTHST 4C03 REPRESENTATIONS OF HEALTH AND ILLNESS

An exploration of representations of health and illness in the humanities. The focus may vary from year to year, but will examine how health and illness have been represented in literature, art, drama, or music.

Three hours (seminar); one term

Prerequisite: Registration in Level IV of any Honours Health Studies or Gerontology program

This course may be taken by students enrolled in a Gerontology program. However, enrolment for such students is limited.

HEALTHST 4D03 HEALTH IN CROSS CULTURAL AND INTERNATIONAL PERSPECTIVES

Examination of contemporary issues in health and illness from cross-cultural and international perspectives.

Three hours (seminar); one term

Prerequisite: Registration in Level IV of any Honours Health Studies program

HEALTHST 4E03 ENVIRONMENT AND HEALTH

Models and methods for research and policy on environment and health. Three hours (seminar); one term.

Prerequisite: Registration in Level IV of any Honours Health Studies program

Cross-list: GEO 4HH3

This course is administered by the School of Geography and Earth Sciences.

HEALTHST 4F03 SELECTED TOPICS IN HEALTH STUDIES II

An examination of selected topics in health studies. Topics may vary from year to year.

Three hours (seminar); one term

Prerequisite: Registration in Level IV of any Honours Health Studies program
HEALTHST 4F03 may be repeated, if on a different topic, to a total of six units.

HEALTHST 4G06 INDEPENDENT STUDY

Independent research supervised by a faculty member.

Two terms

Prerequisite: Credit or registration in HEALTHST 4A03 and permission of the Chair of Health, Aging and Society

HEALTHST 4H03 DIRECTED RESEARCH IN HEALTH STUDIES

Directed study of a research question in Health Studies under the supervision of a faculty member. A report is submitted to the supervisor upon completion of the project.

Three hours (seminar); one term

Prerequisite: HEALTHST 4A03 and registration in Level IV of a Health Studies program; or permission of the Chair of Health, Aging and Society

HEALTHST 4J03 NARRATIVES OF ILLNESS

This seminar explores the role that narratives of illness play in describing, shaping and interrogating the experiences of those who are "unwell."

Three hours (seminar); one term

Prerequisite: Registration in Level IV Honours Health Studies or Level IV Honours Cultural Studies and Critical Theory

HEALTHST 4L03 THE POLITICS OF CHANGE IN SOCIAL WELFARE

An examination of how social welfare policy establishes the boundary between public and private roles, and how the boundary changes.

Three hours (seminar); one term

Prerequisite: HEALTHST 3M03 or POL SCI 3M03 and registration in Level IV of an Honours Health Studies program

Cross-list: POL SCI 4L03

This course is administered by the Department of Political Science.

HEALTH SCIENCES

Faculty Note:

This course listing is divided into two parts:

1. Bachelor of Health Sciences (Honours) program courses.
2. Health Sciences courses normally available only to students registered in Engineering (Chemical Engineering and Bioengineering or Electrical and Biomedical Engineering), Nursing (A), (B), (D), (E) or (F) Streams or Midwifery, as applicable.

BACHELOR OF HEALTH SCIENCES (HONOURS) ...

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

Michael G. DeGroote Centre for Learning and Discovery, Room 3308

Ext. 22815

Assistant Dean, Bachelor of Health Sciences (Honours)

Delsworth G. Harnish/ B.Sc., M.Sc. (Queen's), Ph.D. (McMaster), 3M Teaching Fellow

Note:

Detailed course descriptions are available on the program web site at <http://www.fhs.mcmaster.ca/bhsc>

Courses

HTH SCI 1E06 INQUIRY

This course will initiate the development of a skill set required for life-long learning, in the context of the study of one or two health care issues. A problem based course applying principles of scientific inquiry to selected health issues.

Three hours; two terms

Prerequisite: Registration in the B.H.Sc. (Honours) program

Antirequisite: HTH SCI 1E03, 1EE3

Note: Students entering the B.H.Sc. (Honours) program after completion of Level I in another program may be required to complete HTH SCI 2D06 at the discretion of the Assistant Dean of the program.

HTH SCI 1G03 PSYCHOBIOLOGY

This course introduces essential components of the central and peripheral nervous systems as well as key regulatory systems. Concepts such as plasticity, homeostasis, compensation and adaptation and ways in which failure of these regulatory systems can lead to illness states are examined. Two lectures, one tutorial; one term

Prerequisite: Credit or co-registration in BIOLOGY 1A03 or HTH SCI 1I06
Not open to students with credit or registration in PSYCH 1A03.

HTH SCI 1I06 CELLULAR AND MOLECULAR SYSTEMS AND PRACTICUM IN HEALTH SCIENCES

A critical examination of essential concepts in biological systems with specific reference to cellular and molecular investigations. An opportunity to investigate various elements of core health science courses in a laboratory setting. Two practicums per week (two hours each); one tutorial; two terms

Prerequisite: Grade 12 U Biology and registration in Health Sciences I
Corequisite: SCIENCE 1A00. Students registering in HTH SCI 1I06 must also register in SCIENCE 1A00 when completing their registration.
Not open to students with credit or registration in BIOLOGY 1A03.

HTH SCI 1S00 PREPARATORY STUDIES FOR BACHELOR OF HEALTH SCIENCES

Students will explore inquiry and small group learning in the context of language proficiency.

Three hours; two terms

Prerequisite: Permission of the Assistant Dean, B.H.Sc. (Honours) program

HTH SCI 2A03 STATISTICS

Basic statistical methods and their application to the analysis of biological and psychosocial data. Manual calculations will be discouraged; use of the computer to do statistical analysis is an explicit goal of this course. Three lectures, one tutorial; one term

Prerequisite: Registration in Level II or above and Grade 12 Advanced Functions and Introductory Calculus U

Antirequisite: COMMERCE 2QA3, HTH SCI 1F03, STATS 1CC3

HTH SCI 2D06 INQUIRY II

This course will initiate the development of a skill set required for life-long learning, in the context of the study of one or two health care issues and will use a problem-based format to introduce major illness categories.

Three hours; two terms

Prerequisite: Permission of the Assistant Dean, B.H.Sc. (Honours) Program

Note: This course is restricted to Level II B.H.Sc. (Honours) transfer students only.

HTH SCI 2E03 INQUIRY II

This course will use an inquiry based format to introduce key concepts in biochemistry, molecular biology and biomedical sciences to understand illnesses such as infectious diseases, metabolic disorders, genetic diseases and cancer.

One term

Prerequisite: HTH SCI 1E03 and 1EE3; or HTH SCI 1E06

HTH SCI 2F03 HUMAN PHYSIOLOGY AND ANATOMY I

An introduction to the principal organ systems including the endocrine, skin, CNS and locomotion.

Two lectures, one tutorial, one lab; one term

Prerequisite: Registration in Level II of the B.H.Sc. (Honours) program; or permission of the Assistant Dean, B.H.Sc. (Honours) Program

Antirequisite: BIOLOGY 1J03, 3K03, HTH SCI 1D06, 1H03, 2L03, KINESIOL 1A03, 1A06, 1AA3, 1X06, 1Y03, 1YY3, MED PHYS 4XX3

HTH SCI 2FF3 HUMAN PHYSIOLOGY AND ANATOMY II

A continuation of HTH SCI 2F03 with an examination of the Immune, Cardiovascular, Respiratory, Gastrointestinal and Uro-Genital Systems.

Two lectures, one tutorial, one lab; one term

Prerequisite: HTH SCI 2F03

Antirequisite: BIOLOGY 1J03, 3K03, HTH SCI 1D06, 1HH3, 2LL3, KINESIOL 1A03, 1A06, 1AA3, 1X06, 1Y03, 1YY3, MED PHYS 4XX3

HTH SCI 2G03 EPIDEMIOLOGY

This course examines concepts of health from molecular, clinical, population to societal perspectives.

Two lectures, one tutorial; one term

Prerequisite: STATS 1CC3 or registration in Level II of the B.H.Sc. (Honours) program

HTH SCI 2J03 HEALTH PSYCHOLOGY

This course will provide an overview of psychological factors as they influence or result from medical conditions. Topics will include stress, coping, health promoting or compromising behaviours, patient-physician communication, adherence/compliance, pain, heart disease and cancer. Two lectures, one tutorial; one term

Prerequisite: HTH SCI 1G03 or PSYCH 1AA3

Corequisite: One of HTH SCI 2A03, PSYCH 2RA3 or STATS 1CC3

Antirequisite: KINESIOL 2G03

HTH SCI 2K03 CELL BIOLOGY

An inquiry based examination of the relationship between cell structure and function. Students will be required to apply key concepts of cell biology to facilitate their understanding of timely problems in biomedicine. Tutorials (three hours); Problem Based Learning and Computer Laboratories (three hours); one term

Prerequisite: CHEM 1AA3, HTH SCI 1I06; and HTH SCI 2D06 or 2E03

Antirequisite: BIOLOGY 2B03, MOL BIOL 2B03

HTH SCI 2N03 INQUIRY IN BIOCHEMICAL TECHNIQUES

An inquiry approach to learning about current techniques in biochemistry research. Students will work in small groups in labs and workshops.

One tutorial (one hour) every other week, one lab (four hours) every other week; two terms

Prerequisite: Registration in Level II of the B.H.Sc. (Honours) Biomedical Sciences Specialization

Antirequisite: BIOCHEM 2L06

First offered in 2009-2010.

HTH SCI 2P01 PHYSICAL CHEMISTRY

An independent Study Module that will study the thermodynamics of life, chemical and physical equilibria and enzyme kinetics.

Computer-based independent study module to be completed in Level II.

Prerequisite: CHEM 1AA3 and registration in Level II of the B.H.Sc. (Honours) Biomedical Sciences Specialization

Antirequisite: CHEM 2PA3, 2R03

First offered in 2009-2010.

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

HTH SCI 3E03 INQUIRY III

This course will cover health issues that are prevalent at certain times in the developmental cycle. Topics will include reproduction, global health, health of children and adolescents, adulthood, and health care issues in the elderly.

One term

Prerequisite: HTH SCI 2D06 or 2E03; and registration in Level III of the B.H.Sc (Honours) program

HTH SCI 3G03 CRITICAL APPRAISAL OF THE MEDICAL LITERATURE

Students learn methods to determine internal validity of various research designs to judge the strength of evidence for the effectiveness of an intervention, a diagnostic test, a screening program, a prognostic or risk factor and of systematic reviews.

Two lectures, one tutorial; one term

Prerequisite: HTH SCI 2A03, 2G03

HTH SCI 3GG3 HEALTH SYSTEMS AND HEALTH POLICY

This course reviews how health care is different from other goods and services, how governments have responded to these differences, and how governments make decisions about health care.

Two lectures, one tutorial; one term

Prerequisite: HTH SCI 3G03

HTH SCI 3H03 INQUIRY PROJECT

An opportunity to explore one or more specialized areas of Health Sciences in preparation for HTH SCI 4A09 (or 4B06).

One tutorial/seminar session (three hours); one term

Prerequisite: Registration in the B.H.Sc. (Honours) program

Antirequisite: BIOLOGY 4FF3, 4GG9, 4I03, MOL BIOL 4R09, PHARMAC 4F09, PSYCH 4E09

Not open to students with credit or registration in BIOCHEM 4P03.

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 3X03

HTH SCI 3J03 HEALTH, INJURY AND PATHOLOGY

An introduction to human pathology with emphasis on the mechanisms of pathogenesis and the morphologic changes induced to occur in cells and tissues.

Two lectures, one tutorial (three hours); one term

Prerequisite: HTH SCI 2K03

HTH SCI 3K03 INTRODUCTORY VIROLOGY

An introduction to the basics of virology. Topics include the structure and composition of viruses, virus replication strategies, virus-host interactions and uses of viruses for medical research.

Three lectures (one hour); one term

Prerequisite: BIOLOGY 2B03 or HTH SCI 2K03; and registration in Level III

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.

Two lectures, one tutorial; one term

Prerequisite: HTH SCI 2K03

Antirequisite: HEALTHST 3E03

HTH SCI 3N03 WRITTEN COMMUNICATION IN HEALTH SCIENCES I

This course will explore various genres of written communication. Students will develop their editing and writing skills in a small group.

Three hours; one term

Prerequisite: Registration in Level III or above of the B.H.Sc. (Honours) program and permission of the instructor

HTH SCI 3P06 THERAPEUTIC DRUGS: MOLECULES IN THE MARKETPLACE

A perspective-based approach will be used to explore the interactions between discoveries, industry, regulators and prescribers that lead to the emergence of new therapeutic drugs as solutions to specific clinical problems.

Three lectures, one tutorial; two terms

Prerequisite: HTH SCI 2FF3

HTH SCI 3S03 COMMUNICATION SKILLS

This course offers students a variety of learning experiences that will enable them to better understand the relationship between effective communication and desired health care outcomes. Students will be exposed to evidence based research, role playing, standardized simulations and audio-visual reviews.

Three hours; one term

Prerequisite: HTH SCI 2D06 or 2E03; and registration in Level III or above of the B.H.Sc. (Honours) program

HTH SCI 3U03 MEDICAL GENETICS

This course will cover a broad spectrum of genetic disorders; with particular emphasis on inheritance patterns, molecular mechanisms, treatment and prevention.

Two lectures, one tutorial; one term

Prerequisite: HTH SCI 2K03 and registration in Level III or above

HTH SCI 3V03 RESEARCH AND EXPERIMENTAL DESIGN

Analytical review of fundamental experiments with a focus on experimental design, employing sample data sets to solve experimental problems with an emphasis on how to approach the problem. This course will be a precursor to the BIOCHEM 4F09 senior thesis.

Two lectures, one tutorial (two hours); one term

Prerequisite: HTH SCI 2N03

First offered in 2010-2011.

HTH SCI 3W03 SYSTEMS BIOLOGY

A systems-based approach to studying the cell and integration of cellular processes with a critical appraisal of scientific literature. Working in small groups, students will develop an internet site to examine various topics in cellular biology.

Three lectures/tutorials; one term

Prerequisite: HTH SCI 2N03

First offered in 2010-2011.

HTH SCI 3X02 GENOMIC INFORMATION

Use of computers, graphics, .tif files, Pymol, NCBI databases and ExPASy. Each class is a combination of lecture and hands-on tutorial in a computer laboratory.

Three lectures/tutorials in a computer lab; second term.

Prerequisite: HTH SCI 2N03

First offered in 2010-2011.

HTH SCI 3Y03 DEATH, DISEASE AND DEGENERATION: A HISTORY OF HEALTH AND HEALTH CARE IN CANADA

This course explores the history of health and health care in Canada, from the first European settlements to the present day.

Two lectures, one small group discussion (one hour); one term

Prerequisite: Registration in Level II or above

Cross-list: HEALTHST 3Y03, HISTORY 3Y03

HTH SCI 3Z01 RESEARCH SEMINARS

Students attend six research seminars from a designated list in Biochemistry, Immunology and Neurology and write a one to two page report on each. Two of the six seminars may be graduate student seminars from Medical Sciences or Biochemistry and Biomedical Sciences.

Six seminars; two terms

Prerequisite: HTH SCI 2N03

First offered in 2010-2011.

HTH SCI 4AA3 GROUP DYNAMICS AND PROCESSES

This course will offer both a theoretical and experiential introduction to group dynamics and processes. Learning will be facilitated in large and small groups.

One term

Prerequisite: Registration in Level IV of the B.H.Sc. (Honours) program and permission of the instructor

HTH 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: Registration in B.H.Sc. (Honours) program and permission of B.H.Sc. (Honours) Program Office

Antirequisite: BIOLOGY 4FF3, 4GG9, 4I03, HTH SCI 4B06, MOL BIOL 4R09, PHARMAC 4F09, PSYCH 4E09

Not open to students with credit or registration in BIOCHEM 4P03.

HTH SCI 4B06 SENIOR PROJECTS

A selection of information-based research projects conducted under the supervision of one or more members of the Faculty. Arrangements to register in HTH SCI 4B06 including agreement of supervisor must be made before the end of March in Level III.

Prerequisite: Registration in B.H.Sc. (Honours) program and permission of B.H.Sc. (Honours) Program Office

Antirequisite: BIOLOGY 4FF3, 4GG9, 4I03, HTH SCI 4A09, MOL BIOL 4R09, PHARMAC 4F09, PSYCH 4D06, 4D09, 4E09

Not open to students with credit or registration in BIOCHEM 4P03.

HTH SCI 4BB3 NEUROIMMUNOLOGY

This course will examine immune-brain communication, immune molecules and their signalling pathways, and the role of the immune system in normal brain function and CNS disease.

Two lectures, one tutorial; one term

Prerequisite: BIOLOGY 2B03 or HTH SCI 2K03

HTH SCI 4D03 SPECIAL TOPICS IN HEALTH SCIENCES

This course provides an opportunity for individual or small groups to integrate concepts from their undergraduate courses.

Sessions arranged individually or in small groups; one term

Prerequisite: Permission of the Assistant Dean, B.H.Sc. (Honours) program

HTH SCI 4D03 may be repeated, if on a different topic, to a total of six units.

HTH SCI 4EE3 EDUCATION PRACTICUM IN HEALTH SCIENCES

An opportunity to explore pedagogy as it relates to best practice in education. Sessions arranged individually or in small groups; two terms

Prerequisite: Permission of the Assistant Dean, B.H.Sc. (Honours) program

HTH SCI 4F03 CLINICAL PRACTICE ENVIRONMENT

This course will include one or more placements for students. In conjunction with these placements, students will be required to compile a report on one or more health care delivery environments. Students must arrange their clinical placement.

One term

Prerequisite: HTH SCI 3H03 and permission of the Assistant Dean, B.H.Sc. (Honours) program

HTH SCI 4F03 may be repeated, if on a different topic, to a total of six units.

HTH SCI 4GG3 COMPLEX ADAPTIVE SYSTEMS

This course is an opportunity to think about how people learn and change in all sorts of environments. The course itself will be an experiment in applying CAS theory to issues such as assessment, learning objectives, evidence, feedback and group process.

Three hours; one term

Prerequisite: Registration in Level III or above of the B.H.Sc. (Honours) program and permission of the instructor

HTH SCI 4I13 ADVANCED TOPICS IN IMMUNOLOGY

This course will build on knowledge of the immune system and focus on the immune system in disease: allergy, inflammation, autoimmunity, immune deficiency, malignancy and cancer immunotherapy.

Two lectures, one tutorial; one term

Prerequisite: BIOLOGY 3X03 or HTH SCI 3I03

Antirequisite: BIOLOGY 4I13

HTH SCI 4J03 BIOCHEMICAL IMMUNOLOGY

This advanced course applies problem-based learning to immunological problems. Topics concern development of immunoassays, resistance to infection and immunity in health and disease.

One session (three hours), one tutorial; one term

Prerequisite: Either BIOLOGY 3X03 or HTH SCI 3I03, and either BIOLOGY 2B03 or HTH SCI 2K03, and either BIOLOGY 2C03 or HTH SCI 3D03, and HTH SCI 4I13; or permission of the instructor

Cross-list: BIOCHEM 4J03, MOL BIOL 4J03

HTH SCI 4K03 HUMAN PATHOPHYSIOLOGY

The course is designed to allow participants to think and solve problems in the area of physiology, pathophysiology and anatomy.

One lecture, one tutorial, one lab; one term

Prerequisite: HTH SCI 2FF3 or permission of the instructor

HTH SCI 4KK3 HUMAN PATHOPHYSIOLOGY II

This course is designed to take a more in depth look at the principles underlying the pathophysiology of the various body systems.

One lecture, one tutorial, one lab; one term

Prerequisite: HTH SCI 4K03

HTH SCI 4LL3 MODEL SYSTEMS

Examining the use of human, animal and cell model systems in research through investigation of primary research.

One lecture or workshop (three hours); one term

Prerequisite: HTH SCI 3W03

First offered in 2011-2012.

HTH SCI 4NN3 WRITTEN COMMUNICATION IN HEALTH SCIENCES II

This course will be an advanced course in written communication, building on knowledge gained in Written Communication I. Students will explore and hone their writing skills in various forms.

Three hours; one term

Prerequisite: HTH SCI 3N03 and permission of the instructor

HTH SCI 4O03 PRINCIPLES OF VIRUS PATHOGENESIS

Current theories and knowledge on mechanisms that relate to virus pathogenesis and evasion of host cell responses.

Two lectures, one tutorial; one term

Prerequisite: HTH SCI 3I03 or 3K03; and registration in Level III or above

HTH SCI 4T03 CURRENT RESEARCH INITIATIVES

An opportunity to explore current research initiatives within the McMaster community on a variety of topics. Both alumni from the B.H.Sc. (Honours) program and graduate students at McMaster will offer sessions to explain and discuss their current research and academic experiences.

Three hours; one term

Prerequisite: Registration in Level III or above of the B.H.Sc. (Honours) program or permission of the instructor

HTH SCI 4U06 CURRENT RESEARCH INITIATIVES

An opportunity to explore current research initiatives within the McMaster community on a variety of topics. Both alumni from the B.H.Sc. (Honours) program and graduate students at McMaster will offer sessions to explain and discuss their current research and academic experiences.

Three hours; two terms

Prerequisite: Registration in Level III or above of the B.H.Sc. (Honours) program or permission of the instructor

HTH SCI 4V03 CONTROL OF HUMAN MOVEMENT

The topics in this course will include basic neurophysiology and control of sensation, proprioception, reflex and voluntary movement. Throughout the course, theories underlying motor control of voluntary movement will be studied in healthy and neurologically impaired populations.

Two lectures, one lab; one term

Prerequisite: HTH SCI 2F03, 2FF3

Not offered in 2007-2008.

HTH SCI 4W03 SPECIAL TOPICS IN HEALTH SCIENCES II

This course provides an opportunity for individual or small groups to integrate concepts from their undergraduate courses.

Sessions arranged individually or in small groups; one term

Prerequisite: Permission of the Assistant Dean, B.H.Sc. (Honours) program

HTH SCI 4W03 may be repeated, if on a different topic, to a total of six units.

HTH SCI 4X03 COLLABORATION AND PEER TUTORING

An important part of our responsibility in the program is to develop a learning community that incorporates the concepts of collaboration, peer tutoring and life-long learning. This course will consist of three units to be taken over four years and will encourage these activities, both formally and informally.

Prerequisite: Registration in Level IV of the B.H.Sc. (Honours) program

Antirequisite: BIOLOGY 3Q03, 3QQ3, INQUIRY 1SC3, 3S03, SCIENCE 2L03, 3S03, SOC SCI 2L03.

HTH SCI 4Y03 SCIENCE, CULTURE AND IDENTITY

Through selected readings and discussion, this course will explore some critiques of science and will appraise the challenge they present to scientific authority. The course will culminate in the presentation of a research project on a question developed by students individually or in groups.

Three hours; one term

Prerequisite: Registration in Level II or above of the B.H.Sc. (Honours) program

HEALTH SCIENCES**(ENGINEERING, MIDWIFERY, NURSING) ...****Note:**

The following Health Sciences courses are normally available only to students registered in Engineering (Chemical Engineering and Bioengineering or Electrical and Biomedical Engineering), B.Sc.N. (A), (B), (D), (E) or (F) Streams or Midwifery, as applicable.

Courses**HTH SCI 1AA3 HUMAN BIOCHEMISTRY I**

Introduction to proteins, DNA, RNA, chromosomes and their building blocks; gene expression; proteins, carbohydrates and fats as fuels in the production of energy for living, including nutritional aspects.

Lectures and problem-based tutorial (three hours); one term

Prerequisite: Registration in Level I of the B.Sc.N. (A) or (D) Stream; or permission of the instructor

Antirequisite: HTH SCI 1A06, 1CC7

HTH SCI 1BB3 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 1AA3 and registration in Level I of the B.Sc.N. (A) or (D) Stream; or permission of the instructor

Antirequisite: HTH SCI 1A06, 1CC7

HTH SCI 1C06 SOCIAL AND CULTURAL DIMENSIONS OF HEALTH CARE

This course will increase the students' understanding of individuals, social and cultural groups in relation to health and health care. Special emphasis will be placed on understanding the social and cultural meanings of pregnancy and birth to women and their families, in particular cultural communities within Ontario.

Lectures/tutorials; two terms

Prerequisite: Registration in the Midwifery Education program

HTH SCI 1CC7 INTEGRATED BIOLOGICAL BASES OF NURSING PRACTICE I

Through a small group, self-directed problem-based learning format, students will apply principles of cellular biology, biochemistry and human anatomy and physiology essential to the assessment and understanding of health care problems.

Lecture (two hours), one problem-based tutorial (two hours), one on-line tutorial, self-study; one term

Prerequisite: Registration in Level II of the B.Sc.N. (E) Stream or Level III of the B.Sc.N. (B) Stream

Antirequisite: HTH SCI 1A06, 1AA3, 1BB3, 1ZZ4

HTH SCI 1D06 ANATOMY AND PHYSIOLOGY

This course covers basic concepts of human structure and function, genetics and embryology through lectures, demonstrations and appropriate laboratory assignments.

Lectures/tutorial; two terms

Prerequisite: Registration in the Midwifery Education program

Antirequisite: BIOLOGY 1J03, 3U03, 3UU3, HTH SCI 2F03, 2FF3, KINESIOL 1A03, 1A06, 1AA3, 1X06, 1Y03, 1YY3, MED PHYS 4XX3

HTH SCI 1H06 HUMAN PHYSIOLOGY AND ANATOMY I

A study of anatomy and physiology of the communication and locomotion systems and the systems maintaining homeostasis.

Lecture (two hours), lab or tutorial (three hours); two terms

Prerequisite: Registration in Level I of the B.Sc.N. (A) or (D) Stream or permission of the instructor

Antirequisite: BIOLOGY 1J03, 2A03, HTH SCI 1B07, 1H03, 1HH3, 2F03, 2FF3, 2L03, 2LL3, KINESIOL 1A03, 1A06, 1AA3, 1X06, 1Y03, 1YY3, MED PHYS 4XX3

HTH SCI 1J03 LIFE SCIENCES FOR CLINICAL PRACTICE

This course provides an overview of basic concepts relating to chemistry, biochemistry and microbiology. Content areas will include practical applications of clinical chemistry, specimen collection, related disease entities and pathologies, and the significance of laboratory values.

One lecture (three hours) one lab (two hours); one term

Prerequisite: Registration in the Midwifery Education program

Corequisite: HTH SCI 1D06

Antirequisite: MIDWIF 1C03

HTH SCI 1Z04 HUMAN ANATOMY

Study of gross anatomy providing an overview of tissues and organs of the major body systems. This self-study course is required for Nursing students who have been granted advanced credit for all of the required physiology. Independent study (two hours lecture equivalent/four hours lab equivalent); one term

Prerequisite: Registration in the B.Sc.N. program and permission of the instructor

HTH SCI 2BB3 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. Offered by Web CT/Print Management Based. The Program reserves the right to cancel the course due to low enrolment.

Prerequisite: Registration in Level II of the Midwifery Education program

HTH SCI 2C07 INTEGRATED BIOLOGICAL BASES OF NURSING PRACTICE II

Students will integrate concepts of pathophysiology and will include principles of microbiology and pharmacology essential to the assessment and understanding of health care problems.

Lecture (two hours), one problem-based tutorial (two hours), one journal club (two hours), one on-line tutorial; one term

Prerequisite: HTH SCI 1CC7

Antirequisite: HTH SCI 2AA2, 2B08, 2BB2, 2CC2, 2DD2, 2H03, 2HH3

HTH SCI 2H03 INTRODUCTORY PHARMACOLOGY

An examination of the administration, distribution, action, metabolism and elimination of drugs generally and as related to specific systems.

Lecture (two hours), tutorial or clinical problem (three hours); one term

Prerequisite: HTH SCI 1AA3, 1BB3 (or 1A06), 1H03, 1HH3 (or 1H06) and registration in Level II of the B.Sc.N. (A), (D) or (F) Stream; or permission of the instructor

Antirequisite: HTH SCI 2B08, 2C07, 2DD2

HTH SCI 2HH3 INTRODUCTORY MICROBIOLOGY

An examination of the interactions of microbes in the human body including action, responses, treatment and prevention.

Lecture (two hours), tutorial or lab or clinical problem (three hours); one term

Prerequisite: HTH SCI 1AA3, 1BB3 (or 1A06), 1H03, 1HH3 (or 1H06) and registration in Level II of the B.Sc.N. (A), (D) or (F) Stream; or permission of the instructor

Antirequisite: HTH SCI 2B08, 2C07, 2CC2

HTH SCI 2I03 SOCIAL ASPECTS OF REPRODUCTION

An interdisciplinary course exploring birth and reproduction. Topics may include: social determinants of reproductive health, fertility and birthing rituals, reproductive ethics, policy and technologies.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level II or above

Cross-list: HEALTHST 2H03, WOMEN ST 2H03

This course is administered by Women's Studies.

HTH SCI 2L03 ANATOMY AND PHYSIOLOGY I: COMMUNICATION

An examination of structure-function relationships in the human body systems that communicate with each other or the environment. The systems covered include: endocrine, central nervous system, hearing, taste, smell, vision, autonomic nervous system, skin, peripheral nervous system, and locomotion (musculo-skeletal).

Two lectures (one hour), clinical problem presentation (one hour), one lab (two hours); one term

Prerequisite: Registration in Chemical Engineering and Bioengineering or Electrical and Biomedical Engineering

Antirequisite: BIOLOGY 1J03, HTH SCI 1D06, 1H03, 1H06, 2F03, KINESIOL 1A03, 1A06, 1AA3, 1X06, 1Y03, 1YY3, MED PHYS 4XX3

HTH SCI 2LL3 ANATOMY AND PHYSIOLOGY II: HOMEOSTASIS

An examination of structure-function relationships in the human body systems that are responsible for maintaining normal internal physiological conditions despite a changing environment. The systems covered include: cardiovascular, respiratory, immunology, gastro-intestinal, nutrition, uro-genital, and renal.

Two lectures (one hour), clinical problem presentation (one hour), one lab (two hours); one term

Prerequisite: Registration in Chemical Engineering and Bioengineering or Electrical and Biomedical Engineering

Antirequisite: BIOLOGY 1J03, HTH SCI 1D06, 1H06, 1HH3, 2FF3, KINESIOL 1A03, 1A06, 1AA3, 1X06, 1Y03, 1YY3, MED PHYS 4XX3

HTH SCI 2M03 REPRODUCTIVE PHYSIOLOGY

This course emphasizes intrinsic and extrinsic methods of regulation of reproduction and also provides the basis for understanding alterations from normal mechanisms including the influence of medical conditions.

One tutorial (three hours); term one

Prerequisite: HTH SCI 1D06

Antirequisite: MIDWIF 2D03

HTH SCI 3B03 HEALTH, SCIENCE AND SOCIETY

This course provides an introduction to a number of macrohealth issues including determinants of health and political, economic and social factors that influence the organization of health care systems.

Nine lecture/problem-based tutorials (three hours each), guided self-study (two hours); one term

Prerequisite: Registration in Level III of the B.Sc.N. (A), (D), (E) or (F) Stream; or Level III or IV of the B.Sc.N. (B) Stream; or registration in Level II of the Midwifery Education program; or permission of the instructor

HTH SCI 3C04 INTRODUCTION TO RESEARCH METHODS AND CRITICAL APPRAISAL

Introduction to the principles of clinical research and statistical inference, with particular emphasis on critical assessment of research evidence (both qualitative and quantitative) as presented in the health sciences literature related to health care.

Problem based tutorial (three hours), guided self-study (one and one half hours) per week; one term

Prerequisite: Registration in Level III of the B.Sc.N. (A), (B), (D), (E) Stream or Level IV (F) Stream; or registration in the Midwifery Education program; or permission of the instructor

Antirequisite: HTH SCI 3A03, 3L02, 3M03

HTH SCI 3R03 INDEPENDENT STUDY IN A HEALTH SCIENCES TOPIC

A non-clinical course in which special topics will be considered in depth under the supervision of a faculty member. The plan of study must be negotiated with the faculty member.

Lecture or equivalent (three hours); one term

Prerequisite: Registration in Level II or above of any stream of the B.Sc.N. program; and permission of the instructor; and permission of the Coordinator of Studies (Nursing)

Students will not normally be permitted to apply more than one independent study course in the Health Sciences toward their elective requirements for the B.Sc.N. program.

HTH SCI 4DD6 ADVANCED LEADERSHIP AND MANAGEMENT IN HEALTH CARE ORGANIZATIONS

This advanced course builds upon HTH SCI 4E06 content. It integrates theories and research in leadership and management to enhance health care provider's knowledge of key issues in today's workplace. Offered in tutorial or distance format.

Tutorial or equivalent (four hours), independent study in an organization (six hours); one term

Prerequisite: HTH SCI 4E06

Antirequisite: NURSING 4DD6

HTH SCI 4E06**INTRODUCTION TO HEALTH CARE LEADERSHIP/MANAGEMENT**

Theories and principles of leadership and management are applied to the health care disciplines. Given in both problem based tutorial format and through distance education. Enrolment in tutorial format is limited.

Problem based tutorial or equivalent (four hours); independent study at a clinical site (six hours); one term

Prerequisite: A minimum of one year clinical work experience in a health care profession or permission of the instructor

Antirequisite: NURSING 4B06

HTH SCI 4FF3**INTEGRATIVE LEADERSHIP PROJECT**

Students integrate learning and demonstrate a leadership role in addressing a real health care issue. Students work with both a tutor and a health care leader to address a mutually agreed upon leadership issue in the workplace.

Three hours (seminar and clinical lab); one term

Prerequisite: HTH SCI 4B06, 4DD6, 4I03, 4HH3, 4Z03

Antirequisite: NURSING 4FF3

HTH SCI 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.

Lecture/problem-based tutorials (three hours); one term

Prerequisite: HTH SCI 3B03; and registration in Level III or IV of any stream of the B.Sc.N. program; and permission of the instructor

Antirequisite: COLLAB 4H03, NURSING 4H03

HTH SCI 4HH3**QUALITY MANAGEMENT IN HEALTH CARE ORGANIZATION**

This course focuses on the role of leadership in quality management in health care organizations. Theories, concepts and best practices are utilized to examine issues in the health care work environments. Concepts include patient safety, safety culture, benchmarks and scorecards, program evaluation and risk/utilization management.

Three hours (lecture/seminar); one term

Prerequisite: Registered Nurse and permission of the instructor

Antirequisite: NURSING 4HH3

HTH SCI 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.

Problem-based tutorial or equivalent (three hours); one term

Prerequisite: Health care professional and permission of the instructor

Antirequisite: NURSING 4I03

HTH SCI 4L02**RESEARCH PROJECT**

Students participate in a research study. Concepts of research design, implementation and analysis and dissemination of results are studied.

Approximately two hours per week; two terms

Prerequisite: HTH SCI 3C04 and registration in Level IV of any stream of the B.Sc.N. program; or permission of the instructor

Antirequisite: HTH SCI 4L04

HTH SCI 4S03**POVERTY AND HOMELESSNESS**

This course investigates poverty and homelessness and the disproportionate number of health and social issues facing marginalized groups. It explores the issues of poverty in Canada and places specific emphasis on poverty in our local community of Hamilton Wentworth.

Tutorial groups, independent reading (three hours), individual or group service learning projects (three hours); one term

Prerequisite: HTH SCI 3B03 and registration in Level III or IV of any stream of the B.Sc.N. program; or permission of the instructor

Not open to students with credit in NURSING 4G03 if the topic was Poverty and Homelessness.

HTH SCI 4Z03**HEALTH SCIENCE CONFLICT MANAGEMENT IN HEALTH CARE ORGANIZATIONS**

An introduction to the types and processes of conflict in health care organizations. Exploration and application of theories and principles of conflict and negotiations to situations in the health care environment. Offered in both tutorial and distance format.

Tutorial (three hours); one term

Prerequisite: A minimum of one year clinical work experience in a health care profession or permission of the instructor

Antirequisite: NURSING 4Z03

HEALTH STUDIES

(SEE HEALTH, AGING AND SOCIETY)

HEBREW

(SEE RELIGIOUS STUDIES, HEBREW)

HISPANIC STUDIES

(SEE LINGUISTICS AND LANGUAGES, HISPANIC STUDIES)

HISTORY

WEB ADDRESS: <http://www.humanities.mcmaster.ca/~history/>

Chester New Hall, Room 619

Ext. 24270

Faculty as of January 15, 2007**Chair**

Kenneth Cruikshank

Distinguished University Professor

John C. Weaver/B.A. (Queen's), M.A., Ph.D. (Duke)

Professors

James D. Alsop/B.A. (Winnipeg), M.A. (Western Ontario), Ph.D. (Cambridge), F.R.H.S.

J. Michael Gauvreau/B.A. (Laurentian), M.A., Ph.D. (Toronto)

Bernice M. Kaczynski/B.A. (Pittsburgh), M.Phil., Ph.D. (Yale)

H. V. Nelles/B.A., M.A., Ph.D. (Toronto)/L. R. Wilson, Professor in Canadian History

Adjunct Professor

John A. Sainsbury/(Brock) B.A., M.A. (Cambridge), Ph.D. (McGill)

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. (Rochester), M.A., Ph.D. (York)

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)

Stephen 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)

Wayne L. Thorpe/B.A. (Washington), B.A. (Portland State), M.A. (Colorado), Ph.D. (British Columbia)

David Wright/B.A., M.A. (McGill), D. Phil. (Oxford)

Assistant Professors

Megan Armstrong/B.A. (Toronto), M.A. (Queen's), Ph.D. (Toronto)

Karen Balcom/B.A. (Carleton), M.A. (Dalhousie), Ph.D. (Rutgers)

Juanita De Barros/B.A. (Toronto), M.A., Ph.D. (York)

Michael Egan/B.A., M.A. (Simon Fraser), Ph.D. (Washington State)

Bonny Ibaoh/B.A. (Bendel), M.A. (Ibadan), Ph.D. (Dalhousie)

Tracy McDonald/B.A., M.A., Ph.D. (Toronto)

Adjunct Assistant Professors

Andrew Bone/(Bertrand Russell Editorial Project), B.A. (Birmingham), M.A., Ph.D. (McMaster)

Kathleen E. Garay/(Archivist, Mills Library), B.A. (East Anglia), M.A. (McMaster), Ph.D. (Toronto)

Associate Members

Nancy B. Bouchier/(Kinesiology) B.A., M.A., Ph.D. (Western Ontario)

Peter J. George/(Economics) C.M., B.A., M.A., Ph.D. (Toronto), D.U. (Ottawa), D. Hon. C. (Lviv), D. Litt. (Nipissing), LL.D. (Toronto)

Richard S. Harris/(Geography and Earth Sciences) B.A. (Cambridge), M.A. (Ohio State), Ph.D. (Queen's)

Kenneth H. Norrie/(Economics) B.A. (Saskatchewan), M.Phil., Ph.D. (Yale)

Department Notes:

1. The Department of History offers five Level I courses, each of which is designed to introduce the student to the study of History at the university level. Six units of Level I History are required for those students who anticipate entering B.A. or Honours programs in History. However, students will be admitted to programs in History if they have completed CLASSICS 1M03, (cross-listed as HISTORY 1M03) as part of the six units required for admission into the programs. Students may take only 12 units of these Level I History courses.
2. Not every History course listed in this Calendar is offered every year. Students should consult the Department of History web site (<http://www.humanities.mcmaster.ca/~history/>) in March for a list of courses that will be offered in the following academic year.
3. Enrolment in any Level IV History seminar will be limited to approximately 15 students. Students must be registered in an Honours History program to enrol in any Level IV History seminar. Preference will be given in order to students according to the following categories: Level IV Honours History and Combined Honours in History; Level III Honours History and Combined Honours in History; Level III B.A. History and others (with special permission of the Department).
4. Students interested in Ancient History are advised to examine the courses in Classics offered by the Department of Classics. The following course may be applied towards degree requirements in History at Levels II and III:
KINESIOL 3A03 History of Exercise and Sports Medicine

Courses *If no prerequisite is listed, the course is open.*

- HISTORY 1A03 EUROPE FROM THE RENAISSANCE TO THE FRENCH REVOLUTION**
An examination of the principal themes and issues of European history from the Renaissance to the French Revolution.
Three hours (lectures and tutorials); one term
- HISTORY 1AA3 EUROPE FROM THE FRENCH REVOLUTION TO THE END OF THE SECOND WORLD WAR**
An examination of the principal themes and issues of European history from the French Revolution to the end of the Second World War.
Three hours (lectures and tutorials); one term
- HISTORY 1B03 THE AMERICAS AND THE WORLD**
An examination of the Americas from European contact into the nineteenth century.
Three hours (lectures and tutorials); one term
- HISTORY 1BB3 GLOBAL HISTORY IN THE TWENTIETH CENTURY**
An examination of global interactions of peoples and nations since 1900.
Three hours (lectures and tutorials); one term
- HISTORY 1M03 HISTORY OF GREECE AND ROME**
The history of Greece and Rome from the bronze age to the fall of Rome based on literary, documentary and archaeological evidence.
Two lectures, one tutorial; one term
Cross-list: CLASSICS 1M03
Antirequisite: CLASSICS 1L03, 1LL3, HISTORY 1L03, 1LL3
This course is administered by the Department of Classics.
- HISTORY 2AA3 THE MODERN CARIBBEAN**
An examination of the nineteenth- and twentieth-century Caribbean, focusing on the end of slavery; the arrival of indentured Asian immigrants; pan-Africanism; anti-colonial movements and revolution.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: PEACE ST 2AA3
- HISTORY 2CC3 THE MEDIEVAL WORLD 400-1050**
The Early Middle Ages: The barbarian kingdoms to the feudal monarchies.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Antirequisite: HISTORY 2I06
- HISTORY 2D03 EARLY LATIN AMERICA**
From the Amerindian cultures to 1823. This course will deal with the pre-Columbian civilizations, the Spanish conquest and its consequences until the wars for independence from Spain.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Antirequisite: HISTORY 3XX3
Alternates with HISTORY 2G03.

- HISTORY 2DD3 THE MEDIEVAL WORLD 1050-1400**
The High and Late Middle Ages: Themes in European history, society and culture.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Antirequisite: HISTORY 2I06
- HISTORY 2EE3 SCIENCE AND TECHNOLOGY IN WORLD HISTORY**
An introduction to the manner in which science and technology influence society and how society influences science and technology, paying particular attention to the transfer of knowledge and machines over time and between cultures.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
- HISTORY 2F03 WOMEN IN EUROPE TO 1650**
An exploration of the history of European women and gender during the medieval and early modern periods, focusing on the political, social, spiritual, intellectual and economic realms.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: WOMEN ST 2F03
Antirequisite: HISTORY 2BB6, WOMEN ST 2B06
- HISTORY 2G03 MODERN LATIN AMERICA SINCE 1820**
Liberalism, nationalism, militarism and the various revolutions will be covered, as well as the U.S. role in Latin America and the Caribbean.
Three hours; one term
Prerequisite: Registration in Level II or above
Antirequisite: HISTORY 3YY3, PEACE ST 2G03, 3J03
Alternates with HISTORY 2D03.
- HISTORY 2HH3 MEDITERRANEAN ENCOUNTERS 1500-1800**
This course examines the Mediterranean region as a zone of intense cultural interaction. Particular emphasis will be given to the interaction between Christian, Jewish and Islamic societies.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: RELIG ST 2FF3
- HISTORY 2I13 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); one term
Prerequisite: Registration in Level II or above
Cross-list: PEACE ST 2I13
Antirequisite: HISTORY 3Q03, PEACE ST 3G03
- HISTORY 2J03 AFRICA TO 1900**
Survey of the political, social and economic history of Africa including the evolution of early human cultures, the rise and fall of civilizations and the contact between Africans and Europeans.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
- HISTORY 2JJ3 AFRICA SINCE 1900**
Survey of the political, social and economic history of Africa including the partitioning of the continent, the practices of European imperialism, independence and the process of national building.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
- HISTORY 2K03 THE SOCIETY OF GREECE AND ROME**
A description and analysis of selected aspects of the social life of Greece and Rome. Attention will be given to subjects such as work and leisure, war and the warrior, slavery, marriage and family and the role of women.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: CLASSICS 2K03
This course is administered by the Department of Classics.
- HISTORY 2LA3 HISTORY OF ANCIENT GREECE I**
Greece from the rise of the city-state to the Peloponnesian War, 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: CLASSICS 2LA3
Antirequisite: CLASSICS 2L03, HISTORY 2L03
Alternates with HISTORY 2LC3.
This course is administered by the Department of Classics.

HISTORY 2LB3 HISTORY OF ANCIENT GREECE II

Greece from the Peloponnesian War to the coming of Rome, 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: CLASSICS 2LB3

Antirequisite: CLASSICS 2L03, 3LL3, HISTORY 2L03, 3LL3

Alternates with HISTORY 2LD3.

This course is administered by the Department of Classics.

HISTORY 2LC3 HISTORY OF ANCIENT ROME I

Rome from its early development to the dictatorship of Caesar, with particular attention to the political, military and social developments in the light of literary and archaeological evidence. (No Greek or Latin required.)

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: CLASSICS 2LC3

Antirequisite: CLASSICS 2LL3, HISTORY 2LL3

Alternates with HISTORY 2LA3.

This course is administered by the Department of Classics.

HISTORY 2LD3 HISTORY OF ANCIENT ROME II

Rome from the dictatorship of Caesar to Late Antiquity, with particular attention to the political, military and social developments in the light of literary and archaeological evidence. (No Greek or Latin required.)

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: CLASSICS 2LD3

Antirequisite: CLASSICS 2LL3, HISTORY 2LL3

Alternates with HISTORY 2LB3.

This course is administered by the Department of Classics.

HISTORY 2M03 EARLY MODERN BRITAIN, 1500-1800

A thematic study of British culture, society and governance between 1500 and 1800 A.D.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

Antirequisite: HISTORY 2N06

HISTORY 2MM3 BRITAIN IN THE MODERN ERA, 1800-2000

The political, social, economic and cultural history of Britain over the last two centuries, with particular attention to the domestic impact of the British imperial experience.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

Antirequisite: HISTORY 2N06

HISTORY 2P03 HISTORICAL INQUIRY

An introduction to the systematic investigation of historical issues and problems in a small class setting. Topics will vary, representative of the interests of the department's teaching staff.

Three hours (seminar); one term

Prerequisite: Registration in Level II of an Honours program in History or permission of the instructor

HISTORY 2Q03 IMPERIAL RUSSIA

A survey of Russian history from Peter the Great to the Revolutions of 1917.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

Antirequisite: HISTORY 3H06

HISTORY 2QQ3 THE SOVIET UNION

A history of the Soviet Union from 1917 to the present with an emphasis on social history, culture and identity.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

Antirequisite: HISTORY 3H06

HISTORY 2R03 U.S. HISTORY TO THE CIVIL WAR

A survey of the political, cultural, social and economic development of the United States to 1877, from the colonial and revolutionary eras to the Civil War and Reconstruction.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

HISTORY 2RR3 U.S. HISTORY SINCE THE CIVIL WAR

A survey of the political, cultural, social and economic development of the United States from Reconstruction to the present.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

HISTORY 2S03 WAR IN THE WEST, 1850-1945

A survey of the development of warfare in the Western World from 1850 to 1945. Particular attention is paid to the two World Wars in the twentieth century.

Three hours; one term

Prerequisite: Registration in Level II or above

Cross-list: PEACE ST 2S03

HISTORY 2T03 SURVEY OF CANADIAN HISTORY, BEGINNINGS TO 1885

A survey of the political, cultural, social and economic development of Canada to 1885, from first nations and colonial origins to Confederation and the North West Rebellion.

Three hours (two lectures, one tutorial); one term

Prerequisite: Registration in Level II or above

HISTORY 2TT3 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

HISTORY 2U03 HISTORICAL ORIGINS OF GLOBALIZATION, 1200-1700

An introduction to interpretations of globalization, the appearance and expansion of cross-cultural trade systems, colonization and population diasporas.

Three hours (two lectures, one tutorial); one term

Prerequisite: Registration in Level II or above

HISTORY 2UU3 HISTORICAL ORIGINS 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

HISTORY 3A03 THE OTTOMANS AND THE WORLD AROUND THEM

This course places the Ottoman Empire (1300-1918) in the context of its neighbours in Europe and Asia. It will address themes such as the confrontation of a pre-modern empire with capitalism and modernity in the age of nationalism.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

HISTORY 3AA3 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 3F03

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 3BB3 AFRICA AND THE AFRICAN DIASPORA

An exploration of the voluntary and involuntary movements of peoples of African ancestry across the continental homeland, their dispersion around the world and return to Africa.

Three lectures; one term

Prerequisite: Registration in Level II or above

HISTORY 3D03 FRANCE IN ENLIGHTENMENT AND REVOLUTION

A study of change in eighteenth-century France, with emphasis on the origins, nature and impact of the Enlightenment and the French Revolution.

Three hours (lectures and discussion); one term

Prerequisite: Six units of History and registration in Level II or above

HISTORY 3DD3 THE JEWISH WORLD IN NEW TESTAMENT TIMES

A study of Judaism in the Greco-Roman World. The course will explore selected questions in political history, the development of sects and parties, the role of the temple, apocalypticism and the Dead Sea Scrolls.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level II or above

Cross-list: RELIG ST 3DD3

This course is administered by the Department of Religious Studies.

HISTORY 3EE3 THE GREEK HISTORIANS

The study in translation of Herodotus, Thucydides and other Greek historical writers, with consideration of the evolution of their genre and their contributions to the development of historiography.

Three lectures; one term

Prerequisite: Six units from HISTORY 2K03, 2L03, 2LA3, 2LB3 or registration in Level III or above of a program in Classics

Cross-list: CLASSICS 3EE3

This course is administered by the Department of Classics.

HISTORY 3F03 MEDIEVAL SOCIETY

An examination of the aristocratic, monastic, urban and rural communities of the Middle Ages. Attention will be given to patterns of social organization as well as to such specific themes as gender, popular piety, justice and warfare. Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

HISTORY 3FF3 NAZI GERMANY

This course examines the origins and growth of National Socialism, its twelve years in power and the war that led to its demise. Themes under consideration will also include daily life in Germany in the 1930s and the Holocaust.

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 3GG3 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 2B06

HISTORY 3HH3 ROMAN SLAVERY

An examination of Roman slavery using a variety of sources (historical and juridical texts, funerary inscriptions, archaeological evidence) in order to determine its place in Roman social structure and its importance to the ancient economy and culture.

Three lectures; one term

Prerequisite: Six units from HISTORY 2K03, 2LC3, 2LD3, 2LL3, CLASSICS 2P06 or registration in Level III or above of a program in Classics

Cross-list: CLASSICS 3HH3

Not open to students with credit in CLASSICS 3MM3 or HISTORY 3MM3 if the topic was Roman Slavery.

This course is administered by the Department of Classics.

HISTORY 3I03 THE INTERNATIONAL RELATIONS OF THE EUROPEAN POWERS, 1870-1945

An examination of the origins and course of the First World War, the failure of post-war stabilization; and the origins and course of the Second World War.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: PEACE ST 3I03

HISTORY 3I13 AMERICAN FOREIGN RELATIONS SINCE 1898

Survey of major events and turning points of U.S. diplomatic history since the late 19th century. Emphasis on cultural dimensions of the American empire and selected historiographical controversies.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

Antirequisite: PEACE ST 3I13

HISTORY 3J03 THE UNITED STATES IN THE 1960s

An examination of the political, social and cultural changes that occurred in the United States during the 1960s. Topics include the civil rights struggle, Black Power movement, New Left, opposition to the Vietnam War, counterculture, feminism and the conservative backlash.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

HISTORY 3JJ3 CRIME, CRIMINAL JUSTICE AND PUNISHMENT IN MODERN HISTORY

A study of the changing face of the institutions of criminal justice and of criminal behaviour, as revealed in statistical and conventional historical works. The focus will be on North America, Great Britain and France.

Three lectures; one term

Prerequisite: Registration in Level II or above, with a minimum of six units of History

HISTORY 3KK3 THE VIETNAM WAR

The history of the First and Second Indochina Wars (1945-1973) is examined from multiple perspectives. Explores how and why the war was fought, as well as its global legacy.

Prerequisite: Registration in Level II or above

Antirequisite: PEACE ST 3KK3

HISTORY 3L03 SOCIAL ACTIVISM, 1500-2000

A thematic study of community activism in Europe and North America. Students will be exposed to the religious, socio-economic and political contexts of social activism and the historical theory and practice of community-based actions

Three hours; one term

Prerequisite: Registration in Level II or above

Cross-list: PEACE ST 3L03

HISTORY 3M03 GREEK INTELLECTUAL REVOLUTION

A study of the birth of rationalistic and naturalistic thought in Greece, placing this intellectual revolution in its social, political and cultural context. Three lectures; one term

Prerequisite: Six units from HISTORY 1L03, 1M03, 2K03, 2L03, 2LA3, 2LB3, CLASSICS 2P06 or registration in Level III or above of a program in Classics

Cross-list: CLASSICS 3M03

Offered in alternate years.

This course is administered by the Department of Classics.

HISTORY 3MM3 TOPICS IN ANCIENT HISTORY

Studies of Greek or Roman history and institutions. Consult the Department for the topic to be offered.

Three lectures; one term

Prerequisite: Six units from HISTORY 2K03, 2L03, 2LA3, 2LB3, 2LC3, 2LD3, 2LL3 or registration in Level III or above of a program in Classics

Cross-list: CLASSICS 3MM3

HISTORY 3MM3 may be repeated, if on a different topic, to a total of six units.

This course is administered by the Department of Classics.

HISTORY 3N03 THE HISTORY OF THE CANADIAN WORKING CLASS

An examination of social, political and economic issues shaping the development of the Canadian working class. This includes investigation of the ideological divisions, ethnic relations and gender roles within the working class and within the labour movement.

Three lectures; one term

Prerequisite: Registration in Level II or above

HISTORY 3NN3 CANADA'S REVOLUTIONS: 1939-1982

An intensive treatment, through the lenses of society, ideology and politics, of the revolutionary experience of the post war decades. The course will examine the country's transition from a prevailing conservative liberalism premised on community solidarity to a liberal democracy which exalts individual rights.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

HISTORY 3O03 SLAVERY IN THE ATLANTIC WORLD

An examination of slavery in the Americas, from the fifteenth to the nineteenth centuries. Topics to be examined include plantations and labour regimes; gender, slave health; slave resistance; Afro-creole cultures; emancipation.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

Cross-list: PEACE ST 3O03

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); one term

Prerequisite: Registration in Level II or above

Offered in alternate years.

HISTORY 3QQ3 THE SOVIET UNION THROUGH FILM

Soviet history through the prism of Soviet film as a primary source from 1924 to the present.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

HISTORY 3R03 EUROPE BETWEEN THE WARS, 1918-1938

This course explores the political radicalism, social transformation and cultural experimentation which defined Europe in the roaring 1920s and the crisis-ridden 1930s.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

HISTORY 3RR3 WAR AND SOCIETY IN 20TH-CENTURY BRITAIN

Imperialism and Society in Britain: the impact of World War I and World War II on the British Empire.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

Cross-list: PEACE ST 3RR3

HISTORY 3T03 EARLY MODERN FRANCE, 1450-1789

France was without question one of the most powerful polities in early modern Europe and serves as a useful focal point for understanding the emergence of absolutism, colonization, imperialism, urbanization and changing gender and social roles.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

HISTORY 3TT3 LEISURE AND ENTERTAINMENT IN GREECE AND ROME

Social life, leisure and festivals in the Greek and/or Roman world. Topics may include banqueting, bathing, theatre and spectacle and religious holidays. Literature, art and archaeological evidence will be considered.

Three lectures; one term

Prerequisite: Six units of Level II or III Classics or registration in Level III or above of a program in Classics

Cross-list: CLASSICS 3TTF3

Antirequisite: CLASSICS 3T03

This course is administered by the Department of Classics.

Offered in alternate years.

HISTORY 3U03 THE SOCIAL HISTORY OF TRUTH

An examination of the history of modern science, putting special emphasis on the production and consumption of knowledge.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

HISTORY 3UU3 HISTORY OF THE FUTURE

A study of the history of how human technological capacity in interaction with social ethics has driven imagination of the future and helped shape the future imagined.

Three hours (lectures and discussion); 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 3VV3 WAR AND SOCIETY IN EARLY MODERN BRITAIN 1485-1815

A thematic study of the nature of British warfare and its relationship to society during the period when Britain developed as a major military and naval power.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

Cross-list: PEACE ST 3VV3

HISTORY 3W03 WOMEN IN CANADA AND THE U.S. TO 1920

This course examines key areas of women's history, such as indigenous cultures, slavery, immigration, religion, *witchcraft*, the family, sexuality, paid and unpaid labour and the first wave of the women's movement.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

Cross-list: WOMEN ST 3G03

Antirequisite: HISTORY 3X03

HISTORY 3WW3 WOMEN IN CANADA AND THE U.S. FROM 1920

This course examines key areas of women's history, such as the impact of the Great Depression and the Second World War, the civil rights movement, the sexual revolution and the second wave of the women's movement.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

Cross-list: WOMEN ST 3GG3

Antirequisite: HISTORY 3X03

HISTORY 3X03 ROMAN RELIGION

A study of the role of religion in Roman public and private life using literary, documentary and archaeological evidence.

Three lectures; one term

Prerequisite: Six units from HISTORY 2K03, 2LC3, 2LD3, 2LL3 or registration in Level III or above of a program in Classics

Cross-list: CLASSICS 3X03

This course is administered by the Department of Classics.

Offered in alternate years.

HISTORY 3Y03 DEATH, DISEASE AND DEGENERATION: A HISTORY OF HEALTH AND HEALTH CARE IN CANADA

Explores the history of health and health care in Canada, from the first Western European settlements to the present day.

Two lectures one small group session (one hour); one term

Prerequisite: Registration in Level II or above

Cross-list: HEALTHST 3Y03, HTH SCI 3Y03

This course is administered by the Bachelor of Health Sciences (Honours) program.

HISTORY 3Z03 JUDAISM, THE JEWISH PEOPLE AND THE BIRTH OF THE MODERN WORLD

On the lures and threats of the modern world from the early eighteenth to the early twentieth century. Topics include: Jewish philosophy in the Age of Reason, new Jewish denominations, assimilation, early Zionism, Yiddish socialism, the beginnings of modern anti-Semitism movements of cultural renewal.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level II or above

Cross-list: RELIG ST 3Z03

Antirequisite: RELIG ST 2X03

This course is administered by the Department of Religious Studies.

HISTORY 3ZZ3 JUDAISM AND THE JEWISH PEOPLE IN THE TWENTIETH CENTURY

Jews and Judaism in a century of catastrophe and renewal. The progress of 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 3ZZ3

Antirequisite: RELIG ST 2XX3

This course is administered by the Department of Religious Studies.

Note:

Level IV seminars are open only to students registered in Levels III and IV of an Honours History program. Enrolment will be limited to approximately 15 students per seminar. The Department is able to offer only a selection of the seminars listed below every year. Information on courses may be obtained from the Department. Seminar places will be allotted each March for the succeeding session; early application to the Department is essential.

HISTORY 4A06 RACISM AND HUMAN RIGHTS IN POST-CONFEDERATION CANADA

This course examines ethnic and racist prejudices and discrimination in Canada including attitudes towards immigrants from Asia and Europe, African Canadian and Indigenous peoples. It will also explore the efforts of human rights advocates.

Seminar (two hours); two terms

Prerequisite: One of HISTORY 2J06, 2TT3 or 2UU3; and registration in Level III or IV of an Honours program in History

Departmental permission required.

HISTORY 4AA6 EARLY MODERN BRITAIN, 1500-1800

Selected topics in the political, religious, intellectual, and social life of the British peoples, 1500-1800.

Seminar (two hours); two terms

Prerequisite: One of HISTORY 2M03, 2N06 or 3SS3; and registration in Level III or IV of any Honours program in History

Departmental permission required.

HISTORY 4B06 MODERN CANADA, 1896-1968: AN INTELLECTUAL AND CULTURAL HISTORY

An intensive study of the shaping of the twentieth-century outlook in English-speaking Canada. Topics will include the growth of the welfare state, ideologies (liberalism, conservatism, socialism, feminism), the 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 2T03, 2TT3 or 3NN3; and registration in Level III or IV of any Honours program in History

Departmental permission required.

HISTORY 4BB6 MODERN JAPAN

Japan from the Meiji Restoration to the post-war resurgence, with emphasis on political developments and social change.

Seminar (two hours); two terms

Prerequisite: HISTORY 3B03 and registration in Level III or IV of any Honours program in History; or JAPAN ST 3B03 (HISTORY 3B03) with a grade of at least B- and registration in Level III or IV of the Japanese Studies program
Departmental permission required.

HISTORY 4C06 MODERN EUROPEAN CULTURE IN CRISIS

An examination of European intellectual and cultural history from the late nineteenth to the mid-twentieth centuries. Themes include the encounter with modernity; the intersection of culture and politics; the impact of two world wars; and the response of intellectuals, artists and scientists to ideological polarization.

Seminar (two hours); two terms

Prerequisite: One of HISTORY 2C06, 2FF3, 2II3, 2QQ3, 2S03, 3H06, 3HH3, 3I03, 3Q03, 3QQ3, 3R03; and registration in Level III or IV of any Honours program in History

Departmental permission required.

HISTORY 4D06 ANCIENT CIVILIZATIONS

A thematic study of selected civilizations in the ancient world.

Seminar (two hours); two terms

Prerequisite: One of HISTORY 2I06, 2L03, 2LL3, 3LL3, 3MM3; and registration in Level III or IV of any Honours program in History

Departmental permission required.

HISTORY 4DD6 HUMAN RIGHTS IN AFRICA: HISTORICAL PERSPECTIVES

An exploration of the history of human rights in Africa in the colonial and post-colonial periods.

Seminar (two hours); two terms

Prerequisite: One of HISTORY 2J03, 2JJ3, 3BB3 or 3O03; and registration in Level III or IV of any Honours program in History

Departmental permission required.

HISTORY 4E06 THE LEGACY OF THE FIRST WORLD WAR ON BRITISH SOCIETY

This course examines the social, political and cultural consequences of the First World War on Britain, both at the time of its fighting and long after the fighting had ended.

Seminar (two hours); two terms

Prerequisite: One of HISTORY 2MM3, 2N06, 3PP3 or 3RR3; and registration in Level III or IV of any Honours program in History

Departmental permission required.

HISTORY 4F06 HEALTH AND MEDICINE IN THE MODERN WESTERN WORLD

An examination of public health and medicine in the Modern Western World, with particular emphasis on Britain and North America, c.1760-1945. Topics will include: the impact of infectious diseases on First Nations' society; urban sanitary reform; the emergence of the medical profession; and the rise of universal health insurance.

Seminar (two hours); two terms

Prerequisite: One of HISTORY 2TT3, 3V03 or 3Y03; and registration in Level III or IV of any Honours program in History

Departmental permission required.

HISTORY 4GG6 MIDDLE EASTERN AND ISLAMIC HISTORY

Aspects of the social history of the Middle East and Islamic world, such as the Muslim-Christian encounter, gender and ethnicity.

Seminar (two hours); two terms

Prerequisite: One of HISTORY 2EA3, 2EB3, 2HH3, 3A03, 3AA3; and registration in Level III or IV of any Honours program in History

Departmental permission required.

HISTORY 4I06 WOMEN AND SOCIAL MOVEMENTS IN THE NINETEENTH- AND TWENTIETH-CENTURY UNITED STATES

Women's involvement in social movements such as anti-lynching, unionization, feminism and civil rights is used to discuss power, social change, race, femininity, masculinity, and class in U.S. history.

Seminar (two hours); two terms

Prerequisite: One of HISTORY 2FF3, 2R03, 2RR3 or 3WW3; and registration in Level III or IV of any Honours program in History

Not open to students with credit in HISTORY 4J06 THE UNITED STATES SINCE 1865 if taken in the 2000, 2002 or 2003 academic years.

Departmental permission required.

HISTORY 4JJ6 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 2RR3, 3FF3, 3II3 or 3KK3; and registration in Level III or IV of any Honours program in History

Departmental permission required.

HISTORY 4K06 ENVIRONMENT AND ENVIRONMENTALISM IN MODERN NORTH AMERICA, 1890-1990

Explores how different social groups in the United States and Canada confronted the sometimes adverse impact of urban and industrial growth on the physical environment of their communities.

Seminar (two hours); two terms

Prerequisite: Registration in Level III or IV of any Honours program in History

Departmental permission is required.

HISTORY 4N06 SOCIETY AND CULTURE IN THE ATLANTIC WORLD

An examination of selected themes in the history of the Atlantic world from the sixteenth to the nineteenth centuries. Topics may include race, gender and class; slavery and emancipation; revolution and the transfer of revolutionary ideas.

Prerequisite: One of HISTORY 2AA3, 2D03, 2M03, 2R03, 2UU3, 3O03; and registration in Level III or IV of any Honours program in History

Departmental permission required.

HISTORY 4O06 RUSSIA AND REVOLUTION

The Soviet experiment from 1917 to the death of Stalin and beyond with special emphasis on the issue of identity.

Seminar (two hours); two terms

Prerequisite: One of HISTORY 2II3, 2Q03, 2QQ3, 2S03, 3H06, 3QQ3; and registration in Level III or IV of any Honours program in History

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, 2FF3, 2II3, 2QQ3, 2S03, 3H06, 3HH3, 3I03, 3Q03, 3QQ3 or 3R03; and registration in Level III or IV of any Honours program in History

Departmental permission required.

HISTORY 4Q06 RELIGION AND SOCIETY IN LATE ANTIQUITY

Selected themes in late Roman and early Christian history.

Seminar (two hours); two terms

Prerequisite: One of HISTORY 2CC3, 2DD3, 2F03, 2I06, 2K03, 2L03, 2LA3, 2LB3, 2LC3, 2LD3, 2LL3, 3C03, 3CC3, 3F03, 3H03, 3HH3, 3LL3, 3MM3; and registration in Level III or IV of any Honours program in History

Departmental permission required.

HISTORY 4R06 REVOLUTIONS IN THE HISTORY OF SCIENCE AND TECHNOLOGY

An examination of the historiographies of science and technology, with special focus on science and technology's social functions and interactions.

Seminar (two hours); two terms

Prerequisite: One of HISTORY 2EE3, 2HH3 or 3UU3; and registration in Level III or IV of any Honours program in History

Antirequisite: HISTORY 4M06

Departmental permission required.

HISTORY 4S06 EUROPEAN REFORMATIONS

This seminar course examines religion as a powerful cultural influence in Europe during the sixteenth century. Students will study the major Catholic and Protestant religious reform movements as well as the interaction of Christian and non-Christian traditions.

Seminar (two hours); two terms

Prerequisite: One of HISTORY 2CC3, 2DD3, 2F03, 2HH3, 2I06, 3F03, 3T03; and registration in Level III or IV of any Honours program in History

Departmental permission required.

HISTORY 4U06 INDEPENDENT RESEARCH

A reading and/or research program under the supervision of one member of the Department. A major paper is required, as well as a formal oral examination.

Prerequisite: Registration in Level IV of any Honours program in History with a CA of at least 9.0; and permission of the Department

Departmental permission required.

**HISTORY 4W06 THE NORTH AMERICAN CITY,
1700 TO THE PRESENT**

An examination of: founders' designs; practices and influence of business communities; the impact of technologies and architecture; spatial organization of class and ethnicity; shelter and urban services; differences between Canadian and American cities.

Seminar (two hours); two terms

Prerequisite: One of HISTORY 2R03, 2RR3, 2T03 or 2TT3; and registration in Level III or IV of any Honours program in History
Departmental permission required.

HISTORY 4Y06 THE SECOND WORLD WAR

Emphasis will be placed on the military and diplomatic aspects of the subject.

Seminar (two hours); two terms

Prerequisite: One of HISTORY 2C06, 2S03 3I03, 3Q03 or 3R03; and registration in Level III or IV of any Honours program in History
Departmental permission required.

HUMANITIES (GENERAL)**Courses** *If no prerequisite is listed, the course is open.***HUMAN 2C03 CRITICAL THINKING**

This course aims to improve skills in analyzing and evaluating arguments and presentations found in everyday life and academic contexts, and to improve critical judgement.

Two lectures; one tutorial; one term

Prerequisite: Registration in Level II or above

Antirequisite: ARTS&SCI 1B06, CMST 2W03, PHILOS 2R03

HUMAN 2C03 is administered by the Department of Philosophy.

HUMAN 3W03 APPLIED HUMANITIES I

Students gain applied experience in a field related to a Humanities discipline by applying skills and knowledge acquired in undergraduate studies in practical areas such as research projects, pedagogy and work placements. Students participate in defining learning goals and experiences.

Prerequisite: Registration in Level III or IV of any Honours program offered by the Faculty of Humanities. Students must contact the Dean's Office, CNH-112, for information on opportunities that are available for the coming year.
Permission of the Associate Dean of the Faculty of Humanities is required.

HUMAN 4W03 APPLIED HUMANITIES II

Students gain applied experience in a field related to a Humanities discipline by applying skills and knowledge acquired in undergraduate studies in practical areas such as research projects, pedagogy and work placements. Students participate in defining learning goals and experiences.

Prerequisite: Registration in Level III or IV of any Honours program offered by the Faculty of Humanities. Students must contact the Dean's Office, CNH-112, for information on opportunities that are available for the coming year.

Permission of the Associate Dean of the Faculty of Humanities is required.

INDIGENOUS STUDIES

WEB ADDRESS: <http://www.mcmaster.ca/indigenous/default.htm>

Hamilton Hall, Room 103

Ext. 27426

Director

D.J. Martin-Hill/B.A., M.A., Ph.D. (McMaster)

Committee of Instructors

T. Deer, Mohawk Language Instructor

R. Hill/M.A. (SUNY)

N. General

J. Longboat

T. McCarthy/B.A., M.A. (Western Ontario), Ph.D. (McMaster)

A. Darnay, Ojibwe Language Instructor/B.A. (McMaster), B.Ed. (Nipissing), B.A. (Algoma)

Associate Elders

W. Cooke, Ojibwe

A. General, Confederacy Chief, Six Nations

N. General, Faithkeeper, Six Nations

President's Committee on Indigenous Issues**Co-Chairs**

T. Deer (Six Nations Community Representative)

P. Daenzer (McMaster University Representative)

INDIGENOUS STUDIES ...**Courses** *If no prerequisite is listed, the course is open.***INDIG ST 1A03 INTRODUCTION TO INDIGENOUS STUDIES**

An introduction to Indigenous peoples' world views from pre-contact to the Indian Act of 1876. Indigenous history and philosophy will be examined along with the issues of representation and colonialism.

Three hours (lectures and seminars); one term

Antirequisite: INDIG ST 1A06

**INDIG ST 1AA3 INTRODUCTION TO CONTEMPORARY
INDIGENOUS STUDIES**

This course will explore the relationship between Indigenous peoples and mainstream society in the twentieth-century with regard to governmental policy, land claims, economic development, and self-determination.

Three hours (lectures and seminars); one term

Antirequisite: INDIG ST 1A06

INDIG ST 2A03 INDIGENOUS PEOPLES' SPIRITUALITY

This course will examine the spirituality based knowledge of Aboriginal peoples across North America. The philosophies, world view, sacred ways of knowing and relationship to the natural world will be explored.

Three hours (lectures and seminars); one term

Prerequisite: INDIG ST 1A03, 1AA3; or one of CAYUGA 1Z03, MOHAWK 1Z03, OJIBWE 1Z03; or permission of the instructor

Antirequisite: INDIG ST 2A06

**INDIG ST 2AA3 INDIGENOUS KNOWLEDGE
AND METHODOLOGY**

This course will explore the basis of Indigenous knowledge and how that translates into theory and methodology. It explores a range of interdisciplinary approaches based on current work of Indigenous scholars redefining the field of Indigenous research.

Three hours (lectures and seminars); one term

Prerequisite: INDIG ST 1A03, 1AA3; or one of CAYUGA 1Z03, MOHAWK 1Z03, OJIBWE 1Z03; or permission of the instructor

Antirequisite: INDIG ST 2A06

**INDIG ST 2B03 HISTORY OF INDIGENOUS
PEOPLES' SOVEREIGNTY**

An examination of North America Indigenous People's political and economic history in the pre-contact, early contact, and colonial eras within a post-colonial context. Topics will include: self-determination, resource management, land claims, and economic development.

Three hours (lectures and seminars); one term

Prerequisite: INDIG ST 1A03, 1AA3; or one of CAYUGA 1Z03, MOHAWK 1Z03, OJIBWE 1Z03; or permission of the instructor

**INDIG ST 2C03 CONTEMPORARY INDIGENOUS SOCIETIES
AND ISSUES: SELECTED TOPICS**

2007-2008 Topic: TBA

A review of the geographic, cultural and demographic composition of Inuit, First Nations and Metis, and of the major current developments on land, cultural integrity, treaties, economic development, community social development and self-government.

Three hours (lectures and seminars); one term

Prerequisite: INDIG ST 1A03, 1AA3; or one of CAYUGA 1Z03, MOHAWK 1Z03, OJIBWE 1Z03; or permission of the instructor

INDIG ST 2C03 may be repeated, if on a different topic, to a total of six units.

**INDIG ST 2D03 TRADITIONAL INDIGENOUS
ECOLOGICAL KNOWLEDGE**

This course is a study of the ecological teachings of Indigenous peoples and of their relationships with the natural environment in historical and contemporary times.

Three hours (lectures and seminars); one term

Prerequisite: INDIG ST 1A03, 1AA3; or one of CAYUGA 1Z03, MOHAWK 1Z03, OJIBWE 1Z03; or permission of the instructor

Not open to students with credit in INDIG ST 3CC3, if the topic was Traditional Indigenous Ecological Knowledge.

**INDIG ST 3C03 STUDY OF IROQUOIS FIRST NATIONS
IN CONTEMPORARY TIMES**

An intensive examination of the Iroquois Confederacy and its attempts to maintain its culture, socio-political systems and economic independence. Three hours (lectures and seminars); one term
Prerequisite: Six units of Level II Indigenous Studies or permission of the instructor

**INDIG ST 3CC3 CONTEMPORARY INDIGENOUS SOCIETIES:
SELECTED TOPICS**

2007-2008 Topic: TBA

An intensive examination of selected political, economic, or social problems faced by selected Indigenous peoples. Three hours (lectures and seminars); one term
Prerequisite: Six units Level II Indigenous Studies or permission of the instructor

INDIG ST 3CC3 may be repeated, if on a different topic, to a total of six units.

**INDIG ST 3D03 CONTEMPORARY NATIVE
LITERATURE IN CANADA**

A study of significant works by Native writers who give voice to their experience in Canada. Issues to be examined include appropriation of voice, Native identity, women in Indigenous societies, and stereotyping. Three hours (lectures and seminars); one term
Prerequisite: Six units of Level II Indigenous Studies or six units of Level II English or permission of the instructor

Cross-list: CSCT 3W03, 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: Six units of Level II Indigenous Studies or six units of Level II English or permission of the instructor

Cross-list: CSCT 3X03, ENGLISH 3X03, PEACE ST 3X03

**INDIG ST 3G03 INDIGENOUS CREATIVE ARTS
AND DRAMA: SELECTED TOPICS**

2007-2008 Topic: TBA

The creative processes of Indigenous cultures are studied through the examination of selected forms of artistic expression, which may include art, music, dance and/or drama. Three hours (lectures and seminars); one term

Prerequisite: Six units of Level II Indigenous Studies or permission of the instructor

INDIG ST 3G03 may be repeated, if on a different topic, to a total of nine units.

INDIG ST 3H03 INDIGENOUS MEDICINE I - PHILOSOPHY

This course will examine the Aboriginal concepts of health and wellness. The wholistic traditional approach will be used in the classroom as well as in visits by elders, medicine people and class trips to places of health, wellness and healing. Three hours (lectures and seminars); one term

Prerequisite: Six units of Level II Indigenous Studies or permission of the instructor

Not open to students with credit in INDIG ST 3CC3, if the topics were Traditional Approaches to Healing and Wellness or Indigenous Peoples Health.

INDIG ST 3HH3 INDIGENOUS MEDICINE II - PRACTICAL

This course will examine the concept of traditional medicines, their histories and their connection to Aboriginal philosophies of wellness (studied in Part I); procedures for procurement and use of the medicines will be addressed and emphasis will be placed on the reasons for efficacy. Three hours (lectures and seminars); one term

Prerequisite: Six units of Level II Indigenous Studies or permission of the instructor

Not open to students with credit in INDIG ST 3CC3, if the topics were Traditional Approaches to Healing and Wellness or Indigenous Peoples Health.

INDIG ST 3K03 INDIGENOUS HUMAN RIGHTS

A study of government policies and their impact on Indigenous Peoples, specifically Indian Affairs in Canada and the United States. Topics will include individual and collective rights of Indigenous Peoples and the conceptual problems which arise in a Westernized justice system. Three hours (lectures and seminars); one term

Prerequisite: Six units of Level II Indigenous Studies or permission of the instructor

INDIG ST 3L03 INDIGENOUS INDEPENDENT STUDY

In consultation with the Director of Indigenous Studies, students will research an approved topic, on the basis of materials outside normally available course offerings. A major paper will be required.

Prerequisite: Registration in Level II or III of the Combined B.A. in Indigenous Studies program or permission of the Director

CAYUGA ...

Courses If no prerequisite is listed, the course is open.

**CAYUGA 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

This course is administered by and offered at Six Nations Polytechnic, Ohsweken, Ontario.

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

This course is administered by and offered at Six Nations Polytechnic, Ohsweken, Ontario.

MOHAWK ...

Courses If no prerequisite is listed, the course is open.

**MOHAWK 1Z03 INTRODUCTION TO MOHAWK
LANGUAGE AND CULTURE**

This course will study the Mohawk language, in its spoken and written forms, in the context of Iroquoian cultural traditions, values, beliefs and customs. Three hours (lecture and seminars); one term

Antirequisite: MOHAWK 1Z06

MOHAWK 2Z03 INTERMEDIATE MOHAWK

This course expands on the vocabulary and the oral skills for the Mohawk language. In addition, the course reviews the written component of the language. Three hours (lecture and seminars); one term

Prerequisite: MOHAWK 1Z03 or 1Z06

Antirequisite: MOHAWK 2Z06

OJIBWE...

Courses If no prerequisite is listed, the course is open.

**OJIBWE 1Z03 INTRODUCTION TO OJIBWE
LANGUAGE AND CULTURE**

This course will study the Ojibwe language, in its spoken and written forms, in the context of Ojibwe cultural traditions, values, beliefs and customs. Three hours (lecture and seminars); one term

Antirequisite: OJIBWE 1Z06

OJIBWE 2Z03 INTERMEDIATE OJIBWE

This course expands on the vocabulary and the oral skills for the Ojibwe language. In addition, the course reviews the written component of the language. Three hours (lecture and seminars); one term

Prerequisite: OJIBWE 1Z03 or 1Z06

Antirequisite: OJIBWE 2Z06

INQUIRY

Courses If no prerequisite is listed, the course is open.

INQUIRY 1HU3 INQUIRY IN THE HUMANITIES

This introduction to the systematic investigation of an issue develops skills that will serve students well in their university careers. Students learn how to formulate questions, gather and interpret evidence and reach well-considered conclusions, using, as content, a topic central to research in the Faculty of Humanities. Three hours; one term

Prerequisite: Registration in Humanities I or Music I

INQUIRY 1SC3**INQUIRY IN SCIENCE I**

This introduction to the systematic investigation of an issue develops skills that will serve students well in their university careers. Students learn how to formulate questions, gather and interpret evidence, and reach well-considered conclusions, using, as content, a variety of Science-based topics. The choice of topics is guided by the students' interest.

One hour, term one; Two hours, term two

Prerequisite: Registration in Science I or Mathematics and Statistics I

Antirequisite: HTH SCI 4X03

Enrolment is limited.

INQUIRY 1SS3**INQUIRY IN THE SOCIAL SCIENCES**

The systematic investigation of any subject requires a set of widely applicable and transferrable skills. Students learn how to formulate questions, gather and interpret evidence, and reach well-considered conclusions. The content theme will be drawn from Social Sciences issues and will vary depending upon the subject expertise of the instructor.

Three hours; one term

Prerequisite: Registration in Social Sciences I or Kinesiology I

Not open to students with credit in INQUIRY 1HU3, 1SC3.

INQUIRY 2HS3**CONTROVERSIAL ISSUES IN HEALTH**

Students will explore the themes of Collaborations for Health from an interdisciplinary perspective with different viewpoints and debate offered in one of three thematic areas.

Three hours; one term

Prerequisite: Registration in Level I or II of any program or permission of the course coordinator

INQUIRY 3HS3**HEALTH RESEARCH SELECTIVE**

Students will work singly or in small groups with a faculty member in an area of McMaster University's Collaborations for Health Initiative. Students will present a final poster in a public forum.

Three hours; one term

Prerequisite: INQUIRY 2HS3. Students will be selected after submission of a letter of interest to the course coordinator.

ITALIAN

(SEE LINGUISTICS AND LANGUAGES, ITALIAN)

JAPANESE AND JAPANESE STUDIES

(SEE LINGUISTICS AND LANGUAGES, JAPANESE)

JEWISH STUDIES

(SEE INTERDISCIPLINARY MINORS AND THEMATIC AREAS)

KINESIOLOGY

WEB ADDRESS: <http://mcmaster.ca/kinesiology/>

Ivor Wynne Centre, Room 203

Ext. 24462

Faculty as of January 15, 2007**Chair**

Neil McCartney

Associate Chair (Undergraduate Program)

Nick Cipriano

Professors

Cameron J. Blimkie/B.A., B.P.E. (McMaster), M.A., Ph.D. (Western Ontario)
Digby Elliott/B.Sc., M.Sc., Ph.D. (Waterloo), Senior Canada Research
Chair, Motor Control in Special Populations

Audrey Hicks/B.P.E., M.Sc., Ph.D. (McMaster)

Sue Inglis/B.P.E., M.A. (Alberta), Ph.D. (Ohio State)

Timothy D. Lee/B.H.K., M.A. (Windsor), Ph.D. (Louisiana State)

Neil McCartney/B.Ed. (Exeter), Ph.D. (McMaster)

Digby G. Sale/B.P.H.E. (Toronto), M.A. (Western Ontario), Ph.D. (McMaster)

Philip G. White/B.Sc. (London), Cert.Ed. (Carnegie), M.Sc., Ph.D. (Waterloo)

Associate Professors

Nancy B. Bouchier/B.A., M.A., Ph.D. (Western Ontario)

Steven Bray/B.A., M.A. (Western Ontario), Ph.D. (Waterloo)

Nick Cipriano/B.P.H.E., M.Sc. (Lakehead)

James J. Dowling/B.H.K., M.H.K. (Windsor), Ph.D. (Waterloo)

Martin J. Gibala/B.H.K. (Windsor), M.Sc. (McMaster), Ph.D. (Guelph)

Robert J. Henderson/B.P.E. (McMaster), M.A., Ph.D. (Alberta)

James Lyons/B.A., M.Sc. (McMaster), Ph.D. (Simon Fraser)

Maureen J. MacDonald/B.Sc. (Acadia), M.Sc., Ph.D. (Waterloo)

Kathleen A. Martin Ginis/B.Sc. (Toronto), M.A. (Western Ontario), Ph.D. (Waterloo)

Stuart M. Phillips/B.Sc., M.Sc. (McMaster), Ph.D. (Waterloo)

David C. Wilson/Cert.Ed. (St. Paul's College), B.Ed. (Bristol), M.A. (York)

Assistant Professors

Barry Bartlett/B.P.H.E. (Toronto), M.A. (Western Ontario), CATA (C)

Peter J. Keir/B.Sc. (Waterloo), Ph.D. (Waterloo)

Gianni Parise/B.Kin., M.Sc., Ph.D. (McMaster)

James R. Potvin/B.H.K. (Windsor), Ph.D. (Waterloo)

Associate Members

Vicki Galea/(Rehabilitation Science) B.Sc., M.Sc. (Waterloo), Ph.D. (McMaster)

Markand V. Kamath/(Medicine) B. Eng. (Mysore), M.S., Ph.D. (Indian Inst. of Tech., Madras), Ph.D. (McMaster)

Robert S. McKelvie/(Medicine) B.Sc., M.Sc., M.D. (Western Ontario), Ph.D. (McMaster)

Michael Pierrynowski/(Rehabilitation Science) B.Sc., M.Sc. (Waterloo), Ph.D. (Simon Fraser)

Mark A. Tarnopolsky/(Medicine) B.P.E., M.D., Ph.D., F.R.C.P. (C), (McMaster)

Jean Wessel/(Rehabilitation Science) B.Sc. (McGill) M.H.Sc. (McMaster) Ph.D. (Alberta)

Laurie Wishart/(Rehabilitation Science) Dip. P&OT, 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.
3. KINESIOL 1Y03 and 1YY3 are available to non-Kinesiology students.
4. The following courses are available for elective credit for students enrolled in Level III or above of a non-Kinesiology program: KINESIOL 3DD3, 3I03, 3JJ3, 3M03, 3P03, 3S03, 3SS3, 3T03, 3Y03, 4D03, 4G03, 4M03 and 4T03. Space for such students is limited and places are assigned on a first come basis.
5. Kinesiology students who previously completed KINESIOL 4P03 may use this course to satisfy Psychology requirements for Kinesiology students pursuing a Minor in Psychology.
6. KINESIOL 2G03 and 3SS3 may be used to satisfy Health Studies requirements for Kinesiology students pursuing a Minor in Health Studies.
7. KINESIOL 4SS3 may be used to satisfy Gerontology requirements for Kinesiology students pursuing a Minor in Gerontology.
8. Some Level III and IV Kinesiology courses may require current CPR/First Aid certification. Students are responsible for checking course outlines and ensuring this requirement is met.

Courses

All courses are open only to Kinesiology students unless otherwise specified. (See Notes 3 and 4 above.)

KINESIOL 1A03 HUMAN ANATOMY AND PHYSIOLOGY I

An introduction to the basic embryology and tissue development and examination of the anatomy and physiology of the skeletal, nervous, cardiovascular, lymphatic and respiratory systems.

Three hours (lectures), two hours (labs/tutorials); one term

Prerequisite: Registration in Kinesiology I

Antirequisite: HTH SCI 1D06, 1H03, 1H06, 1HH3, 2F03, 2FF3, 2L03, 2LL3, KINESIOL 1A06, 1Y03, 1YY3

Not open to students with credit or registration in BIOLOGY 4G06.

KINESIOL 1AA3 HUMAN ANATOMY AND PHYSIOLOGY II

An examination of the anatomy and physiology of the articular, muscular, gastrointestinal, endocrine, renal and reproductive systems.

Three hours (lectures), two hours (labs/tutorials); one term

Prerequisite: KINESIOL 1A03 and registration in Kinesiology I

Antirequisite: HTH SCI 1D06, 1H03, 1H06, 1HH3, 2F03, 2FF3, 2L03, 2LL3, KINESIOL 1A06, 1Y03, 1YY3

Not open to students with credit or registration in BIOLOGY 4G06.

KINESIOL 1C03 PHYSICAL ACTIVITY EPIDEMIOLOGY AND HEALTH

Introduction to the study of physical activity epidemiology and examines the relationship between physical activity and health.

Three hours (lectures), one hour (labs/tutorials); one term

Prerequisite: Registration in Kinesiology I

KINESIOL 1E03 PSYCHOMOTOR BEHAVIOUR

Examination of the behavioral and psychological principles of motor control and motor learning. Topics include classification and measurement of motor performance, sensory processes, perception, memory, attention and feedback.

Three hours (lectures), one hour (lab/tutorials); one term

Prerequisite: Registration in Kinesiology I

KINESIOL 1F03 INTRODUCTION TO HUMAN NUTRITION AND HEALTH

Introduction to the study of human nutrition and examines the role of nutritional practice and physical activity in the prevention and treatment of cardiovascular disease, including obesity and diabetes.

Three hours (lectures), one hour (labs/tutorials); one term

Prerequisite: Registration in Kinesiology I

KINESIOL 1G03 RESEARCH METHODOLOGIES AND DATA ANALYSES

Introduction to the ways in which independent research initiatives are conducted in the discipline of kinesiology based on the generation of pertinent research questions and the testing of specific hypothesis.

Three hours (lectures), one hour (labs/tutorials); one term

Prerequisite: Registration in Kinesiology I

KINESIOL 1Y03 HUMAN ANATOMY AND PHYSIOLOGY I

An introduction to the basic embryology and tissue development and examination of the anatomy and physiology of the skeletal, nervous, cardiovascular, lymphatic and respiratory systems.

Three hours (lectures), two hours (labs/tutorials); one term

Completion of Biology U is strongly recommended.

Antirequisite: BIOLOGY 1J03, 2A03, HTH SCI 1D06, 1H03, 1HH3, 2F03, 2FF3, 2L03, 2LL3, KINESIOL 1A03, 1A06, 1AA3, 1X06

Not open to students registered in a Kinesiology program, Science I, the Bachelor of Health Sciences (Honours) program or to students with credit or registration in BIOLOGY 4G06.

KINESIOL 1YY3 HUMAN ANATOMY AND PHYSIOLOGY II

An examination of the anatomy and physiology of the articular, muscular, gastrointestinal, endocrine, renal and reproductive systems.

Three hours (lectures), two hours (labs/tutorials); one term

Prerequisite: KINESIOL 1Y03

Antirequisite: BIOLOGY 1J03, 2A03, HTH SCI 1D06, 1H03, 1HH3, 2F03, 2FF3, 2L03, 2LL3, KINESIOL 1A03, 1A06, 1AA3, 1X06

Not open to students registered in a Kinesiology program, Science I, the Bachelor of Health Sciences (Honours) program or to students with credit or registration in BIOLOGY 4G06.

KINESIOL 2A03 BIOMECHANICS

An introduction to mechanical principles and concepts as applied to human physical activity and the musculoskeletal system.

Three hours (lectures, lab); one term

Prerequisite: KINESIOL 1A06 and registration in Level II of a Kinesiology program

Prerequisite (Beginning in 2008-2009): KINESIOL 1A03 and 1AA3 (or 1A06); KINESIOL 1C03, 1E03, 1F03, 1G03 and registration in Level II of an Honours Kinesiology program

KINESIOL 2C03 NEUROMUSCULAR EXERCISE PHYSIOLOGY

Examination of neuromuscular function during exercise, with an emphasis on factors limiting strength, speed and power performance. Adaptations to training will also be considered, as well as training methods used to induce adaptations.

Three hours (lectures), two hours (labs/tutorials); one term

Prerequisite: KINESIOL 1A03 and 1AA3 (or 1A06) 1C03, 1E03, 1F03, 1G03 and registration in Level II of an Honours Kinesiology program; or registration in Honours Biology (Physiology Specialization)

Antirequisite: KINESIOL 2C06

First offered in 2008-2009.

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 1A03, 1AA3 (or 1A06) and registration in Level II of an Honours Kinesiology program; or registration in Honours Biology (Physiology Specialization)

Last offered in 2007-2008.

KINESIOL 2CC3 CARDIORESPIRATORY AND METABOLIC EXERCISE PHYSIOLOGY

Examination of cardiorespiratory function during exercise, with emphasis on factors limiting endurance performance. Adaptations to training will also be considered, as well as training methods used to induce adaptations.

Three hours (lectures), two hours (labs/tutorials); one term

Prerequisite: KINESIOL 1A03, 1AA3 (or 1A06) 1C03, 1E03, 1F03, 1G03 and registration in Level II of an Honours Kinesiology program; or registration in Honours Biology (Physiology Specialization)

Antirequisite: KINESIOL 2C06

First offered in 2008-2009.

KINESIOL 2E03 MUSCULOSKELETAL ANATOMY

Examination of functional anatomy from a hands on, experiential perspective with a focus on palpating the structures of the osseous, articular, muscular and supportive systems.

Four hours (labs/tutorials); one term

Prerequisite: KINESIOL 1A03, 1AA3 (or 1A06), 1C03, 1E03, 1F03, 1G03 and registration in Level II of an Honours Kinesiology program

First offered in 2008-2009.

KINESIOL 2F03 HUMAN GROWTH AND MOTOR DEVELOPMENT ACROSS THE LIFESPAN

Growth, developmental and aging changes underlying morphological and functional development of selected physiological systems which influence human exercise capacity throughout the life span.

Three hours (lectures), one hour (labs/tutorials); one term

Prerequisite: KINESIOL 1A03, 1AA3 (or 1A06), 1C03, 1E03, 1F03, 1G03 and registration in Level II of an Honours Kinesiology program

First offered in 2008-2009.

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 program

Prerequisite (Beginning in 2008-2009): KINESIOL 1A03 and 1AA3 (or 1A06); and KINESIOL 1C03, 1E03, 1F03, 1G03; and registration in Level II of an Honours Kinesiology program

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 practice such as physical education and sports medicine.

Three hours (lectures, tutorials); one term

Prerequisite: Registration in Level II of a Kinesiology program

Antirequisite: KINESIOL 1D03

KINESIOL 3A03 HISTORY OF EXERCISE AND SPORTS MEDICINE

Selected topics in the social and cultural history of exercise and sports medicine in the Western World, with an emphasis on nineteenth and twentieth century developments in North America.

Three hours (lecture/seminar); one term

Prerequisite: Registration in Level III or above of any Kinesiology, Health Studies or History program

KINESIOL 3AA3 BIOMECHANICS II

Study of kinematics and kinetics of human movement, including electromyography, fluid and tissue mechanics with applications.

Three hours (lectures, lab); one term

Prerequisite: KINESIOL 1A06, 2A03 and registration in Level III or above of a Kinesiology program

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: KINESIOL 3BP0

Students who do not successfully complete the required KINESIOL 3BP0 placement will forfeit credit in KINESIOL 3B03.

KINESIOL 3BP0 SPECIAL POPULATIONS PLACEMENT

This placement is designed to supplement the student's classroom learning of the issues involving physical activity for special populations. Students design and/or implement physical activity programs in a variety of community settings.

Prerequisite: Registration in Level III or above of a Kinesiology program

Corequisite: 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 3C03 STATISTICS AND RESEARCH DESIGN

Research design and descriptive and inferential statistics in Kinesiology.

Three hours (lectures, labs); one term

Prerequisite: Registration in Level III or above of a Kinesiology program

**KINESIOL 3D03 GROWTH, MATURATION
AND PHYSICAL ACTIVITY**

Growth, development and maturation changes underlying morphologic and functional development of selected physiological systems which influence human exercise capacity during childhood.

Three lectures, debates and applied case study assignment; one term

Prerequisite: KINESIOL 1A06, 2C06; or BIOLOGY 2A03 and registration in Honours Biology (Physiology Specialization)

**KINESIOL 3DD3 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 4DD3

This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program. However, enrolment for such students is limited.

KINESIOL 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 program; or PSYCH 2F03 and registration in Level III or above of an Honours Psychology program and permission of the instructor.

**KINESIOL 3I03 ETHICS IN KINESIOLOGY:
RESEARCH AND PRACTICE**

An examination of ethical issues in health research and allied professional practices.

Two hours (lecture), one hour (tutorial); one term

Prerequisite: Registration in Level III or above

First offered in 2008-2009.

This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program. However, enrolment for such students is limited.

KINESIOL 3JJ3 HISTORY OF MODERN DANCE

A survey of trends in modern dance including forerunners, pioneers, second generation, post-moderns, and new dance. Students attend performances and participate in workshops.

Three hours (lectures, practical); one term

Prerequisite: Registration in Level III or above

This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program. However, enrolment for such students is limited.

KINESIOL 3K03 SPORTS INJURIES

Common injuries suffered in sport and physical activity will be discussed under the following headings: mechanism of injury, prevention, recognition and care, tissue healing, basic taping techniques, basic support techniques and emergency care.

Two lectures, one lab; one term

Prerequisite: KINESIOL 1A06, 2C06

(Approximately \$40.00 will be charged for supplies used in labs.)

KINESIOL 3KP0 SPORTS INJURIES PLACEMENT

This placement is designed to provide practical experience in sports injuries in a variety of clinical settings.

Prerequisite: Registration in Level III or above of a Kinesiology program; and a grade of at least B- in KINESIOL 3K03; and valid CPR/First Aid certification; and permission of the instructor

KINESIOL 3M03 FOUNDATIONS OF ATHLETIC COACHING

An examination of the coaching process with emphasis placed on the behavioural aspects. Topics include leadership styles and decision making, motivation in sport, ethics in coaching, group cohesion and psychological considerations for youth in sport.

Three hours (lectures); one term

Prerequisite: Registration in Level III or above

This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program. However, enrolment for such students is limited.

**KINESIOL 3MP3 COMMUNITY LEADERSHIP IN
SPORT AND PHYSICAL ACTIVITY**

This placement course provides the essential links between classroom knowledge and professional practice. Working with special needs populations, children, adolescents, adults and the elderly, students will experience the challenges faced by community agencies that deliver sport and physical activity programs.

Placement experience equivalent to one day per week (60 hrs.), seminars; one term

Prerequisite: Credit or registration in KINESIOL 3M03 and registration in Level III or above

Antirequisite: SOC SCI 3MP3

Not open to students with credit or registration in KINESIOL 4EE3 if the placement is in the area of coaching or leadership.

**KINESIOL 3N03 ERGONOMICS I:
WORKPLACE INJURY RISK ASSESSMENT**

Analysis and quantification of musculoskeletal injury risks in the workplace, with an emphasis on reducing work related low back and upper extremity disorders.

Two hours (lecture), one hour (lab); one term

Prerequisite: KINESIOL 2A03, 2C06

KINESIOL 3P03 SPORT AND SOCIAL DEVELOPMENT

Macro-analysis of sport and culture, considering the place of sport and leisure in cultural transmission and cultural change.

Three hours (lectures and discussion); one term

Prerequisite: One of KINESIOL 1H03, 2B03, SOCIOL 1A06; and registration in Level III or above

Antirequisite: SOCIOL 2T03

Not open to students with credit or registration in SOCIOL 3J03 if the topic was Sociology of Sport.

This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program. However, enrolment for such students is limited.

KINESIOL 3S03 SOMATICS AND HOLISTIC HEALTH

An examination of the philosophies and practice of holistic health-medicine through the writings of somatic pioneers including Rudolf Laban, Irmgaard Bartenieff, and others. Experiential workshops are used to connect physical and mental health.

Three hours (lectures, practical); one term

Prerequisite: Registration in Level III or above

This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program.

KINESIOL 3SS3 BODY, MIND, SPIRIT

An exploration of the relationship between body, mind and spirit from the standpoint of eastern and western religious and philosophical thought with special reference to current perspectives on human potential. Course work includes experiential workshops.

Three hours (lectures and seminars); one term

Prerequisite: Registration in Level III or above

This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program.

KINESIOL 3T03 DANCE PERFORMANCE

An in-depth practical experience in performing, choreographing and teaching aimed at experienced dancers. The course will have a focus on creative modern dance and dance composition but will also include an introduction to other styles such as jazz and ballet.

Four hours (seminars and labs); one term

Prerequisite: Registration in Level III or above

This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program.

(Approximate cost of field component is \$30.00.)

KINESIOL 3Y03 HUMAN NUTRITION AND METABOLISM

An in-depth analysis of human nutrition and metabolism, with an emphasis on the impact of diet on human physical performance in both healthy and disease states.

Three hours (lectures and labs); one term

Prerequisite: Either KINESIOL 1A06 or 1X06, or both KINESIOL 1Y03 and 1YY3; and registration in Level III or above

Antirequisite: KINESIOL 4Y03

This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program. However, enrolment for such students is limited.

KINESIOL 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: KINESIOL 2A03, 3AA3

KINESIOL 4B03 PHYSICAL ACTIVITY AND CORONARY HEART DISEASE

An examination of the role of physical activity in the prevention and rehabilitation of coronary heart disease.

Three lectures; one term

Prerequisite: KINESIOL 1A06, 2C06

Offered in alternate years.

Not offered in 2007-2008.

KINESIOL 4BB3 ERGONOMICS II: MECHANISM OF INJURY AND PREVENTION

An investigation of injury mechanisms, injury epidemiology, job design consideration, WSIB, Ministry of Labour laws, job placement and functional abilities assessments. Students work in small groups to resolve ergonomic problems in the workplace.

Two lectures, one lab; one term

Prerequisite: KINESIOL 3N03

KINESIOL 4C03 INTEGRATIVE PHYSIOLOGY OF HUMAN PERFORMANCE

A detailed analysis of the physiological factors that regulate human physical performance. Emphasis is placed on the body's integrative response to exercise, including the control of energy demand and supply.

Three hours (lectures, labs); one term

Prerequisite: KINESIOL 2C06; or BIOLOGY 2A03 and registration in Honours Biology (Physiology Specialization)

KINESIOL 4CC3 NEUROMUSCULAR EXERCISE PHYSIOLOGY

Neuromuscular physiology of strength, power, and speed performance, including adaptations to training and training methods.

Three hours (lectures, labs); one term

Prerequisite: KINESIOL 2C06; or BIOLOGY 2A03 and registration in Honours Biology (Physiology Specialization)

KINESIOL 4D03 OUTDOOR EDUCATION

An examination of skills, pedagogy and perspectives of outdoor (expeditionary) education. This course involves a nine day field component before classes start.

Three hours (lectures, tutorials, field experiences); one term

Prerequisite: Registration in Level III or above of a Kinesiology program; or registration in Level III or above of a non-Kinesiology program and permission of the instructor

This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program.

(Approximate cost of field component is \$380.00.)

KINESIOL 4EE3 ADVANCED PLACEMENT

Students take part in a supervised practical experience that links classroom knowledge to professional practice. Placements are offered in aging, cardiac rehabilitation, sports injuries, dance, management, outdoor education, special needs populations and teaching and coaching. Placement experience equivalent to one day per week (60 hrs.), seminars; one term

Prerequisite: One of KINESIOL 3B03, 3F03, 3JJ3, 3K03, 3M03, 4B03, 4D03, 4I03, 4JJ3, 4SS3; and registration in Level IV of a Kinesiology program; and permission of the supervising instructor

Antirequisite: KINESIOL 4X06

KINESIOL 4F03 SELECTED TOPICS IN KINESIOLOGY

Each year the Department of Kinesiology offers a number of different courses under this category reflecting topics of contemporary interest with emphasis upon current theory and research. Students are advised to contact the Department of Kinesiology, Undergraduate Office, for descriptions of the courses offered during the current academic year.

Three hours (lectures); one term

Prerequisite: Registration in Level III or above of a Kinesiology program

KINESIOL 4FF3 SELECTED TOPICS IN KINESIOLOGY II

As per KINESIOL 4F03

Three hours (lectures); one term

Prerequisite: Registration in Level III or above of a Kinesiology program

KINESIOL 4G03 PEDAGOGY OF CONTEMPORARY AND TRADITIONAL WILDERNESS TRAVEL

An examination of Canadian winter travel skills (traditional and contemporary), travel literature and pedagogy of travel guiding. Part of the course requirement is a mandatory five-day traditional winter travel experience during the February mid-term recess.

Three hours (lectures, tutorials, field experiences); one term

Prerequisite: KINESIOL 4D03 and registration in Level III or above

This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program.

(Approximate cost of field component is \$80.00)

KINESIOL 4GG3 CLINICAL BIOMECHANICS

This courses examines current research in clinical biomechanics relating to injury and rehabilitation mechanisms, properties of material implants and application, and normal and clinical gait analysis.

Two lectures, one lab; one term

Prerequisite: KINESIOL 3AA3

KINESIOL 4I03 EXERCISE PSYCHOLOGY

This course examines the interaction of psychological factors and participation in physical activity with a focus on research, promotion and maintenance of exercise participation and health outcomes.

Three hours (lectures/tutorials); one term

Prerequisite: KINESIOL 2G03 and registration in Level III or above of a Kinesiology program

KINESIOL 4J03 FUNCTIONAL ANATOMY

A hands-on applied study of functional anatomy for independent learners. The focus is on palpating the structures of the osseous, articular, muscular, and supportive systems and testing their functions.

Four hours (labs, located in IWC/224); one term

Prerequisite: KINESIOL 2C06, 3K03 and registration in Level III or above of a Kinesiology program

(Approximately \$35.00 will be charged for supplies used in labs.)

Not open to students with credit in KINESIOL 4FF3 if the topic was Functional Anatomy.

KINESIOL 4K03 ADVENTURES IN PERCEPTION AND ACTION

The examination of perception and action of everyday skills is discussed using a problem-based approach. The emphasis is on the discovery of principles through the generation of research methods and hypothesis testing.

Three hours (lectures, labs); one term

Prerequisite: KINESIOL 1E03 and registration in Level III or above of a Kinesiology program

KINESIOL 4KK3 FUNDAMENTALS OF REHABILITATION

This course will outline the basic principles of rehabilitation and explore the more common techniques and modalities. Application of principles will be explored in a number of impairments including acquired brain injury, amputee, spinal cord injury, neuromuscular disease, stroke, etc.

Three hours (lectures, lab); one term

Prerequisite: KINESIOL 1A06, 2C06 and registration in Level III or above of a Kinesiology program

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 program.

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 and registration in Level III or above of a Kinesiology program

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, or BIOLOGY 2A03 and registration in Honours Biology (Physiology Specialization)

KINESIOL 4R03 INDEPENDENT RESEARCH

Investigation of a selected theoretical or applied problem mutually acceptable to instructor and student.

Prerequisite: Registration in Level IV of a Kinesiology program with a minimum C.A. of 8.5 and permission of the instructor

Antirequisite: KINESIOL 4RR6

KINESIOL 4RR6 THESIS

Independent project involving a research topic under the supervision of a faculty member. The project involves a literature review, design of methodology, data collection, analysis and a research report or equivalent appropriate to the sub-discipline.

Prerequisite: Registration in Level IV of a Kinesiology program with a minimum C.A. of 8.5; and permission of the instructor; and co-registration or completion of KINESIOL 3C03

Antirequisite: KINESIOL 4R03

KINESIOL 4S03 PHYSICAL ACTIVITY IN CHRONIC HEALTH IMPAIRMENTS

Focus on specific health impairments prevalent in our society and the various benefits/risks of physical activity in these populations.

Three hours (two lectures, one seminar); one term

Prerequisite: KINESIOL 3B03, 3BP0

KINESIOL 4SS3 HUMAN AGING: BIOLOGICAL AND LIFESTYLE INFLUENCES

The interrelationship between biological processes of aging and associated lifestyle factors (e.g. exercise/inactivity) will be explored in various human systems.

Three hours (lectures); one term

Prerequisite: 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 program. However, enrolment for such students 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

KINESIOL 4X06 THEORY AND PRACTICE IN EXERCISE REHABILITATION

Provides students with in-depth experiences working in health promotion and rehabilitation settings with a variety of special populations. Students explore exercise and lifestyle issues through an experiential component, seminars and research

Three hours (seminars, lab); two terms

Prerequisite: Registration in Level IV of a Kinesiology program with a minimum C.A. of 7.0; and credit or registration in two of KINESIOL 3B03, 4B03, 4I03, 4S03, 4SS3

Antirequisite: KINESIOL 4EE3

LABOUR STUDIES

WEB ADDRESS: <http://socserv.mcmaster.ca/labourstudies/>

Kenneth Taylor Hall, Room 717

Ext. 24692

Faculty as of January 15, 2007**Director**

Charlotte Yates

Professors

Wayne Lewchuk/(Economics) B.A., M.A. (Toronto), Ph.D. (Cambridge)

Charlotte A. B. Yates/(Political Science) B.A. (Winnipeg), M.A. (Queen's), Ph.D. (Carleton)

Associate Professors

Donna Baines/(Social Work) B.S.W. (Calgary), M.S.W. (Carleton), Ph.D. (Toronto)

Robert H. Storey/(Sociology) B.A. (Toronto), M.A. (Dalhousie), Ph.D. (Toronto)

Donald M. Wells/(Political Science) B.A. (Western Ontario), M.A. (British Columbia), Ph.D. (Toronto)

Assistant Professors

David Goutor/(History) B.A., M.A., Ph.D. (Toronto)

Greg McElligott/(Political Science) B.A., M.A. (Carleton), Ph.D. (York)

Associate Members

Patricia M. Daenzer/(Social Work) B.A., B.S.W. (York), M.S.W., Ph.D. (Toronto)

Robert J. O'Brien/(Political Science) B.A. (Carleton), M.Sc. (London), Ph.D. (York)

Joseph B. Rose/(Commerce) B.B.A. (Adelphi), M.B.A. (California), Ph.D. (SUNY-Buffalo)/(Industrial Relations)

Pamela Sugiman/(Sociology) B.A., M.A., Ph.D. (Toronto)

Note:

The following courses may be taken for elective credit by qualified students registered in any program, however, space for such students is limited and permission of the instructor is required.

LABR ST 2A03	Unions
LABR ST 2C03	Theoretical Foundations of the Labour Movement
LABR ST 2E03	Working in the 21st Century: Challenges and Possibilities
LABR ST 3A03	Economics of Labour Market Issues
LABR ST 3C03	Labour Law and Policy
LABR ST 3D03	Occupational Health and Safety
LABR ST 3E03	Women, Work and Unionism
LABR ST 3F03	Selected Topics in Labour Studies
LABR ST 3G03	Economic Restructuring and Work Organization
LABR ST 3J03	Independent Study
LABR ST 3W03	Technologies at Work: Past, Present, Future

The Honours B.A. Program and the B.A. Program in Labour Studies are supervised and coordinated by an interdisciplinary Labour Studies Committee.

Labour Studies Committee**Chair**

Charlotte Yates(Labour Studies/Political Science)

Donna Baines (Labour Studies/Social Work)

David Goutor(Labour Studies)

Wayne Lewchuk(Economics/Labour Studies)

Greg McElligott (Labour Studies/Political Science)

Robert Storey (Labour Studies/Sociology)

Donald Wells (Labour Studies/Political Science)

Courses 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 1C03 VOICES OF WORK, RESISTANCE AND CHANGE

An examination of how work is shaped by gender, race, class and culture in a global world; how workplace cultures of community and resistance are built; and their effect on our experience of work.

Lectures and discussion; one term

Antirequisite: LABR ST 2D03

LABR ST 2A03 UNIONS

Examines unions' structure, internal decision making and economic, political and social environment. Students explore collective bargaining, political action, union democracy, diversity and renewal by simulating internal union life and participating in a union convention.

Lecture and group work/simulation; one term

Prerequisite: Registration in a Labour Studies program or permission of the instructor

LABR ST 2B03 SOCIAL WELFARE I: GENERAL INTRODUCTION

Purpose, values underlying development of social welfare programs; Canada's social security system in historical perspective.

Lectures and discussion; one term

Prerequisite: Registration in a Labour Studies program

Cross-list: SOC WORK 2B03

Students in a Labour Studies program must register for this course as LABR ST 2B03.

This course is administered by the School of Social Work.

LABR ST 2BB3 SOCIAL WELFARE: ANTI-OPPRESSIVE POLICIES AND PRACTICES IN SOCIAL WORK

Exploration and analysis of systematic patterns of oppression, their relationships to social policies and practice and the implications for social work through a variety of instruction including experiential exercises. Topics could include: race, gender, disability, sexual orientation.

Exercises, lectures and discussion; one term

Prerequisite: Registration in a Labour Studies Program

Cross-list: SOC WORK 2BB3

Students in a Labour Studies program must register for this course as LABR ST 2BB3.

This course is administered by the School of Social Work.

LABR ST 2C03 THEORETICAL FOUNDATIONS OF THE LABOUR MOVEMENT

An examination of political, sociological and economic explanations of labour behaviour in industrial society. The focus will be on attempts to explain why labour has tended to organize as well as the different strategies which labour has pursued to achieve its goals.

Lectures and discussion; one term

Prerequisite: Registration in a Labour Studies program or permission of the instructor

Antirequisite: LABR ST 1B03

LABR ST 2E03 WORKING IN THE 21ST CENTURY: CHALLENGES AND POSSIBILITIES

An examination of how technology, government regulation and social and political activism influence how work is organized in the 21st century.

Lectures and discussion; one term

Prerequisite: Registration in a Labour Studies program or permission of the instructor

Antirequisite: LABR ST 1Z03

LABR ST 2G03 LABOUR AND GLOBALIZATION

An examination of key themes in the political economy of contemporary globalization with particular emphasis on implications for worklife, working class politics and democracy. An introduction to major international economic institutions and processes associated with globalization and emerging forms of labour internationalism that contest globalization.

Lectures and discussion; one term

Prerequisite: LABR ST 1C03

Priority is given to students registered in a Labour Studies program.

LABR ST 3A03 ECONOMICS OF LABOUR MARKET ISSUES

This course applies economic analysis to issues of importance in the labour market. Topics vary and may include: women in the Canadian labour market, discrimination in hiring and promotion, unemployment, job loss and workplace closing, work sharing.

Prerequisite: ECON 1A06 or both ECON 1B03 and 1BB3 and registration in a Labour Studies program; or permission of the instructor

Cross-list: ECON 2A03

Not open to students with credit or registration in ECON 3D03.

This course is administered by the Department of Economics.

LABR ST 3B03 ECONOMICS OF TRADE UNIONISM AND LABOUR

Topics will include the economics of the labour market, the impact of trade unions on the labour market, economic theories of strikes, trade unions and the state.

Lectures and discussion; one term

Prerequisite: ECON 1A06 or both ECON 1B03 and 1BB3; and registration in a Labour Studies program

Cross-list: ECON 2T03

This course is administered by the Department of Economics.

LABR ST 3C03 LABOUR LAW AND POLICY

An analysis of the concepts and fundamentals of Canadian labour law and an analysis of Canadian labour policy.

Lectures; one term

Prerequisite: LABR ST 2A03, and registration in a Labour Studies program; or permission of the instructor

Cross-list: COMMERCE 4BF3

Generally offered in alternate years.

LABR ST 3D03 OCCUPATIONAL HEALTH AND SAFETY

An analysis of issues and problems associated with occupational health and safety in Canada and other industrialized countries. Topics will be examined from social, political, economic, legal and medical perspectives.

Lectures and discussion; one term

Prerequisite: Registration in Level III or above of a Health Studies or Labour Studies program or permission of the instructor

Cross-list: HEALTHST 3C03

Generally offered in alternate years.

LABR ST 3E03 WOMEN, WORK AND UNIONISM

An examination of the historical and contemporary relations between women and work, and women and unionism. Topics will include the evolution and structure of the gender division of labour, women and the labour market, and the relationship of women to the labour movement.

Lectures and discussion; one term

Prerequisite: LABR ST 2A03 and registration in a Labour Studies program; or permission of the instructor

Generally offered in alternate years.

LABR ST 3F03 SELECTED TOPICS IN LABOUR STUDIES

Topics of current interest to students in Labour Studies, with emphasis on current theory and research. Students should consult the Labour Studies Office concerning the topics to be examined.

Three hours (seminar); one term

Prerequisite: LABR ST 2A03, and registration in a Labour Studies program; 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, and registration in a Labour Studies program; or permission of the instructor

Antirequisite: LABR ST 3AA3

LABR ST 3H03 FIELD PLACEMENT METHODS

An inquiry course that exposes students to research ethics and strategies in preparation for Level IV thesis or field work. Emphasizes working with data in a real world context. Students will learn on-line research skills and how to use Power Point and other presentation strategies.

Lectures and discussion; one term

Prerequisite: Registration in Level III or IV of an Honours Labour Studies program

Antirequisite: LABR ST 4A09

LABR ST 3J03 INDEPENDENT STUDY

Independent study of a research problem to be arranged between student and instructor. It is incumbent on the student to secure arrangements with the supervising instructor and present a written proposal to the Director for approval prior to registration.

One term

Prerequisite: Registration in Level III or IV of an Honours Labour Studies program and permission of the Director

**LABR ST 3W03 TECHNOLOGIES AT WORK:
PAST, PRESENT, FUTURE**

An inquiry based course exploring the evolution of work, how workplaces are organized in relation to technologies today, and the possible impact of technology on work in the future. It will explore the nature of work in manufacturing, the service sector and the public sector.

Lectures, discussion and inquiry report; one term

Prerequisite: Registration in Level III or IV of a Labour Studies program

Antirequisite: ENGSOCTY 3X03

Offered in alternate years.

LABR ST 4A06 RESEARCH AND FIELD EXPERIENCE

Students will either write an honours thesis or participate in a field experience (a placement in a labour union, government agency or other appropriate organization). Enrolment in the field experience option is limited; students must apply to the Labour Studies Office by March 1.

Two terms

Prerequisite: Registration in Level IV of an Honours Labour Studies program

Antirequisite: LABR ST 4A09

LABR ST 4C03 PUBLIC SECTOR COLLECTIVE BARGAINING

This course examines unionization and collective bargaining for employees in the public, and para-public sectors. The topics covered include the origin and growth of public sector unions, models of public sector bargaining, legal aspects of bargaining rights and impasse resolution, bargaining issues and bargaining outcomes, and empirical studies of the effectiveness of dispute resolution procedures.

Lectures and discussion; one term

Prerequisite: COMMERCE 4BC3 and registration in Level III or IV of a Labour Studies program

Cross-list: COMMERCE 4BG3

This course is administered by the School of Business.

LABR ST 4E03 COMPARATIVE LABOUR SYSTEMS

A discussion of labour policies, politics, unionization and industrial relations in several selected countries in Europe, Latin America and possibly including Japan. Topics will include government labour market policy, labour law, union objectives and strategies and the impact that unions have on the respective national political-economies.

Lectures and seminar discussion; one term

Prerequisite: Registration in Level III or IV of a Labour Studies program or permission of the instructor

Antirequisite: COMMERCE 4BH3, LABR ST 4D03

LATIN

(SEE CLASSICS, LATIN)

LINGUISTICS

(SEE LINGUISTICS AND LANGUAGES, LINGUISTICS)

LINGUISTICS AND LANGUAGES

WEB ADDRESS: <http://www.humanities.mcmaster.ca/~linguistics/>

Togo Salmon Hall, Room 613

Ext. 24388

Faculty as of January 15, 2007**Acting Chair**

John J. Colarusso

Professors

John J. Colarusso/B.A. (Cornell), M.A. (Northwestern), Ph.D. (Harvard)

Nina Kolesnikoff/M.A. (Moscow State), Ph.D. (Alberta)

Magda Strojinska/M.A. (Warsaw), Ph.D. (Edinburgh)

Associate Professors

Iris Bruce/M.A., Ph.D. (Toronto)

Maria del C. Cerezo/B.A. (Puerto Rico), M.A. (McGill), Ph.D. (Toronto)

Florio Minelli/B.A., M.A. (Western Ontario), Ph.D. (Brown)

Jean Wilson/B.A. (McMaster), B.Ed., M.A., Ph.D. (Toronto)

Assistant Professors

Catherine Anderson/B.A. (McMaster), Ph.D. (Northwestern)

Vittoria Cecchetto/B.A., M.A., Ph.D. (Toronto)

Paolo Chirumbolo/B.A., M.A., Ph.D. (Toronto)

Tsuneko Iwai/B.A., M.Ed., Ph.D. (Toronto)

Anna L. Moro/B.A., M.A., Ph.D. (Toronto)

Steffi Retzlaff/M.A. (Oldenburg), Ph.D. (Potsdam)

Antonio Velasquez/B.A. (Waterloo), M.A., Ph.D. (Toronto)

Marzena Walkowiak/M.A., Ph.D. (Toronto)

Lecturers

Franco Gallippi/B.A. (York), M.A. (Toronto)

Jakub Kazecki/M.A. (Dalhousie)

Department Notes:

1. The Department of Linguistics and Languages administers all courses in German, Hispanic Studies, Italian, Japanese, Linguistics, Polish, and Russian. For information and counselling, please contact the departmental office, Togo Salmon Hall, Room 613.
2. All language courses are taught and assessed in the original language, except GERMAN 3NN3, 4G03, 4J03 and ITALIAN 2B03.
3. Not all courses are offered on an annual basis. Students should consult the timetable for available courses.

GERMAN ...

Courses and programs in German are administered within the Department of Linguistics and Languages of the Faculty of Humanities. For information and counselling, please contact the departmental office, Togo Salmon Hall, Room 613.

Notes:

1. Students should note that the Department has classified its German language courses under the following categories:
Introductory Level Language Course
GERMAN 1Z06
Intermediate Level Language Courses
GERMAN 1B03, 1BB3, 2Z03, 2ZZ3
Advanced Level Language Courses
GERMAN 3Z03, 3ZZ3, 4CC3, 4Z03
2. Not all courses are offered on an annual basis. Students should consult the timetable for available courses.
3. Courses cross-listed with other programs (GERMAN 3NN3, 4G03, 4J03) will use English as the language of classroom instruction. Students taking these courses for credit in German will be required to do all their reading, writing and film viewing in German.
4. Students may be required to take a placement test in the Department of Linguistics and Languages to assess their proficiency in the language.

Courses

If no prerequisite is listed, the course is open.

GERMAN 1B03 INTERMEDIATE GERMAN I

A course designed to expand German linguistic skills through practice in reading, writing, listening and speaking, promoting intercultural learning and international awareness. Course uses Web CT and multimedia technology. Four hours; one term

Prerequisite: Grade 12 U or M equivalent

Antirequisite: GERMAN 2Z03, 2ZZ3

Not open to students with credit or registration in GERMAN 1BB3.

The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 1BB3 INTERMEDIATE GERMAN II

Through integrated and interactive practice in reading, writing, listening and speaking, this course is intended to serve as a foundation for the advanced study of German language and culture. The sequels to this course are GERMAN 3Z03 and 3ZZ3.

Four hours; one term

Prerequisite: GERMAN 1B03

Antirequisite: GERMAN 2ZZ3

GERMAN 1Z06 BEGINNER'S INTENSIVE GERMAN

This course enables students to communicate effectively and accurately in German. Using multimedia resources, students acquire the basics of German grammar and develop language skills in order to master everyday situations. The course is enhanced by the use of WebCT and multimedia technology. The sequel to this course is GERMAN 2Z03. Four hours; two terms

Antirequisite: Grade 12 U or M equivalent, GERMAN 1ZZ3

Students who have credit in GERMAN 1Z03, but not in GERMAN 1ZZ3, will be permitted to take GERMAN 1Z06; however, they must relinquish credit in GERMAN 1Z03 to do so.

The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 2AA3 INTRODUCTION TO GERMAN STUDIES

This course provides the foundation for work in German literature and in the broader field of German Studies. Theoretical approaches combined with the analysis of specific cultural texts, forms and practices will allow students to experience the 'pleasure of the text' and help them to develop analytical and research tools.

Three hours; one term

Prerequisite: GERMAN 1BB3 or 2ZZ3, (or concurrent registration in GERMAN 2Z03 or 2ZZ3)

GERMAN 2CC3 GERMANY THROUGH THE AGES: CULTURE AND SOCIETY

An interdisciplinary look at the historical events, cultural phenomena, and personalities which have shaped German culture and society until World War II. Topics include: Medieval and Romantic Heritage, the Golden Twenties, Nationalism and National Socialism, the Holocaust.

Three hours; one term

Prerequisite: GERMAN 1BB3 or 2ZZ3 (or concurrent registration in GERMAN 2Z03 or 2ZZ3)

GERMAN 2Z03 INTERMEDIATE GERMAN I

The course is designed to further expand German linguistic skills through integrated and interactive practice in reading, writing, listening and speaking. The course is enhanced by the use of WebCT and multimedia technology. The sequel to this course is GERMAN 2ZZ3.

Three hours; one term

Prerequisite: GERMAN 1Z06 or 1ZZ3

Antirequisite: GERMAN 1B03

Not open to students with credit or registration in GERMAN 2ZZ3.

The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 2ZZ3 INTERMEDIATE GERMAN II

Through integrated and interactive practice in reading, writing, listening and speaking, this course is intended to serve as a foundation for the advanced study of German language, literature and culture. The course is enhanced by the use of WebCT and multimedia technology. The sequels to this course are GERMAN 3Z03 and 3ZZ3.

Three hours; one term

Prerequisite: GERMAN 2Z03

Antirequisite: GERMAN 1BB3

The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 3B03 GLOBALIZATION AND AUTONOMY: GERMAN WAR NARRATIVES FROM THE EIGHTEENTH CENTURY TO THE PRESENT

The course focuses on images of war in German culture and investigates the role of the literary and visual representations of military conflict in the processes of globalization and autonomy.

Three hours; one term

Prerequisite: GERMAN 2AA3 or 2CC3

Offered in alternate years.

GERMAN 3C03 GERMAN CULTURE AFTER 1945

This course will explore the culture of modern Germany from 1945 to the present. Students will study important cultural developments by examining selected texts from literature, film and other forms of cultural expression.

Three hours; one term

Prerequisite: GERMAN 2AA3 or 2CC3

GERMAN 3NN3 WOMEN IN GERMAN LITERATURE AND CULTURE

This course explores the rich literary and cultural history of women writers, filmmakers and artists from the early Middle Ages to the present in German-speaking Europe. (See Note 3 above.)

Three hours; one term

Prerequisite: Registration in Level II or above

Cross-list: COMP LIT 3NN3, WOMEN ST 3NN3

Offered in alternate years.

GERMAN 3Z03 ADVANCED GERMAN I

The course offers an action-oriented approach to language and literature. Students read various texts and explore their deeper meanings using various techniques. The sequels to this course are GERMAN 3ZZ3 and 4Z03.

Three hours; one term

Prerequisite: GERMAN 1BB3 or 2ZZ3

Antirequisite: GERMAN 3E03

The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 3ZZ3 ADVANCED GERMAN II

This course offers an action-oriented approach to language and literature by means of drama instruction leading to the performance of a German play in public. The sequel to the course is GERMAN 4Z03.

Three hours; one term

Prerequisite: GERMAN 3Z03

Antirequisite: GERMAN 3G03

Priority is given to students in a program requiring German. Students with native or near native fluency may be required to register in an appropriate alternative.

The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 4B03 GERMAN READING COURSE (TAUGHT IN ENGLISH)

Designed for graduate students or students intending to enter graduate programs, this course provides an intensive introduction to reading comprehension skills and techniques. Reading materials will be selected to reflect students' specialized interests and will be used to practice textual analysis, study relevant grammar points and aid in vocabulary development. The sequel for this course is GERMAN 4CC3. Credits obtained in both of these courses may be accepted in fulfillment of the second language reading requirement for graduate programs.

Offered during the Spring session only.

Prerequisite: GERMAN 1Z06 and permission of the Department of Linguistics and Languages

Not open to students registered in a program in German.

GERMAN 4CC3 TRANSLATION: TECHNIQUES AND PRACTICE

This course offers practice in the translation of literary and non-literary texts. (English to German and German to English). The practical component will be complemented by an overview of electronic and on-line translation aids, as well as different theories and techniques of translation in Western Culture.

Three hours; one term

Prerequisite: One of GERMAN 3E03, 3Z03 or 4Z03

GERMAN 4FF3 GERMAN FOLKLORE AND FAIRY TALES

The course will examine elements of folklore and the supernatural in fairy tales from various periods: tales from German Romanticism, and modern twentieth-century (parodic) rewritings of the tradition. The boundaries between oral folk literature and literature, as well as between children's and adult literature will also be examined.

Three lectures; one term

Prerequisite: GERMAN 2AA3 or 2CC3

Alternates with GERMAN 4HH3.

GERMAN 4G03 BERLIN/VIENNA: THE CULTURAL LIFE OF A CITY

Students will embark on an interdisciplinary journey into the cultural history of a city from the 19th century to the present. Through literary texts, songs, films, works of art and architecture we will examine varied representations of the city in high and popular culture. (See Note 3 above.)

Three hours; one term

Prerequisite: Registration in Level III or IV

Cross-list: COMP LIT 4G03

Offered on an irregular rotation basis.

GERMAN 4H03 THE HOLOCAUST IN GERMAN FILM AND FICTION

This course will examine the moral, philosophical and cultural legacy of the holocaust as represented through the artistic imagination. Literary texts and films will involve key issues: truthfulness, politicization, marginalization, universalization, trivialization, abstraction, aestheticization, Holokitsch, etc.

Three hours; one term

Prerequisite: GERMAN 2AA3 or 2CC3

Offered on an irregular rotation basis.

GERMAN 4HH3 GERMAN LANGUAGE THROUGH THE AGES

The course follows the development of the German language from its Indo-European origins to the present situation in three German speaking countries. Selected texts from different epochs, as well as visual materials on the linguistic and social history of the German language will be studied.

Three lectures; one term

Prerequisite: Nine units of German above Level I

Alternates with GERMAN 4FF3.

GERMAN 4II3 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 4J03 THE SPLIT-SCREEN - RECONSTRUCTING NATIONAL IDENTITIES IN WEST AND EAST GERMAN CINEMA

This course examines German film texts of the post-war period and their representation of West and East German identities. Films will be discussed within the context of important political, social, and cultural developments at the time of the films' production. (See Note 3 above.)

Two hours, plus one film screening per week; one term

Prerequisite: Six units of German above Level I

Cross-list: COMP LIT 4J03; THTR&FLM 4J03

Offered on an irregular rotation basis.

GERMAN 4K03 FRANZ KAFKA AND 'MINOR LITERATURE' IN CONTEMPORARY GERMAN CULTURE

Students will inquire into some of the reasons for Kafka's popularity in contemporary culture and examine how themes of marginality, power, and identity - central to Kafka's work - reemerge in contemporary German Jewish and Turkish writing.

Three lectures; one term

Prerequisite: GERMAN 2AA3 or 2CC3

Offered on an irregular rotation basis.

GERMAN 4Z03 GERMAN LANGUAGE AND CULTURE

This course further develops students' language proficiency and their cultural knowledge/competency. Students study various aspects of contemporary German society and focus on developing advanced reading, writing and speaking skills.

Three hours; one term

Prerequisite: GERMAN 3G03 or 3ZZ3

HISPANIC STUDIES ...

Courses and programs in Hispanic Studies are administered within the Department of Linguistics and Languages of the Faculty of Humanities. For information and counselling, please contact the departmental office, Togo Salmon Hall, Room 613.

Notes:

- Students should note that the Department has classified its Hispanic language courses under the following categories:
Introductory Level Language Course
 HISPANIC 1Z06
Intermediate Level Language Courses
 HISPANIC 1A03, 1AA3, 2D03, 2DD3, 2Z03, 2ZZ3
Advanced Level Language Courses
 HISPANIC 3X03, 3Y03, 4XX3, 4YY3
- Not all courses are offered on an annual basis. Students should consult the timetable for available courses.
- Students may be required to take a placement test in the Department of Linguistics and Languages to assess their proficiency in the language.
- Students are advised to pay particular attention to prerequisites for upper-level literature courses.

Courses If no prerequisite is listed, the course is open.**HISPANIC 1A03 INTERMEDIATE SPANISH I**

First part of an intensive review of grammatical structures in Spanish. Emphasis will be on composition, expansion of vocabulary and oral practice. Written works in the original will be studied. The sequel to this course is HISPANIC 1AA3.

Four hours; one term

Prerequisite: Grade 12 U or M equivalent

Antirequisite: HISPANIC 2D03, 2DD3, 2Z03, 2ZZ3

Not open to students with credit or registration in HISPANIC 1AA3.

Not open to native speakers of Spanish.

The Department reserves the right to place students in the course most appropriate to their abilities.

HISPANIC 1AA3 INTERMEDIATE SPANISH II

Second part of an intensive review of grammatical structures in Spanish. Emphasis will be on composition, expansion of vocabulary and oral practice. Written works in the original will be studied. The sequel to this course is HISPANIC 3X03.

Four hours; one term

Prerequisite: HISPANIC 1A03

Antirequisite: HISPANIC 2D03, 2DD3, 2ZZ3

Not open to native speakers of Spanish.

The Department reserves the right to place students in the course most appropriate to their abilities.

HISPANIC 1Z06 BEGINNER'S INTENSIVE SPANISH

This course gives students the ability to express themselves reasonably well in Spanish and acquire the basics of Spanish grammar and considerable reading skill. Small tutorial groups will ensure maximum participation by each student. This course is enhanced by a Computer Assisted Language Learning (CALL) module. The sequel to this course is HISPANIC 2Z03.

Four hours; two terms

Antirequisite: Grade 12 U or M equivalent, HISPANIC 1ZZ3, 2D03, 2DD3

Not open to native speakers of Spanish.

Students who have credit in HISPANIC 1Z03, but not in HISPANIC 1ZZ3, will be permitted to take HISPANIC 1Z06; however, they must relinquish credit in HISPANIC 1Z03 to do so.

The Department reserves the right to place students in the course most appropriate to their abilities.

HISPANIC 2C03 CONTEMPORARY SPANISH-AMERICAN CULTURE

Using a multidisciplinary approach involving fiction, cinema, music, art, and other cultural expressions, this course explores some of the issues that shape and define Spanish-America today.

Three hours; one term

Prerequisite: One of HISPANIC 1AA3, 2DD3, 2Z03 or concurrent registration in HISPANIC 2Z03

HISPANIC 2D03 INTENSIVE SPANISH FOR NATIVE SPEAKERS I
 First part of a course designed to meet the needs of native Spanish-speaking students who have little or no formal training in Spanish. Emphasis on grammar and composition. The sequel to this course is HISPANIC 2DD3.

Three hours; one term

Antirequisite: HISPANIC 1A03, 1AA3, 1Z06, 2Z03, 2ZZ3

HISPANIC 2DD3 INTENSIVE SPANISH FOR NATIVE SPEAKERS II

Second part of a course designed to meet the needs of native Spanish-speaking students who have little or no formal training in Spanish. Emphasis on grammar and composition.

Three hours; one term

Prerequisite: HISPANIC 2D03

Antirequisite: HISPANIC 1A03, 1AA3, 1Z06, 2Z03, 2ZZ3

HISPANIC 2L03 INTRODUCTION TO SPANISH AMERICAN LITERATURE

A survey of Spanish American literature from the fifteenth century to the present. The most significant cultural currents and representative writers will be studied to understand the development of literary genres and the cultural, political and social context in which they flourished.

Three lectures; one term

Prerequisite: HISPANIC 1AA3; or HISPANIC 2C03 and 2Z03

HISPANIC 2X03 CONTEMPORARY SPAIN

Drawing on art, film, literature and mass media, the course will explore the culture, society and political institutions of Spain from the civil war to the foundations of the European Union.

Three lectures; one term

Prerequisite: One of HISPANIC 1AA3, 2DD3, 2Z03 or concurrent registration in HISPANIC 2Z03

HISPANIC 2XX3 SPAIN IN THE WESTERN TRADITION

Drawing on literature, history, philosophy and the visual arts, this course will explore some of Spain's unique and enduring contributions to the Western tradition.

Three lectures; one term

Prerequisite: HISPANIC 1AA3; or HISPANIC 2X03 and 2Z03

HISPANIC 2Z03 INTERMEDIATE SPANISH I

First part of an intensive review of the grammatical structures of Spanish. Emphasis will be on composition, expansion of vocabulary and oral practice. Written works in the original will be studied. The sequel to this course is HISPANIC 2ZZ3.

Four hours; one term

Prerequisite: HISPANIC 1Z06 or 1ZZ3

Antirequisite: HISPANIC 1A03, 1AA3, 2D03, 2DD3

Not open to native speakers of Spanish.

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 3X03.

Four hours; one term

Prerequisite: HISPANIC 2Z03

Antirequisite: HISPANIC 1AA3, 2D03, 2DD3

Not open to native speakers of Spanish.

The Department reserves the right to place students in the course most appropriate to their abilities.

HISPANIC 3X03 LANGUAGE PRACTICE I

In this course different styles of writing and communication will be examined and practiced: literary, journalistic, academic, etc.

Three hours; one term

Prerequisite: One of HISPANIC 1AA3, 2DD3 or 2ZZ3

Antirequisite: HISPANIC 3A03, 3DD3

HISPANIC 3Y03 SPANISH TRANSLATION

A course designed to introduce the student to the basic principles of translation from Spanish to English and from English to Spanish. Practice will be given in comprehension and précis writing.

Three hours; one term

Prerequisite: One of HISPANIC 1AA3, 2DD3 or 2ZZ3

Antirequisite: HISPANIC 4G03

HISPANIC 4A03 THE SPANISH AMERICAN NOVEL (BEFORE 1954)

A study of the Spanish American Novel up to the middle of the 20th century (Azuela, Gallegos, Alegria, etc.).

Three lectures; one term

Prerequisite: HISPANIC 2L03 and six units of Hispanic Studies above Level I

Offered in alternate years.

HISPANIC 4D03 HUMOUR IN LATIN AMERICAN LITERATURE

This course will study different theories of humour and its techniques and functions in representative literary texts from Latin America.

Three hours; one term

Prerequisite: HISPANIC 2L03 and nine units of Hispanic Studies above Level I

HISPANIC 4I13 INDEPENDENT STUDY

The student will prepare, under the supervision of a faculty member, a research paper involving independent study in an area in which the student has demonstrated competence.

Prerequisite: 12 units of Hispanic Studies above Level I and permission of the Department

HISPANIC 4L03 SPAIN'S GREAT MYTHS: DON QUIJOTE AND DON JUAN

An examination of the original texts and of the subsequent interpretations and adaptations of two of Spain's most enduring creations: one presents all the dramatic paradigms of life, the other embodies eternal conflicts that centre on the purpose of life itself.

Three hours; one term

Prerequisite: 12 units of Hispanic Studies above Level I

Offered on an irregular rotation basis.

HISPANIC 4M03 HEROES AND ANTI-HEROES IN SPANISH LITERATURE

The course will examine these two concepts in works ranging from *Poema de Mio Cid* - the quintessential Spanish hero- to *Celestina* - the bawd- and the picaresque, from *Don Quijote* to the tragedy of the ignoble.

Three hours; one term

Prerequisite: 12 units of Hispanic Studies above Level I

Offered on an irregular rotation basis.

HISPANIC 4N03 THE SPANISH AMERICAN SHORT STORY

This course will study the Spanish American Short Story from the 19th century to the present, its development, themes and formal aspects.

Three hours; one term

Prerequisite: HISPANIC 2L03 and nine units of Hispanic Studies above Level I

Not open to students with credit in HISPANIC 4S03, TOPICS IN SPANISH-AMERICAN LITERATURE, if the topic was The Spanish American Short Story.

Offered on an irregular rotation basis.

HISPANIC 4P03 THE BOOM GENERATION AND THEIR SHORT STORIES

This course will study the concept "Boom" and the short stories of four of its members: Donoso, Cortázar, Vargas Llosa and García Márquez. It will also examine the relation between the short stories and the novels of these authors.

Three hours; one term

Prerequisite: HISPANIC 2L03 and nine units of Hispanic Studies above Level I
Not open to students with credit in HISPANIC 4S03, TOPICS IN SPANISH-AMERICAN LITERATURE, if the topic was The Boom Generation.
Offered on an irregular rotation basis.

HISPANIC 4Q03 SPANISH AND LATIN AMERICAN CULTURE THROUGH CINEMA

This course is designed to provide students with the background necessary to analyse and interpret Spanish and Latin American culture through cinema. Films will be studied within their social and political context.

Three hours; one term

Prerequisite: HISPANIC 2C03 or 2L03; and nine units of Hispanic Studies above Level I

Offered on an irregular rotation basis.

HISPANIC 4R03 WOMEN WRITERS OF LATIN AMERICA

Emphasis will be on women writers of the 19th and 20th centuries. Selected readings will be analysed to explore how women have employed literary strategies to represent themselves and others within their oppressive socio-cultural milieu.

Three hours; one term

Prerequisite: HISPANIC 2C03 or 2L03; and nine units of Hispanic Studies above Level I

Offered on an irregular rotation basis.

HISPANIC 4V03 REPRESENTATIVE DRAMATISTS OF 20TH-CENTURY SPAIN

Recurrent themes such as exile, political oppression, issues of gender identity, race and feminism will be examined in major important works written by men and women from Spain

Three hours; one term

Prerequisite: HISPANIC 2X03 or 2XX3; and nine units of Hispanic Studies above Level I

Offered on an irregular rotation basis.

HISPANIC 4XX3 LANGUAGE PRACTICE II

With emphasis on precision, conciseness and other pertinent aspects of written communication, students will write compositions in a variety of styles while developing appropriate stylistic awareness and learning practical writing techniques.

Three hours; one term

Prerequisite: HISPANIC 3X03

HISPANIC 4YY3 ADVANCED TRANSLATION

Practice in the translation into Spanish of a specialized nature (example: administration, business, medical, etc.), leading to the study of comparative aspects of stylistics and syntax.

Three hours; one term

Prerequisite: HISPANIC 3Y03

ITALIAN ...

Courses and programs in Italian are administered within the Department of Linguistics and Languages of the Faculty of Humanities. For information and counselling, please contact the departmental office, Togo Salmon Hall, Room 613.

Notes:

- Students should note that the Department has classified its Italian language courses under the following categories:
Introductory Level Language Courses
ITALIAN 1Z06, 1ZZ6
Intermediate Level Language Courses
ITALIAN 1A03, 1AA3, 2Z03, 2ZZ3
Advanced Level Language Courses
ITALIAN 3A03, 3D03, 4A03, 4B03
- Not all courses are offered on an annual basis. Students should consult the timetable for available courses.
- ITALIAN 2B03 will use English as the language of classroom instruction. Students taking this course for credit in Italian will be required to do all their reading, writing and film viewing in Italian.
- Students may be required to take a placement test in the Department of Linguistics and Languages to assess their proficiency in the language.

Courses *If no prerequisite is listed, the course is open.***ITALIAN 1A03 INTERMEDIATE ITALIAN I**

An intensive review of certain grammatical structures of Italian and an introduction to composition, together with oral practice. The sequel to this course is ITALIAN 1AA3.

Four hours; one term

Prerequisite: Grade 12 U or M equivalent or other equivalent or permission of the Department

Antirequisite: ITALIAN 2Z03

Not open to students with credit or registration in ITALIAN 1AA3.

The Department reserves the right to place students in the course most appropriate to their abilities.

ITALIAN 1AA3 INTERMEDIATE ITALIAN II

An intensive review of those grammatical structures not studied previously, together with oral practice. Selected written works in the original will also be studied. The sequel to this course is ITALIAN 3A03.

Four hours; one term

Prerequisite: ITALIAN 1A03

Antirequisite: ITALIAN 2ZZ3

The Department reserves the right to place students in the course most appropriate to their abilities.

ITALIAN 1Z06 BEGINNER'S INTENSIVE ITALIAN

This course gives students the ability to express themselves reasonably well in Italian and acquire the basics of Italian grammar and considerable reading skill. Small tutorial groups will ensure maximum participation by each student. This course is enhanced by a CALL (Computer-Aided Language Learning) module. The sequel to this course is ITALIAN 2Z03.

Four hours; two terms

Antirequisite: Grade 12 U or M equivalent, ITALIAN 1CC3, 1DD3, 1ZZ3

Students who have credit in ITALIAN 1C03, but not in ITALIAN 1CC3, will be permitted to take ITALIAN 1Z06; however, they must relinquish credit in ITALIAN 1C03 to do so.

The Department reserves the right to place students in the course most appropriate to their abilities.

ITALIAN 1ZZ6 BEGINNER'S INTENSIVE ITALIAN FOR DIALECT SPEAKERS

An intensive beginner's course designed for students with no formal training in Standard Italian, but who understand an Italian dialect or Standard Italian. The course covers the basics of Italian grammar and gives students the opportunity to practise the spoken language.

Four hours; two terms

Antirequisite: ITALIAN 1Z06 or Grade 12 U or M equivalent

Students who have credit in ITALIAN 1C03, but not in ITALIAN 1CC3, will be permitted to take ITALIAN 1ZZ6; however, they must relinquish credit in ITALIAN 1C03 to do so.

The Department reserves the right to place students in the course most appropriate to their abilities.

ITALIAN 2B03 ITALY THROUGH THE CAMERA LENS

This course takes the student on a journey through fifty years of Italian cinematic history using nine movies (in Italian, with subtitles) that represent some of the most critical moments related to Italian culture in post WWII period. (See Note 3 above.)

Four hours; one term

Prerequisite: Registration in Level II or above

Cross-list: THTR&FLM 2103

ITALIAN 2F03 INTRODUCTION TO THE STUDY OF LITERATURE: IL NEOREALISMO

An introduction to the study of literature in Italian, focusing on the neorealist movement in literature and also in cinema. The course explores principal themes in connection to the socio-historical and political context.

Three lectures; one term

Prerequisite: ITALIAN 1AA3 or 2Z03 (or concurrent registration in ITALIAN 2Z03)

ITALIAN 2I03 ITALY THROUGH THE AGES I: THE ORIGINS TO THE RENAISSANCE

A survey of representative works in Italian literature and culture from its origins to the Renaissance.

Three hours; one term

Prerequisite: ITALIAN 1AA3 or 2Z03 (or concurrent registration in ITALIAN 2Z03)

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: ITALIAN 1CC3 or 1Z06

Antirequisite: ITALIAN 1AA3, 2ZZ3

The Department reserves the right to place students in the course most appropriate to their abilities.

ITALIAN 2ZZ3 INTERMEDIATE ITALIAN II

An intensive review of those grammatical structures not studied previously, together with oral practice. Selected written works in the original will also be studied. The sequel to this course is ITALIAN 3A03.

Four hours; one term

Prerequisite: ITALIAN 2Z03

Antirequisite: ITALIAN 1AA3

The Department reserves the right to place students in the course most appropriate to their abilities.

ITALIAN 3A03 ADVANCED GRAMMAR PRACTICE

This course is designed to improve the student's written and oral proficiency through exercises, compositions, and analysis of texts. The sequel to this course is ITALIAN 3D03.

Three hours; one term

Prerequisite: One of ITALIAN 1AA3, 2ZZ3

ITALIAN 3D03 COMPOSITION AND STYLISTICS I

An introduction to the study of Italian stylistics through an intensive and systematic analysis of Italian clause, sentence and discourse structure in the written and spoken language. The sequel to this course is ITALIAN 4A03.

Three hours; one term

Prerequisite: ITALIAN 3A03

ITALIAN 3I03 ITALY THROUGH THE AGES II: FROM THE BAROQUE TO THE 20TH CENTURY

A continuation of Italian 2I03. Along with a study of representative literary texts from the Baroque to the 20th century, the course will also consider fundamental aspects of Italian culture (history, figurative arts, music).

Three hours; one term

Prerequisite: ITALIAN 2I03

Antirequisite: ITALIAN 4Y03

ITALIAN 3X03 CONTEMPORARY ITALY: THE IMAGE OF ITALY TODAY

A study of current trends, literature, new directions, and art in Italy today, in the framework of the European consciousness and market.

Three lectures; one term

Prerequisite: ITALIAN 2F03 or 2I03

Offered in alternate years.

ITALIAN 3Y03 CULTURE AND SOCIETY IN RENAISSANCE ITALY

An exploration of Italian culture in the Renaissance and its impact on the development of modern European thought. Students will be introduced to Renaissance ideas on politics, history, society, the artist and the scientist through the study of representative works.

Three lectures; one term

Prerequisite: ITALIAN 2F03 or 2I03

Antirequisite: ITALIAN 4R03

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

ITALIAN 4I13 INDEPENDENT STUDY

The student will prepare, under the supervision of a faculty member, a research paper involving independent study in an area where the student has already demonstrated competence.

Prerequisite: 12 units of Italian above Level I and permission of the Department

ITALIAN 4X03 LOVE AND LIFE IN THE MIDDLE AGES

An exploration of Italian life and culture in the Middle Ages through the study of the *dolce stil nuovo* and selected works by Dante, Petrarch and Boccaccio.

Three lectures; one term

Prerequisite: ITALIAN 2F03 or 2I03

Antirequisite: ITALIAN 3RR3

Offered in alternate years.

ITALIAN 4XX3 DANTE'S WORLD

An exploration of Dante's *Commedia* in the context of medieval culture, politics and philosophy. The course will also consider the impact of the *Commedia* on Western thought.

Three lectures; one term

Prerequisite: ITALIAN 2F03 or 2I03

Antirequisite: ITALIAN 3R03

Offered in alternate years.

ITALIAN 4YY3 RISORGIMENTO: THE ROMANTIC QUEST FOR A NATION

A study of Italian civilization and culture during the 19th century, focusing on the fundamental issues of Italian unification. Exponential artistic, cultural and literary representatives of the period will be examined.

Three lectures; one term

Prerequisite: ITALIAN 2F03 or 2I03

Offered in alternate years.

JAPANESE ...

Japanese courses are administered within the Department of Linguistics and Languages of the Faculty of Humanities. The Combined Honours in Japanese Studies and Another Subject Program is coordinated by an interdisciplinary Committee of Instruction. For information and counselling, please contact the departmental office, Togo Salmon Hall, Room 613.

Note:

Not all courses are offered on an annual basis. Students should consult the timetable for available courses.

Courses *If no prerequisite is listed, the course is open.***JAPANESE 1Z06 BEGINNER'S INTENSIVE JAPANESE**

Formerly: JAPANESE 1Z03 and 1ZZ3

An introduction to spoken and written Japanese focusing on developing proficiency in the skills of listening, speaking, reading and writing. Kanji (Chinese characters) will be introduced. Acquisition of basic grammar, *hiragana* and *katakana* scripts, and oral communication skills will be emphasized. Open to students with no prior background in Japanese. The sequel to this course is JAPANESE 2Z03.

Four hours; two terms

Antirequisite: JAPANESE 1Z03, 1ZZ3

Students who have credit in JAPANESE 1Z03, but not in JAPANESE 1ZZ3, will be permitted to take JAPANESE 1Z06; however, they must relinquish credit in JAPANESE 1Z03 to do so.

The Department reserves the right to place students in the course most appropriate to their abilities.

JAPANESE 2Z03 INTERMEDIATE INTENSIVE JAPANESE I

This course develops students' communicative skills in Japanese through conversational exercises, creative writing and other practices. Emphasis will be placed upon refining the knowledge of grammar and expanding vocabulary. The sequel to this course is JAPANESE 2ZZ3.

Four hours; one term

Prerequisite: A grade of at least B- in JAPANESE 1Z06 or 1ZZ3

Not open to students with credit in JAPANESE 2ZZ3.

The Department reserves the right to place students in the course most appropriate to their abilities.

JAPANESE 2ZZ3 INTERMEDIATE INTENSIVE JAPANESE II

This course further develops and consolidates the students' communicative skills in Japanese through conversational exercises, creative writing and other exercises. The sequel to this course is JAPANESE 3A03.

Four hours; one term

Prerequisite: JAPANESE 2Z03

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 3AA3.

Four hours; one term

Prerequisite: JAPANESE 2ZZ3

The Department reserves the right to place students in the course most appropriate to their abilities.

JAPANESE 3AA3 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.

Three hours; one term

Prerequisite: JAPANESE 3A03

The Department reserves the right to place students in the course most appropriate to their abilities.

JAPANESE 3B03 BUSINESS JAPANESE I

A study of Japanese language in a context of culture, values and customs of the Japanese business world. Emphasis on oral and aural proficiency in Japanese.

Three hours; one term

Prerequisite: JAPANESE 2ZZ3

JAPANESE 3CC3 BUSINESS JAPANESE II

A continuation of JAPANESE 3B03. This course focuses on a further study of Japanese language in a context of Japanese business practices, values and customs. Oral and aural proficiency are emphasized.

Three hours; one term

Prerequisite: JAPANESE 3B03

Offered in alternate years.

JAPANESE 4A03 ADVANCED READINGS IN CURRENT AFFAIRS IN JAPANESE

This course will further develop students' comprehensive skills in Japanese through readings of a variety of topics on current affairs. Readings of magazines will be combined with discussions on videos.

Three hours; one term

Prerequisite: JAPANESE 3AA3

JAPANESE 4Z03 ADVANCED ORAL PRACTICE IN JAPANESE

This course will further develop students' spoken discourse skills through viewing of videos, group discussions and cooperative group activities. Emphasis will be on overall communicative competence in oral Japanese.

Three hours; one term

Prerequisite: JAPANESE 3AA3

JAPANESE STUDIES ...**Courses** *If no prerequisite is listed, the course is open.***JAPAN ST 2A03 JAPANESE COMMUNICATION**

This course looks at the Japanese language from sociolinguistic and pragmatic points of view identifying the unique characteristics of the target culture that lie behind its use. Such knowledge is invaluable in solving problems of intercultural communication.

Three hours; one term

Prerequisite: Registration in Level II or above

Antirequisite: CMST 2AA3

Alternates with JAPAN ST 2F03.

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 Sudo, and animation directors such as Hayao Miyazaki and Isao Takahata.

Three hours; one term

Prerequisite: Registration in Level II or above

Cross-list: THTR&FLM 2H03

Alternates with JAPAN ST 2A03.

JAPAN ST 2P06 JAPANESE CIVILIZATION

Introduction to Japanese history, society, and culture through a study of religious traditions, literature, and art of Japan.

Two lectures, one tutorial; two terms

Prerequisite: Registration in Level II or above

Cross-list: RELIG ST 2P06

This course is administered by the Department of Religious Studies.

JAPAN ST 3B03 MODERN JAPAN

A survey of 19th- and 20th-century Japan, with emphasis on political developments, social change, and Japan's relations with East Asia and the West. Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: HISTORY 3B03

This course is administered by the Department of History.

JAPAN ST 3E03 JAPANESE RELIGION

A study of Japanese religion and how it functions in Japanese society. Topics will include Shinto, shamanism, Ancestor Worship, Japanese Buddhism and the New Religions of Japan.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level II or above. One of RELIG ST 1B06, 2MM6 or JAPAN ST 2P06 is recommended.

Cross-list: RELIG ST 3E03

This course is administered by the Department of Religious Studies.

JAPAN ST 3H03 STORYTELLING IN EAST ASIAN RELIGIONS

An in-depth study of selected examples of story literature in China and Japan with attention to the way religion is represented in them.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level II or above

Cross-list: RELIG ST 2F03

This course is administered by the Department of Religious Studies.

JAPAN ST 3S03 THE EAST ASIAN RELIGIOUS TRADITION

Readings in East Asian religious texts in translation will centre around themes such as culture vs. nature, virtue vs. power, social responsibility vs. personal cultivation, bookish learning vs. meditation.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level III or above

Cross-list: ARTS&SCI 3S03, RELIG ST 3S03

This course is administered by the Department of Religious Studies.

JAPAN ST 3UU3 BUDDHISM IN EAST ASIA

An examination of myth, history, doctrine, monastic culture, and ritual practice in East Asian Buddhism.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level II or above

Cross-list: RELIG ST 3UU3

This course is administered by the Department of Religious Studies.

JAPAN ST 4A06 GUIDED READING IN JAPANESE STUDIES

Independent study on an approved topic. A major essay and/or final examination will be required.

Two terms

Prerequisite: Registration in Level III or IV of the Combined Honours in Japanese Studies program and permission of the Director

JAPAN ST 4B03 GUIDED READING IN JAPANESE STUDIES

Independent study on an approved topic. A research essay and/or final examination will be required.

One term

Prerequisite: Registration in Level III or IV of the Combined Honours in Japanese Studies program and permission of the Director

JAPAN ST 4S03 JAPANESE BUSINESS

An introduction to Japan's business system. The approach is integrative, as the course examines Japan's economic history, culture, politics, industrial policy, management practices, advertising and doing business with Japan.

Prerequisite: Registration in a Commerce, Engineering and Management or Japanese Studies program

Cross-list: COMMERCE 4SF3

This course is administered by the School of Business.

LINGUISTICS ...

Linguistics courses and programs are administered within the Department of Linguistics and Languages of the Faculty of Humanities. For information and counselling, please contact the departmental office, Togo Salmon Hall, Room 613.

Note:

Not all courses are offered on an annual basis. Students should consult the timetable for available courses.

Courses *If no prerequisite is listed, the course is open.***LINGUIST 1A03 INTRODUCTION TO LINGUISTICS I**

This course provides an introduction to the field of linguistics, the scientific study of language. The focus will be on language structure, specifically the core areas of phonetics, phonology and morphology. Topics covered will be exemplified not only through English, but through a wide variety of languages. Two lectures, one tutorial; one term

LINGUIST 1AA3 INTRODUCTION TO LINGUISTICS II

This course is a continuation of LINGUIST 1A03, and completes the introduction to linguistics. Emphasis will be placed on syntax, semantics, typology, historical linguistics and applied linguistics.

Two lectures, one tutorial; one term

Prerequisite: LINGUIST 1A03

LINGUIST 2AA3 HISTORICAL LINGUISTICS: THE DEVELOPMENT OF INDO-EUROPEAN LANGUAGES

The phonetic, morphological, syntactic and lexical structures of Indo-European languages and the role of these features in the genesis and development of the Indo-European-based languages of Europe.

Three lectures; one term

Prerequisite: LINGUIST 1A03, 1AA3

Antirequisite: ANTHROP 2AA3

LINGUIST 2E03 THE NATURE OF TEXTS: FROM SLANG TO FORMAL DISCOURSE

This course introduces students to the field of discourse analysis and investigates a variety of styles and registers from the conversational to the literary and from the journalistic to the academic.

Three hours; one term

Prerequisite: Registration in Level II or above

Cross-list: CMST 2E03

This course is administered by the Department of Linguistics and Languages.

LINGUIST 2L03 PHONETICS

A study of the sounds of language and human articulatory capabilities.

Three lectures; one term

Prerequisite: LINGUIST 1A03

Cross-list: ANTHROP 2L03

This course is administered by the Department of Linguistics and Languages.

LINGUIST 2LL3 INTRODUCTION TO LINGUISTIC TYPOLOGY

The study of diversity in the languages of the world, language universals and the parameters of cross-linguistic analysis of grammatical systems.

Three hours (lectures and discussion); one term

Prerequisite: LINGUIST 1A03, 1AA3

Cross-list: ANTHROP 2LL3

Offered in alternate years.

This course is administered by the Department of Linguistics and Languages.

LINGUIST 3A03 PHONOLOGY

A study of the patterns of distinctive sounds in the world's languages.

Three lectures; one term

Prerequisite: LINGUIST 2L03

Cross-list: ANTHROP 3A03

Antirequisite: ANTHROP 2M03, LINGUIST 2M03

This course is administered by the Department of Linguistics and Languages.

LINGUIST 3B03 PSYCHOLINGUISTICS

The study of perception, production and acquisition of language. Special attention is paid to methods of psycho- and neurolinguistic research and to their connection with theoretical linguistics.

Three hours; one term

Prerequisite: LINGUIST 1A03 and 1AA3 (or 1A06); or PSYCH 2H03

Cross-list: PSYCH 3BB3

Alternates with LINGUIST 3C03.

This course is administered by the Department of Linguistics and Languages.

LINGUIST 3C03 CHILD LANGUAGE ACQUISITION

Language behaviour and development in children, from birth to school age. The course examines how data from children's language acquisition can inform linguistic theory.

Three hours; one term

Prerequisite: LINGUIST 1A03; and LINGUIST 1AA3 or PSYCH 2H03

Cross-list: PSYCH 3C03

Alternates with LINGUIST 3B03.

LINGUIST 3I03 SYNTAX

The study of sentence structure in many languages. The emphasis is on using empirical data to test theoretical proposals.

Three hours; one term

Prerequisite: LINGUIST 1A03, 1AA3

Cross-list: ANTHROP 3I03

This course is administered by the Department of Linguistics and Languages.

LINGUIST 3I13 SEMANTICS

The study of patterns of meaning in language; a critical survey of theories and issues.

Three hours; one term

Prerequisite: ANTHROP 3I03 or LINGUIST 3I03

Cross-list: ANTHROP 3I13

Offered in alternate years.

This course is administered by the Department of Linguistics and Languages.

LINGUIST 3M03 MORPHOLOGY

The study of word formation in the languages of the world; a critical survey of current theories and issues.

Three lectures; one term

Prerequisite: LINGUIST 1A03, 1AA3

Cross-list: ANTHROP 3M03

Offered in alternate years.

This course is administered by the Department of Linguistics and Languages.

LINGUIST 3P03 PRAGMATICS

A discussion of the problems confronting the linguist in the study of text and discourse at the level beyond the sentence. The course will deal with the interaction between grammar and situational factors.

Three lectures; one term

Prerequisite: LINGUIST 1A03, 1AA3; or FRENCH 2H03

Cross-list: CMST 3V03

Antirequisite: ANTHROP 3PL3

Offered in alternate years.

This course is administered by the Department of Linguistics and Languages.

LINGUIST 3X03 INTRODUCTION TO SOCIOLINGUISTICS

An introduction to sociolinguistics with particular emphasis on the social situation of the major European languages. Topics covered include linguistic variation (regional, social, situational), language and gender, language and disadvantage/power, language choice, language change, pidgin and creole languages.

Three lectures; one term

Prerequisite: LINGUIST 1A03, 1AA3

Cross-list: CMST 3G03

Antirequisite: ANTHROP 3X03

This course is administered by the Department of Linguistics and Languages.

LINGUIST 4B03 SECOND LANGUAGE ACQUISITION

The course examines empirical evidence and theoretical perspectives on language learning by adults.

Three hours; one term

Prerequisite: LINGUIST 1A03, 1AA3 and six units of Linguistics above Level I

Cross-list: CMST 4G03

Antirequisite: ANTHROP 4BL3

This course is administered by the Department of Linguistics and Languages.

LINGUIST 4D03 COMPUTERS AND LINGUISTIC ANALYSIS

This course studies the linguistic applications of computer technology in general, and language processing in particular, including parsers and machine translation.

Two lectures, one lab; one term

Prerequisite: LINGUIST 1A03, 1AA3 and six units of Linguistics above Level I

Cross-list: CMST 4I03

Offered in alternate years.

This course is administered by the Department of Linguistics and Languages.

LINGUIST 4E03 TESL (TEACHING ENGLISH AS A SECOND LANGUAGE): METHODOLOGICAL CONSIDERATIONS

This course will look at the phenomenon of TESL not only in the Canadian context but also worldwide. There will also be a detailed investigation of the dominant teaching methodologies associated with TESL.

Seminar (two hours); one term

Prerequisite: LINGUIST 1A03, 1AA3 and six units of Linguistics above Level I

Offered on an irregular rotation basis.

LINGUIST 4I03 IMMIGRANT CONTACT LANGUAGES AND THE CREATION OF A NEW IDENTITY

This course will look at the genesis, characteristics and usage patterns of "immigrant contact languages" and the characteristics of the resultant "hyphenated" identity (i.e. Spanglish - Latino; Italese - Italo-Canadian).

Seminar (two hours); one term

Prerequisite: LINGUIST 1A03, 1AA3 and six units of Linguistics above Level I

Offered on an irregular rotation basis.

LINGUIST 4I13 INDEPENDENT STUDY

The student will prepare, under the supervision of a faculty member, a research paper involving independent study in an area where the student has already demonstrated competence.

Prerequisite: 18 units of Linguistics above Level I and permission of the Department

LINGUIST 4LB3 ADVANCED PHONETICS, PHONOLOGY AND MORPHOLOGY

This course examines advanced issues in phonetics, phonology and morphology, seeking to evaluate current theory and to address data that fall beyond the explanatory capacities of those paradigms. The course is data oriented, with material taken from several languages of the Caucasus.

Three lectures; one term

Prerequisite: Nine units of Linguistics or Linguistic Anthropology above Level I

Cross-list: ANTHROP 4LB3

Antirequisite: ANTHROP 4LA3, LINGUIST 4LA3

This course is administered by the Department of Linguistics and Languages.

LINGUIST 4LC3 ADVANCED SYNTAX AND SEMANTICS

This course examines advanced issues in syntax and semantics, seeking to evaluate current theory and to address data that fall beyond the explanatory capacities of those paradigms. The course is data oriented, with material taken from several languages of the Caucasus.

Three lectures; one term

Prerequisite: Nine units of Linguistics or Linguistic Anthropology above Level I

Cross-list: ANTHROP 4LC3

Antirequisite: ANTHROP 4LA3, LINGUIST 4LA3

This course is administered by the Department of Linguistics and Languages.

LINGUIST 4M03 PIDGINS AND CREOLES

A survey of the structure (grammar and vocabulary), genesis, evolution and social history of the languages that developed as a result of European expansion to Africa, the Americas, Asia and the Pacific. Emphasis will be placed on the Atlantic (Caribbean and West African) creoles.

Seminar (two hours); one term

Prerequisite: LINGUIST 3X03

Offered on an irregular rotation basis.

LINGUIST 4N03 ENGLISH AS A GLOBAL LANGUAGE

This course explores issues arising from the status of English as a language of international communication, including: the rise of English as a global language, world Englishes, linguistic power, consequences for multilingual societies, especially minority languages.

Seminar (two hours); one term

Prerequisite: LINGUIST 3X03

Offered on an irregular rotation basis.

LINGUIST 4R03 CROSS-CULTURAL COMMUNICATION

Students will explore the links between language and culture and learn skills necessary to be intermediaries between cultures. Topics include: communication between genders, the cognitive role of metaphor, language and perception, emotions across cultures, culture and advertising, body language and cultural stereotyping.

Seminar (two hours); one term

Prerequisite: LINGUIST 1A03, 1AA3 and six units of Linguistics above Level I; or permission of the Department

Cross-list: CMST 4R03

Not open to students with credit in LINGUIST 4BB3, TOPICS IN THE APPLICATION OF LINGUISTICS, if the topic was Cross-Cultural Communication.

Offered on an irregular rotation basis.

LINGUIST 4S03 INTERPERSONAL COMMUNICATION

This course offers an introduction to contemporary interpersonal communication theories and research. Topics include: small group communication, persuasive communication, argumentation strategies, conflict resolution and computer mediated, intercultural, international and political communication.

Seminar (two hours); one term

Prerequisite: LINGUIST 1A03, 1AA3 and six units of Linguistics above Level I; or permission of the Department

Cross-list: CMST 4S03

Not open to students with credit in LINGUIST 4BB3, TOPICS IN THE APPLICATION OF LINGUISTICS, if the topic was Interpersonal Communication.

Offered on an irregular rotation basis.

LINGUIST 4SL3 SLP PRACTICUM

Observation in a professional speech pathology environment or involvement in a relevant research project, and completion of a paper related to experience. Experience must be approved by the Department prior to the commencement of the course.

One term

Prerequisite: Registration in Level IV of the Honours Linguistic Cognitive Science program and permission of the Department

LINGUIST 4T03 FORENSIC LINGUISTICS

This course examines issues arising from the language-law interface, including: speaker/author identification; interpretation and transcription of police interrogations, witness statements, trial discourse; written legal language.

Seminar (two hours); one term

Prerequisite: LINGUIST 3X03

Cross-list: CMST 4T03

Not open to students with credit in LINGUIST 4BB3, TOPICS IN THE APPLICATION OF LINGUISTICS, if the topic was Forensic Linguistics. Offered on an irregular rotation basis.

LINGUIST 4TE3 TESL PRACTICUM

Observation and instruction in a TESL classroom and completion of a paper based on experience. Experience must be approved by the Department prior to the commencement of the course.

One term

Prerequisite: Registration in Level IV of the Honours Linguistic Cognitive Science program and permission of the Department

LINGUIST 4XX3 TOPICS IN LINGUISTIC THEORY

Issues in different aspects of Linguistic Theory and Advanced Philology. Consult the Department for the topic to be offered.

Seminar (two hours); one term

Prerequisite: LINGUIST 1A03, 1AA3 and six units of Linguistics above Level I

Cross-list: ANTHROP 4XX3

LINGUIST 4XX3 may be repeated, if on a different topic, to a total of six units.

Offered in alternate years.

This course is administered by the Department of Linguistics and Languages.

LINGUIST 4Z03 TOPICS IN PSYCHOLINGUISTICS

Topics include: First Language Acquisition; Brain and Language. Consult the Department for the topic to be offered.

Seminar (two hours); one term

Prerequisite: Any Level III course in Linguistics; or PSYCH 3BB3 or 3UU3

Cross-list: PSYCH 4Z03

LINGUIST 4Z03 may be repeated, if on a different topic, to a total of six units.

Offered in alternate years.

This course is administered by the Department of Linguistics and Languages.

LINGUIST 4ZZ3 APPROACHES TO DISCOURSE

This course offers an overview of different approaches to the analysis of discourse, including speech act theory, interactional sociolinguistics, ethnography of communication, pragmatics, conversation analysis, and critical discourse analysis.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level III or IV of a program in Communication Studies or Linguistics or permission of the Program Counsellor for Communication Studies

Cross-list: CMST 4L03

This course is administered by the Department of Communication Studies and Multimedia.

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 1ZZ3

The Department reserves the right to place students in the course most appropriate to their abilities.

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 1ZZ3, 2AA3

Antirequisite: POLISH 2Z06

The Department reserves the right to place students in the course most appropriate to their abilities.

POLISH 3AA3 INTERMEDIATE POLISH II

This course concentrates on the study of grammatical structures and rules of composition. It develops written and oral skills.

Four hours; one term

Prerequisite: POLISH 3A03

Antirequisite: POLISH 2Z06

The Department reserves the right to place students in the course most appropriate to their abilities.

RUSSIAN ...

Courses in Russian are administered within the Department of Linguistics and Languages of the Faculty of Humanities. For information and counselling, please contact the departmental office, Togo Salmon Hall, Room 613.

Note:

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

Courses

If no prerequisite is listed, the course is open.

RUSSIAN 2A03 INTENSIVE BEGINNER'S RUSSIAN I

Designed for students with no prior knowledge of Russian, the course covers basic Russian vocabulary and grammatical structures, while emphasizing spoken Russian. This course is enhanced by CALL (Computer-Assisted Language Learning) module. The sequel to this course is RUSSIAN 2AA3.

Four hours; one term

Antirequisite: Grade 12 U or M equivalent, RUSSIAN 1Z03

Not open to students with credit or registration in RUSSIAN 2AA3 or credit in RUSSIAN 1ZZ3. The Department reserves the right to place students in the course most appropriate to their abilities.

RUSSIAN 2AA3 INTENSIVE BEGINNER'S RUSSIAN II

This course consists of an intensive study of Russian vocabulary and grammar, with further emphasis on spoken Russian and enhancement by CALL (Computer-Assisted Language Learning) module. The sequel to this course is RUSSIAN 3A03.

Four hours; one term

Prerequisite: RUSSIAN 1Z03 or 2A03

Antirequisite: Grade 12 U or M equivalent, RUSSIAN 1ZZ3

The Department reserves the right to place students in the course most appropriate to their abilities.

RUSSIAN 3A03 INTERMEDIATE RUSSIAN I

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: RUSSIAN 1ZZ3 or 2AA3

Antirequisite: RUSSIAN 2C06, 2Z03

Not open to students with credit or registration in RUSSIAN 3AA3 or credit in RUSSIAN 2ZZ3.

The Department reserves the right to place students in the course most appropriate to their abilities.

POLISH ...

Courses in Polish are administered within the Department of Linguistics and Languages of the Faculty of Humanities. For information and counselling, please contact the departmental office, Togo Salmon Hall, Room 613.

Notes:

1. Students should note that the Department has classified its Polish language courses under the following categories:

Introductory Level Language Courses

POLISH 2A03, 2AA3

Intermediate Level Language Courses

POLISH 3A03, 3AA3

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.

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

Antirequisite: POLISH 1Z03

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.

RUSSIAN 3AA3 INTERMEDIATE RUSSIAN II

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.

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.

MANUFACTURING TECHNOLOGY

(SEE TECHNOLOGY, MANUFACTURING TECHNOLOGY)

MATERIALS SCIENCE AND ENGINEERING

WEB ADDRESS: <http://mse.mcmaster.ca/>

John Hodgins Engineering Building, Room 357

Ext. 24295

Faculty as of January 15, 2007

Chair

Kenneth S. Coley

Distinguished University Professors

J. David Embury/B.Sc. (Manchester), Ph.D. (Cambridge), F.R.S.C., P.Eng.
Gary R. Purdy/M.Sc. (Alberta), Ph.D. (McMaster), D.H.C. (Grenoble),
F.C.I.M., F.R.S.C., P.Eng.

Professors

Gianluigi Botton/B.Eng. Phys., Ph.D. (Ecole Polytechnique)
Kenneth S. Coley/B.Sc. (Strathclyde), Ph.D., D.I.C. (Imperial College,
London)
Gordon A. Irons/B.A.Sc. (Toronto), Ph.D. (McGill), F.C.I.M., P.Eng.,
Dofasco Chair in Ferrous Metallurgy
Adrian Kitai/B.Sc. (McMaster), Ph.D. (Cornell), P.Eng.
Anthony Petric/B.A.Sc. (Toronto), Ph.D. (Ecole Polytechnique), P.Eng.
David S. Wilkinson/B.A.Sc. (Toronto), Ph.D. (Cambridge), F.C.I.M.,
F.A.Cer.S., P.Eng.
Gu Xu/M.Sc., Ph.D. (Pittsburgh), D.E.S. (Columbia)
Shiping Zhu/B.Eng. (Zhejiang), Ph.D. (McMaster) P.Eng.

Adjunct Professors

Hany Aziz/B.Sc. (Cairo), M.Eng., Ph.D. (McMaster)
Yves Brechet/D.E.A. (Ecole Polytechnique), Ph.D. (Grenoble)
Michael J. Graham/B.Sc., Ph.D. (Liverpool)
Zygmunt J. Jakubek/M.Sc. (Cracow), Ph.D. (M.I.T.)
David J. Lloyd/B.Sc., Ph.D. (Wales)
Beng S. Ong/B.Sc. (Nanyang), Ph.D. (McGill)
Zoran D. Popovic/Dipl.Eng., M.Sc. (Belgrade), Ph.D. (McMaster)
S.V. Subramanian/B.Sc. (Banaras), M.Met., Ph.D. (Sheffield)

Associate Professors

Dmitri V. Malakhov/B.Sc. (Moscow), M.Sc., Ph.D. (Novosibirsk, Russia)
Marek Niewczas/M.Sc., Ph.D. (Krakow)
Nikolas Provatas/M.Sc., Ph.D. (McGill)
Igor Zhitomirsky/M.Sc. (State University, Kalinin), Ph.D. (Karpov Insti-
tute, Moscow)

Assistant Professor

Hatem S. Zurob/B.Eng., Ph.D. (McMaster)

Associate Members

Kari Dalnoki-Veress/(Physics) B.Sc., M.Sc., Ph.D. (Guelph)
John E. Greedan/(Chemistry) B.A. (Bucknell), Ph.D. (Tufts), F.C.I.C.
Mohamed Hamed/(Mechanical Engineering) B.A.Sc., Ph.D. (Alexandria)
Adam P. Hitchcock/(Chemistry) B.Sc. (McMaster), Ph.D. (British
Columbia), F.C.I.C.
Joseph McDermid/(Mechanical Engineering) B.A.Sc. (Queen's), M.Eng.,
Ph.D. (McGill)
Kalai Saravanamuttu/(Chemistry) B.Sc., Ph.D. (McGill)
Sumanth Shankar/(Mechanical Engineering) B.Tech (Varanasi), Ph.D.
(Worcester)

Courses If no prerequisite is listed, the course is open.

MATLS 1M03 STRUCTURE AND PROPERTIES OF MATERIALS

An introduction to the structure of both crystalline and amorphous solids; the physical and chemical basis for properties exhibited by materials; an overview of material properties including mechanical, electrical, magnetic and thermal behaviour.

Three lectures, one tutorial; second term

Prerequisite: Registration in any program in the Faculties of Engineering or Science

Antirequisite: ENGINEER 2E03, 2O03, 2O04, MATLS 1A03, 2O03

MATLS 2B03 THERMODYNAMICS OF MATERIALS

Thermodynamics of gases and critical phenomena. The three laws of thermodynamics applied to materials processing. An introduction to statistical thermodynamics.

Three lectures, one tutorial; first term

Prerequisite: CHEM 1A03 or 1E03

Antirequisite: ENG PHYS 2H04, PHYSICS 2H04

MATLS 2D03 SOLUTION THERMODYNAMICS

Thermodynamic activity in solid and liquid systems: Gibbs energy of solutions; binary phase diagrams; equilibrium constant; reaction equilibria in gases; Ellingham diagrams.

Three lectures, one tutorial; second term

Prerequisite: CHEM 1A03 or 1E03; and MATLS 2B03

Antirequisite: MATLS 2B06

MATLS 2H04 MEASUREMENTS AND COMMUNICATION

Basic experimental, simulation and data collection skills relating to materials structure and properties. Written and presentation skills development through lab report writing, assignments and plant visits.

Two three hour laboratories or tutorials per week; both terms

Prerequisite: Registration in a program administered by the Department of Materials Science and Engineering

Antirequisite: MATLS 2H03

MATLS 2X03 CRYSTALLINE STRUCTURE OF MATERIALS

Crystal geometry, point groups, space groups, x-ray diffraction methods for the determination of crystalline structures and chemical compositions, electron and neutron diffraction methods, microanalysis, crystalline defects, physical properties of crystals, crystal growth, phase analysis, phase diagrams, phase transitions, protein crystallography.

Two lectures, one lab (three hours); first term

Prerequisite: Completion of Science I or Engineering I

Antirequisite: MATLS 2X02

MATLS 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.

Three lectures; second term

Prerequisite: MATLS 2D03

MATLS 3C04 THERMODYNAMICS OF MULTICOMPONENT SYSTEMS

Reaction equilibria in solution; stability diagrams; ternary phase diagrams; aqueous and high temperature electrochemistry; use of computerized thermodynamic databases.

Three lectures, one lab (three hours), one tutorial; first term

Prerequisite: MATLS 2D03

Antirequisite: MATLS 3C03, 3D03

MATLS 3E04 MASS TRANSFER

Phenomenological and mechanistic approaches to diffusion; boundary conditions; diffusion in fluids and solids; point defects in solids.

Three lectures, two tutorials; second term.

Prerequisite: One of ENGINEER 2O03, MATLS 1A03 or 1M03; and MATH 2M06 (or 2M03 and 2MM3) or both MATH 2A03 and 2C03

MATLS 3F03 HIGH-TEMPERATURE MATERIALS PRODUCTION

Fundamentals of processing, building on a knowledge of heat and mass transfer. High temperature processing of materials, focusing on heat sources, solid state processing of powders and liquid state processing, high temperature production routes for most important metals.

Three lectures, one tutorial (one hour); second term.

Prerequisite: MATLS 2D03

Antirequisite: MATLS 4B04

MATLS 3M03 MECHANICAL BEHAVIOUR OF MATERIALS

How materials are made strong, tough, ductile, formable. How to prevent failures. Materials selection using computer databases.

Two lectures, one tutorial and/or laboratory; first term

Prerequisite: ENGINEER 2P04 and one of ENGINEER 2O03, MATLS 1A03, 1M03, 2O03; or permission of the department

Antirequisite: ENGINEER 3P03, MATLS 3P03

MATLS 3Q03 MATERIALS FOR ELECTRONIC APPLICATIONS

Fundamental properties of materials used in electronic applications, operation of devices and fabrication methods of electronic circuits and packaging. Includes description of dielectric, magnetic and optoelectronic properties.

Three lectures; second term

Prerequisite: One of ENGINEER 2E03, 2O03 or MATLS 1M03

MATLS 3T04 PHASE TRANSFORMATIONS

Review of thermodynamics, binary phase diagrams and solid state diffusion. Role of interfaces; solidification, diffusional and martensitic transformations; welding; oxidation. Metallographic examination will be featured in laboratory work.

Three lectures or tutorial, one lab (three hours); first term

Prerequisite: One of ENGINEER 2O03, MATLS 1M03, 2X02 or 2X03

MATLS 4A02 SEMINARS AND INDUSTRIAL PRACTICE

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 program administered by the Department of Materials Science and Engineering

MATLS 4AA3 COMPUTATIONAL THERMODYNAMICS

Thermodynamic modelling. Principles of computational thermodynamics and its applications. Thermo-Calc. Fortran programming. TQ interface and its incorporation into problem-oriented programs.

Two lectures, one tutorial during the first half of the term, one lecture, two tutorials during the second half of the term; second term

Prerequisite: One of MATLS 3C03, 3C04 or registration in a program administered by the Department of Materials Science and Engineering

Antirequisite: MATLS 3A03

Offered on an irregular rotation basis.

Offered in 2007-2008.

Not offered in 2008-2009.

MATLS 4C03 MODERN IRON AND STEELMAKING

Theory and practice of iron making. New processes for reduced energy consumption and pollution. Thermodynamics and kinetics of steelmaking. Steel refining. Casting, including new near net shape technologies. Specialty steelmaking.

Three lectures; second term

Prerequisite: Registration in final or penultimate year of any Materials Engineering program or permission of instructor

Corequisite: MATLS 3F03 or 4B04

Offered on an irregular rotation basis.

Not offered in 2007-2008.

Offered in 2008-2009.

MATLS 4D03 MATERIALS AND THE ENVIRONMENT

The environments experienced by engineering materials in service, and economic methods for ensuring their survival. The basic science of high temperature oxidation and aqueous corrosion leads to an appreciation of methods for corrosion control.

Three lectures; second term

Prerequisite: MATLS 3C04, 3T04

Offered on an irregular rotation basis.

Not offered in 2007-2008.

Offered in 2008-2009.

MATLS 4F03 SYNTHESIS AND APPLICATIONS OF NANOMATERIALS

Introduction to synthesis routes for nanomaterials, bottom-up and top-down approaches, specific properties of materials at the nanoscale including carbon nanotubes, nanoparticles and quantum dots.

Three lectures; second term

Prerequisite: Registration in Level IV of a program in Honours Chemistry, Engineering Physics, Materials Engineering or Honours Materials Science

Antirequisite: MATLS 4F04

MATLS 4G03 CHARACTERIZATION OF NANOMATERIALS

Interaction of electrons and photons with matter. Imaging methods with electron microscopy, scanning probe techniques, x-ray photoelectron spectroscopy and X-ray absorption analysis with high spatial resolution.

Three lectures; first term

Prerequisite: Registration in Level III or IV of a program in Chemical Engineering, Honours Chemistry, Engineering Physics, Materials Engineering or Honours Materials Science

Antirequisite: MATLS 4G02

Offered on an irregular rotation basis.

Not offered in 2007-2008.

Offered in 2008-2009.

MATLS 4H03 THIN FILM SCIENCE AND ENGINEERING

Deposition and fabrication techniques, surfaces, growth mechanisms, epitaxy, kinetic effects in thin films, defects and properties of thin films. Materials for packaging.

Three lectures; first term

Prerequisite: Registration in Level IV of Materials Science or Materials Engineering

Offered on an irregular rotation basis.

Offered in 2007-2008.

Not offered in 2008-2009.

MATLS 4I03 SUSTAINABLE MANUFACTURING PROCESSES

Sustainable development, materials cycles, methods for measuring environmental impact, life cycle analysis, waste treatment and recycling technologies.

Two lectures, one tutorial (one hour); second term

Prerequisite: Registration in final or penultimate year of any Materials Engineering program or permission of instructor

Offered on an irregular rotation basis.

Offered in 2007-2008.

Not offered in 2008-2009.

MATLS 4J04 MATERIALS SELECTION IN DESIGN AND MANUFACTURING

Materials selection charts, materials selection with mechanical constraints, coupled materials and processing/fabrication routes, effect of shape on materials selection, design of hybrid materials, eco-selection.

Three lectures, one tutorial (one hour); first term

Prerequisite: ENGINEER 2P04 or MECH ENG 2P04; and CHEM ENG 2A04 or MECH ENG 3R03

MATLS 4K04 SENIOR THESIS

Individual experimental research problem with a selected supervisor. A preliminary written and oral report is required at the end of the first term. The thesis is defended orally. A minimum of six unscheduled hours each week, both terms.

Prerequisite: A CA of at least 8.0; and registration in the final level of a Materials Engineering program or Level IV of Honours Materials Science.

MATLS 4L02 MATERIALS MANUFACTURING LABORATORY

A sequence of experiments based on processing methods used in the metal and ceramic industries. Structure-property relationships are assessed at each step of the processing route.

One lecture, one lab (three hours); first term

Prerequisite: Registration in final year of a Materials Engineering program

MATLS 4NN3 COMPUTATIONAL MODELLING IN MATERIALS ENGINEERING

Introduction to numerical modeling of heat and mass transfer processes, microstructure development in alloys, interface properties and simple atomic and molecular modelling.

Three lectures; second term

Prerequisite: MATLS 1M03, 3T04; or registration in a program administered by the Department of Materials Science and Engineering

Antirequisite: MATLS 3N03, 4E04

Offered on an irregular rotation basis.

Not offered in 2007-2008.

Offered in 2008-2009.

MATLS 4P03 PROPERTIES OF POLYMERIC MATERIALS

Structure of amorphous and crystalline polymeric materials; mechanical, electrical and optical properties, and their modification through processing.

Three lectures; first term

Prerequisite: CHEM 2WW2; and both MATH 2A03 and 2C03 or MATH 2M06 (or 2M03 and 2MM3)

Offered on an irregular rotation basis.

Offered in 2007-2008.

Not offered in 2008-2009.

Open to Level III and IV students registered in a program in the Faculty of Science or Engineering with permission of the department.

MATLS 4R03 CERAMIC SCIENCE

The unique properties of structural and functional ceramics are explored, including ferroelectric, piezoelectric and magnetic ceramics, clays, porcelains and refractories. The importance of processing for achieving properties is emphasized.

Three lectures; second term

Prerequisite: Registration in a program in Materials Engineering

Offered on an irregular rotation basis.

Offered in 2007-2008.

Not offered in 2008-2009.

MATLS 4T03 PROPERTIES AND PROCESSING OF COMPOSITES

Intrinsic properties of matrix materials and fibres; mechanics and thermodynamics of interfaces; mechanical properties and fabrication of engineering composites.

Three lectures; second term

Prerequisite: ENGINEER 3P03 or MATLS 3M03

Offered on an irregular rotation basis.

Offered in 2007-2008.

Not offered in 2008-2009.

MATLS 4Z04 INDUSTRIAL PROJECTS

Projects, in cooperation with industry, involving materials design in manufacturing, complemented by lectures in group problem solving and design methodology.

Two labs (three hours); both terms

Prerequisite: Registration in Level IV or V of any program in Materials Engineering

MATHEMATICS AND STATISTICS

WEB ADDRESS: <http://www.math.mcmaster.ca>

Hamilton Hall, Room 218

Ext. 27034

Faculty as of January 15, 2007

Chair

Bradd Hart

Associate Chairs

Hans Boden/Graduate Studies

Deirdre Haskell/Undergraduate Studies

Professors

Stanley Alama/B.Sc. (Columbia), M.Sc., Ph.D. (Courant, N.Y.U.)

N. Balakrishnan/B.Sc., M.Sc. (Madras), Ph.D. (I.I.T., Kanpur) Hans Boden/B.S. (New Hampshire), Ph.D. (Brandeis)/Graduate Advisor, Mathematics

Lia Bronsard/B.A. (Montreal), M.Sc., Ph.D. (Courant, NYU)

Walter Craig/A.B. (California-Berkeley), M.S., Ph.D. (Courant, N.Y.U.)/Senior Canada Research Chair

Shui Feng/B.Sc., M.Sc. (Beijing Normal), Ph.D. (Carleton)

Jean-Pierre Gabardo/B.Sc. (Université de l'État a Mons), Ph.D. (Maryland)

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. (Saarbrücken), Habil. (Münster)

Peter D.M. Macdonald/B.Sc., M.Sc. (Toronto), D.Phil. (Oxford), P. Stat

Maung Min-Oo/B.Sc. (Rangoon), Dipl. Math., Dr. rer. nat., Habil. (Bonn)

Gregory H. Moore/B.A. (California-Berkeley), M.A., M.Sc., Ph.D. (Toronto)

Andrew J. Nicas/B.Sc. (McGill), M.A., Ph.D. (Princeton)

Eric T. Sawyer/B.Sc., Ph.D. (McGill)/McKay Professor of Mathematics

Matthew A. Valeriote/B.Math. (Waterloo), Ph.D. (California-Berkeley)

Roman Viveros-Aguilera/B.A. (Veracruzana, Mexico), M.A. (National Polytechnic Inst., Mexico), Ph.D. (Waterloo)/Graduate Advisor, Statistics

McKenzie Y.-K. Wang/A.B. (Princeton), Ph.D. (Stanford)

Gail S.K. Wolkowicz/B.Sc., M.Sc. (McGill), Ph.D. (Alberta)

Adjunct Professor

Abdel H. El-Shaarawi/B.Sc., M.Sc. (Cairo), Ph.D. (Waterloo)/part-time

Associate Professors

Aaron Childs/B.Sc., M.Sc., Ph.D. (McMaster)

David Earn/B.Sc., M.Sc. (Toronto), Ph.D. (Cambridge)

Deirdre Haskell/B.A. (Oxford), M.S., Ph.D. (Stanford)

Nicholas Kevlahan/B.Sc. (British Columbia), Ph.D. (Cambridge)

Zdislav V. Kovarik/M.Sc. (Charles, Prague), Ph.D. (Toronto)

Miroslav Lovric/B.S. (Zagreb), M.S., Ph.D. (Ohio State), 3M Teaching Fellow Ernest R. Mead/B.A., M.A., Ph.D. (Western Ontario), A.S.A.

Dmitry E. Pelinovsky/M.S. (Nizhny Novgorod State, Russia), Ph.D. (Monash)

Patrick Speissegger/M.Sc. (Swiss Federal Institute of Technology), Ph.D. (Illinois-Urbana)/Canada Research Chair

Adjunct Associate Professors

Agnes Tourin/M.Sc. (Paris), Ph.D. (Paris IX)

Kevin N. Vander Meulen/B.Sc. (Calvin College), Ph.D. (Queen's)

Assistant Professors

Ilham Akhundov/B.A. (Azerbaijan State University), M.A., Ph.D. (St. Petersburg-Leningrad)

Angelo Canty/B.Sc. (University College, Cork), M.Sc., Ph.D. (Toronto)

Matheus Grasselli/B.Sc. (Sao Paolo), Ph.D. (King's College, London)

Megumi Harada/A.B. (Harvard), Ph.D. (California-Berkeley)

David Lozinski/B.Math. (Waterloo), M.Sc., Ph.D. (Northwestern)

Bartosz Protas/M.Sc. (Warsaw University of Technology), Ph.D. (Warsaw University of Technology and Université de Paris)

Romyar Sharifi/B.A. (California-Berkeley), Ph.D. (Chicago)/Canada Research Chair

Rong Zhu/B.Sc., M.Sc. (University of Science and Technology of China), Ph.D. (British Columbia)

Associate Members

Antoine Deza/(Computing and Software)/M.Sc. (Ecole Nationale des Ponts et Chaussées), Ph.D. (Tokyo Institute of Technology)

William M. Farmer/(Computing and Software)/B.A. (Notre Dame), M.A., M.S., Ph.D. (Wisconsin-Madison)

Timothy Field/(Electrical and Computer Engineering)/B.A. (Cambridge), D.Phil. (Oxford)

Nedialbo Nedialkov/(Computing and Software)/B.Sc. (Sophia, Bulgaria), M.Sc., Ph.D. (Toronto)

Jiming Peng/(Computing and Software)/B.Sc. (Xiang Tan), M.Sc. (Chinese Academy of Sciences), Ph.D. (Delft University of Technology)

William F. Smyth/(Computing and Software)/B.A. (Toronto), M.Sc. (Ottawa), Ph.D. (Curtin), C.Eng., F.B.C.S., F.I.C.A.

Tamas Terlakyl/(Computing and Software)/M.Sc., Ph.D. (Loránd Eötvös)

Stephen Walter/(Health Sciences)/B.Sc. (Imperial College, London), Ph.D. (Edinburgh), A.R.C.S.

Department Note:

Course codes ending with * indicate that course is not necessarily offered every session; consult the Chair of the Department or the Associate Dean of Science (Studies).

MATHEMATICS ...

Courses

If no prerequisite is listed, the course is open.

MATH 1A03 CALCULUS FOR SCIENCE I

For students in science: geared towards applications, with attention to underlying concepts. Functions: limits, continuity, derivatives, optimization, curve sketching. Antiderivative, definite integral, techniques of integration. Three lectures, one tutorial; one term

Prerequisite: Grade 12 Advanced Functions and Introductory Calculus U or MATH 1K03

Prerequisite (Beginning 2008-2009): One of Grade 12 Calculus and Vectors U, Grade 12 Advanced Functions and Introductory Calculus U, MATH 1F03 or 1K03

Antirequisite: ARTS&SCI 1D06, MATH 1N03, 1X03

Normally not open to students who have completed MATH 1M03.

Not open to students registered in an Engineering program.

MATH 1AA3 CALCULUS FOR SCIENCE II

For students in science: additional techniques of integration, applications of definite integrals, differential equations, polar coordinates, parametrized curves. Sequences, infinite series, power series. Partial derivatives.

Three lectures, one tutorial; one term

Prerequisite: MATH 1A03 or 1X03

Prerequisite (Beginning 2008-2009): MATH 1A03 or 1X03; or a grade of at least A- in MATH 1LS3

Antirequisite: ARTS&SCI 1D06, MATH 1NN3, 1XX3

MATH 1B03 LINEAR ALGEBRA I

Vector spaces given by solutions to linear systems. Linear independence, dimension. Determinants. Eigenvalues, eigenvectors and diagonalisation. Complex numbers.

Three lectures, one tutorial; one term

Prerequisite: One of Grade 12 Geometry and Discrete U, MATH 1D03, STATS 1L03

Prerequisite (Beginning 2008-2009): One of Grade 12 Calculus and Vectors U, Grade 12 Geometry and Discrete U, MATH 1D03, 1F03 or STATS 1L03

Antirequisite: MATH 1H03, 1H05, 1HH3

Not open to students registered in an Engineering program.

MATH 1C03 INTRODUCTION TO MATHEMATICAL REASONING

Inquiry into the ideas and methods of advanced mathematics. Material will include topics selected from algebra, calculus, discrete math, geometry and number theory.

Three hours; one term

Prerequisite: Grade 12 Advanced Functions and Introductory Calculus U and Grade 12 Geometry and Discrete U; or registration in MATH 1D03 and registration in Science I or Mathematics and Statistics I

Prerequisite (Beginning 2008-2009): One of Grade 12 Calculus and Vectors U, Grade 12 Geometry and Discrete U, MATH 1D03 or 1F03; and credit or registration in MATH 1B03

Enrolment is limited. See the heading *Limited Enrolment Courses* in the Faculty of Science section of the Calendar.

MATH 1D03 ALGEBRA AND GEOMETRY

Vector geometry; equations of lines and planes, projections. Matrices. Systems of linear equations; geometric interpretation of solutions. Eigenvalues and eigenvectors. Complex numbers. Applications.

Three lectures, one tutorial; one term

Prerequisite: Grade 12 Advanced Functions and Introductory Calculus U
Not open to students who have completed Grade 12 Geometry and Discrete Math U.

Last offered in 2007-2008.

MATH 1E03 ADVANCED FUNCTIONS

Polynomial, rational, trigonometric, exponential and logarithmic functions; algebraically, numerically and geometrically. Qualitative understanding of rates of change.

Three lectures, one tutorial; one term

Prerequisite: OSS Grade 11 Mathematics

Not open to students with credit in Grade 12 Advanced Functions U or Grade 12 Advanced Functions and Introductory Calculus U.

First offered in 2008-2009.

MATH 1F03 INTRODUCTION TO CALCULUS AND ANALYTIC GEOMETRY

A first course in the techniques of the differential calculus including exponential, logarithmic and trigonometric functions. An introduction to vector geometry.

Three lectures, one tutorial; one term

Prerequisite: One of Grade 12 Advanced Functions U, Grade 12 Advanced Functions and Introductory Calculus U or MATH 1E03

Not open to students with credit in Grade 12 Calculus and Vectors U.

First offered in 2008-2009.

MATH 1H03 LINEAR ALGEBRA FOR ENGINEERING

Linear systems of equations, matrices, determinants, vectors and vector spaces, complex numbers, eigenvalues and eigenvectors.

Three lectures, one tutorial; first term

Prerequisite: Registration in a program in Engineering

Antirequisite: MATH 1B03, 1H05

MATH 1K03 INTRODUCTORY CALCULUS FOR BUSINESS, HUMANITIES AND THE SOCIAL SCIENCES

An introduction to differential calculus and its applications.

Three lectures, one tutorial; one term

Prerequisite: OSS Grade 11 Mathematics or OSIS Grade 12 Mathematics (Advanced)

Normally not open to students who have completed Grade 12 Advanced Functions and Introductory Calculus U.

Last offered in 2007-2008.

MATH 1LS3 MATHEMATICS FOR THE LIFE SCIENCES

Topics from differential and integral calculus, differential equations, discrete math, chosen for their relevance to the life sciences.

Three lectures, one tutorial; one term

Prerequisite: One of Grade 12 Calculus and Vectors U, Grade 12 Advanced Functions and Introductory Calculus U or MATH 1F03

Not open to students with a grade of A- or above in MATH 1A03.

Students with a grade of at least A- in MATH 1LS3 may use it as a substitute for MATH 1A03 for prerequisites and for consideration to a Level II program for which MATH 1A03 is normally required.

First offered in 2008-2009.

MATH 1M03 CALCULUS FOR BUSINESS, HUMANITIES AND THE SOCIAL SCIENCES

Integral calculus of polynomial, rational, exponential and logarithmic functions. Optimization problems. Applications in the Social Sciences and Business.

Three lectures, one tutorial; one term

Prerequisite: MATH 1K03 or Grade 12 Advanced Functions and Introductory Calculus U

Prerequisite (Beginning 2008-2009): One of Grade 12 Calculus and Vectors U, Grade 12 Advanced Functions and Introductory Calculus U, MATH 1F03 or 1K03

Students considering upper year mathematics courses should take MATH 1A03.

Not open to students with credit or registration in ARTS&SCI 1D06, MATH 1A03, 1N03, 1X03.

MATH 1N03 CALCULUS FOR ENGINEERING I

Differential calculus, the definite integral, techniques of integration, applications.

Three lectures, one tutorial; one term

Prerequisite: Registration in a program in Engineering

Antirequisite: MATH 1A03, 1X03

MATH 1NN3 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 1AA3, 1XX3

MATH 1X03 CALCULUS FOR MATH AND STATS I

For students with interest in mathematics/statistics: emphasis on geometric intuition, but also theoretical foundations. Functions: limits, continuity, derivatives, optimization, curve sketching. Antiderivative, definite integral, techniques of integration.

Three lectures, one tutorial; one term

Prerequisite: Registration in Math and Stats I

Antirequisite: ARTS&SCI 1D06, MATH 1A03, 1N03

MATH 1XX3 CALCULUS FOR MATH AND STATS II

For students in mathematics/statistics. Additional techniques of integration, applications of definite integrals, differential equations, polar coordinates, parametrized curves. Sequences, infinite series, power series. Partial derivatives.

Three lectures, one tutorial; one term

Prerequisite: MATH 1X03 and registration in Math and Stats I

Antirequisite: ARTS&SCI 1D06, MATH 1AA3, 1NN3

MATH 2A03 CALCULUS III

Functions of several variables, chain rule, Taylor's formula, extremal problems, Lagrange multipliers; multiple integrals, change of variables formula, line and surface integrals, Green's, Gauss' and Stokes' theorems.

Three lectures; one term

Prerequisite: One of MATH 1AA3, 1NN3, 1XX3, ARTS&SCI 1D06; and credit or registration in one of MATH 1B03, 1D03, 1H03, 1H05 or 1HH3

Antirequisite: MATH 2M06, 2MM3, 2Q04

Not open to students with credit in MATH 2X03.

MATH 2C03 DIFFERENTIAL EQUATIONS

Ordinary differential equations, Laplace transforms, series solutions, partial differential equations, separation of variables, Fourier series.

Three lectures; one term

Prerequisite: One of MATH 1AA3, 1NN3, 1XX3, ARTS&SCI 1D06; and one of MATH 1B03, 1D03, 1H03, 1H05, 1HH3

Antirequisite: MATH 2O03, 2M03, 2M06, 2P04

MATH 2E03 INTRODUCTION TO MODELLING

General features of modelling. Selected examples from biology, chemistry, economics and physics are treated by a variety of elementary methods. Computer packages are used when appropriate.

Three lectures, one lab (one hour); one term

Prerequisite: One of MATH 1AA3, 1NN3, 1XX3, ARTS&SCI 1D06; and credit or registration in one of MATH 1B03, 1D03, 1H03, 1H05, 1HH3

Enrolment is limited. However, all students in programs requiring this course will be admitted. See the heading *Limited Enrolment Courses* in the Faculty of Science section of the Calendar.

MATH 2K03 FINANCIAL MATHEMATICS

Nominal and effective rates of interest and discount, forces of interest and discount, compound interest, annuities certain; amortization, sinking funds; bonds, security evaluation, determination of yields.

Three lectures; one term

Prerequisite: One of MATH 1A03, 1M03, 1N03, 1X03, ARTS&SCI 1D06

MATH 2L03

**MATHEMATICAL METHODS FOR
BUSINESS AND SOCIAL SCIENCES**

Selected topics from: linear programming, Markov chains, game theory, differential equations, and the calculus of several variables.

Three lectures; one term

Prerequisite: One of MATH 1A03, 1M03, 1N03, 1X03, ARTS&SCI 1D06; and one of MATH 1B03, 1D03, 1H03, STATS 1L03, Grade 12 Mathematics of Data Management U

Not open to students registered in Science or Engineering programs.

MATH 2M03

ENGINEERING MATHEMATICS II

Ordinary differential equations, Laplace transforms, Fourier series, with engineering applications.

Three lectures; one term

Prerequisite: MATH 1NN3; and one of MATH 1H03, 1H05, 1HH3

Antirequisite: MATH 2C03, 2P04, 2M06

MATH 2MM3

ENGINEERING MATHEMATICS III

Vector calculus, functions of several variables, integral theorems, with Engineering applications.

Three lectures; one term

Prerequisite: MATH 2M03; and one of MATH 1H03, 1H05, 1HH3

Antirequisite: MATH 2A03, 2Q04, 2M06

Not open to students who have completed MATH 2X03.

MATH 2P04

DIFFERENTIAL EQUATIONS FOR ENGINEERING

Ordinary differential equations, systems of linear ordinary differential equations, Laplace transform, power series solutions, Fourier series with engineering applications.

Three lectures and two tutorials; one term

Prerequisite: MATH 1NN3 and one of MATH 1H03, 1H05, 1HH3

Antirequisite: MATH 2C03, 2M03, 2M06

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 one of MATH 1H03, 1H05, 1HH3

Antirequisite: MATH 2A03, 2M06, 2MM3

MATH 2R03

LINEAR ALGEBRA II

Abstract vector spaces. Linear transformations. Inner product spaces. Spectral theorems. Orthogonal bases, other topics.

Three lectures; one term

Prerequisite: One of MATH 1AA3, 1NN3, 1XX3, ARTS&SCI 1D06; and one of MATH 1B03, 1H03, 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 LINEAR ALGEBRA

Introduction to MatLab; matrix and vector norms; sensitivity, conditioning, convergence and complexity; direct and iterative methods for linear systems; eigenvalues and eigenvectors; least squares.

Three lectures; one term

Prerequisite: MATH 2R03

MATH 2U03

TEACHING MATHEMATICS

This course is designed to give a 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 both MATH 1X03 and 1XX3, or in ARTS&SCI 1D06; and permission of the instructor. Applications must be submitted to the instructor by May 1 of the academic year prior to registration, with selection for placements announced by September 9.

See the heading *Limited Enrolment Courses* in the *Faculty of Science* section of the Calendar.

Enrolment is limited.

MATH 2X03

ADVANCED CALCULUS I

Introduction to the theory of functions of several variables: limits, continuity, differentiability. Taylor's Theorem and optimization, with applications.

Three lectures; one term

Prerequisite: One of MATH 1AA3, 1XX3 or ARTS&SCI 1D06; and MATH 1B03 or 1D03

Normally not open to students with credit in MATH 2A03, 2M06, 2Q04.

MATH 2XX3

ADVANCED CALCULUS II

Multiple integration, path and surface integrals and applications. Classical integration theorems of vector calculus.

Three lectures; one term

Prerequisite: MATH 2X03

MATH 3A03

REAL ANALYSIS I

Sequences of real numbers; supremum, continuity. Riemann integral, differentiation. Sequences and series of functions; uniform continuity and uniform convergence.

Three lectures; one term

Prerequisite: MATH 2C03, 2R03, 2XX3

MATH 3B03

GEOMETRY

Selected topics from: affine and projective geometry, Euclidean, spherical and hyperbolic geometry, differential geometry of curves and surfaces.

Three lectures; one term

Prerequisite: MATH 2A03 or 2X03; and MATH 2R03

MATH 3C03

MATHEMATICAL PHYSICS I

Linear algebra and eigenvalue problems; partial differential equations, orthogonal functions, Fourier series, Legendre functions, spherical harmonics.

Three lectures; one term

Prerequisite: One of MATH 2A03, 2Q04 or 2X03; and MATH 2C03 or 2P04. One of PHYSICS 2B06, 2D03 or 2E03 is recommended.

Not open to students with credit or registration in MATH 3FF3 or credit in MATH 3J04.

MATH 3CY3*

CRYPTOGRAPHY

Introduction to cryptosystems used in modern security systems: elementary number theory, primality testing and factorization, discrete logarithm, SRA cryptosystems, elliptic curve cryptosystems.

Three lectures; one term

Prerequisite: MATH 2R03

MATH 3D03

MATHEMATICAL PHYSICS II

Functions of a complex variable, probability and statistics, boundary value problems, Bessel functions.

Three lectures; one term

Prerequisite: MATH 3C03

Antirequisite: MATH 3K03

Not open to students with credit or registration in MATH 3X03 or credit in MATH 3J04.

Not open to students registered in Honours Mathematics and Physics.

MATH 3DC3*

DISCRETE DYNAMICAL SYSTEMS AND CHAOS

Iteration of functions: orbits, graphical analysis, fixed and periodic points, stability, bifurcations, chaos, fractals.

Three lectures; one term

Prerequisite: MATH 2A03 or 2X03

MATH 3E03

ALGEBRA I

An introduction to group theory, including Sylow theorems and structure of finitely generated Abelian groups; applications of group theory.

Three lectures; one term

Prerequisite: MATH 2S03

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

Systems of ordinary differential equations, autonomous systems in the plane, phase portraits, linear systems, stability, Lyapunov's method, Poincaré-Bendixson theorem, applications.

Three lectures; one term

Prerequisite: MATH 2C03, 2X03 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 2C03, 2R03, 2X03

MATH 3G03

PROBLEM SOLVING

A course designed to illustrate the principles of mathematical problem solving. Maximum enrolment is 20 students.

Three lectures; one term

Prerequisite: MATH 2A03 or 2X03; and MATH 2R03

MATH 3GP3* GEOMETRIC IDEAS IN PHYSICS

Minkowski space, Lorentz metric, Maxwell's equations, general relativity, geodesics, curvature, black hole geometries and other selected topics.

Three lectures; one term

Prerequisite: MATH 2A03 or 2X03; and MATH 2R03 or credit or registration in MATH 3C03

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 Mathematics or Statistics Level II or above

MATH 3I03 PARTIAL DIFFERENTIAL EQUATIONS FOR ENGINEERING

Topics in partial differential equations of interest to mechanical, material and ceramic engineering, including the wave equation, the heat diffusion equation and Laplace equation, in various co-ordinate systems.

Three lectures; first term

Prerequisite: MATH 2M06 (or 2M03 and 2MM3); or MATH 2P04 and 2Q04; or registration in Level III or IV of a program in the Department of Materials Science and Engineering

MATH 3K03 ENGINEERING MATHEMATICS III

Complex variable theory with applications to electrical and computer engineering.

Three lectures; one term

Prerequisite: MATH 2P04

Antirequisite: MATH 3D03

MATH 3N03 MATHEMATICAL BIOLOGY

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 INTERPOLATION AND APPROXIMATION THEORY

Polynomial and spline interpolations; approximation in Hilbert space; Hermite interpolation and orthogonal polynomials; wavelets; numerical differentiation and integration; solution of nonlinear equations; minimization of nonlinear functions.

Three lectures; one term

Prerequisite: MATH 2A03 or 2X03; and MATH 2T03

MATH 3QC3* INTRODUCTION TO QUANTUM COMPUTING

Postulates of quantum mechanics for finite dimensional systems; information on quantum bits, logical operations and quantum gates; quantum parallelism and complexity theory; examples of quantum algorithms.

Three lectures; one term

Prerequisite: MATH 2A03 or 2X03; and MATH 2R03

MATH 3T03 INQUIRY IN TOPOLOGY

Size and shape in topology and analysis, compactness, connectedness, limit sets, theory of dimension, fractals and self-similarity.

Three lectures; one term

Prerequisite: MATH 2XX3

MATH 3TP3* TRUTH AND PROVABILITY: GÖDEL'S INCOMPLETENESS THEOREMS

The goal is to inquire into Gödel's proof of incompleteness; in any sufficiently powerful axiom system there will be statements which are true but not provable.

Three lectures; one term

Prerequisite: MATH 2R03

MATH 3U03* COMBINATORICS

Inversion formulae, systems of distinct representatives, block designs and other configurations; other topics.

Three lectures; one term

Prerequisite: MATH 2A03 or 2X03; and MATH 2R03

Antirequisite: MATH 4C03

MATH 3V03* GRAPH THEORY

Graphs, trees, bipartite graphs, connectivity, graph colouring, matrix representations, applications.

Three lectures; one term

Prerequisite: MATH 2A03 or 2X03; and MATH 2R03

Antirequisite: MATH 4J03

MATH 3X03 COMPLEX ANALYSIS I

Analytic functions, Cauchy's theorem, Cauchy's integral formula, residues, zeroes of analytic functions; Laurent series, the maximum principle.

Three lectures; one term

Prerequisite: MATH 2C03, 2R03, 2XX3

MATH 3Z03 INQUIRY: HISTORY OF MATHEMATICS

An introduction to the history of mathematics, including interaction with other phases of culture, with special emphasis on the past three centuries.

Three lectures; one term

Prerequisite: At least two Level II Mathematics or Statistics courses other than MATH 2K03, 2L03

Enrolment is limited See the heading *Limited Enrolment Courses* in the *Faculty of Science* section of the Calendar.

MATH 4A03 REAL ANALYSIS II

Metric spaces, compactness. Spaces of continuous functions, functions of several variables, inverse and implicit function theorems. Lebesgue integration.

Three lectures; one term

Prerequisite: MATH 3A03

Antirequisite: MATH 3AA3

MATH 4AT3* TOPICS IN ANALYSIS

Precise topics will vary; consult the department for current information. Possible topics include: functional analysis, measure theory, harmonic analysis, calculus of variations.

Three lectures; one term

Prerequisite: Permission of the instructor

MATH 4AT3 may be repeated, if on a different topic.

MATH 4B03 CALCULUS ON MANIFOLDS

Review of multivariable calculus, basic properties of manifolds, differential forms, Stokes' theorem, de Rham cohomology and applications.

Three lectures; one term

Prerequisite: MATH 3A03 or 3C03

MATH 4BT3* TOPICS IN GEOMETRY

Precise topics will vary; consult the department for current information. Possible topics include: differential geometry, riemannian metrics, connections, curvature, geodesics, topological and analytic properties of Riemannian manifolds.

Three lectures; one term

Prerequisite: Permission of the instructor

MATH 4BT3 may be repeated, if on a different topic.

MATH 4E03 GALOIS THEORY

Field extensions, splitting fields, normality and separability, Galois extensions, finite fields, solvability by radicals, cyclic extensions, cyclotomic extensions, algebraic closure, classical constructions, computations of Galois groups.

Three lectures; one term

Prerequisite: MATH 3EE3

MATH 4ET3* TOPICS IN ALGEBRA

Precise topics will vary; consult the department for current information. Possible topics include: algebraic geometry, algebraic number theory.

Three lectures; one term

Prerequisite: Permission of the instructor

MATH 4ET3 may be repeated, if on a different topic.

MATH 4G03 DYNAMICAL SYSTEMS

Topics to be selected from ordinary differential equations theory, bifurcation and stability theory.

Three lectures; one term

Prerequisite: MATH 3F03. MATH 3A03 is recommended.

MATH 4K03* MATHEMATICS OF FINANCE

Options and forwards, efficient market hypothesis, no arbitrage condition, binomial asset pricing model, portfolio strategies, stochastic processes, conditional expectation, martingales, optimal portfolio selection, exotic options, stochastic interest rate models.

Three lectures; one term

Prerequisite: MATH 2A03 or 2X03; and STATS 2D03

MATH 4L03* INTRODUCTION TO MATHEMATICAL LOGIC

First order logic, deduction systems, completeness and compactness theorems, model theory.

Three lectures; one term

Prerequisite: MATH 3E03

MATH 4LT3*

TOPICS IN LOGIC

Precise topics will vary; consult the department for current information. Possible topics include: axiomatic set theory, computability theory, model theory or proof theory.

Three lectures; one term

Prerequisite: Permission of the instructor

MATH 4LT3 may be repeated, if on a different topic.

MATH 4Q03

NUMERICAL METHODS FOR DIFFERENTIAL EQUATIONS

Approximation error; methods for ordinary differential equations, stiffness; iterative methods for boundary value problems; weighted residuals; spectral methods; methods for partial differential equations, accuracy, consistency, convergence; stability analysis.

Three lectures; second term

Prerequisite: Credit or registration in MATH 3C03 or 3FF3; or permission of the instructor

MATH 4TT3*

TOPICS IN TOPOLOGY

Precise topics will vary; consult the department for current information. Possible topics include: fundamental group and covering spaces, cell complexes and homology theory, theory of knots, links, and braids.

Three lectures; one term

Prerequisite: Permission of the instructor

Antirequisite: MATH 4T03

MATH 4TT3 may be repeated, if on a different topic.

MATH 4V03*

APPLIED ANALYSIS

Theory of Distributions, Fourier Transform, fundamental solutions and Green's functions for partial differential operators, uncertainty principle, Poisson summation formula, applications.

Three lectures; one term

Prerequisite: MATH 3A03

MATH 4W03

TOPICS IN MATHEMATICS

Directed reading in areas of mathematics of interest to the student and the instructor.

Prerequisite: Permission of the Chair of the Department

MATH 4W03 may be repeated, if on a different topic.

MATH 4X03

COMPLEX ANALYSIS II

Conformal maps, analytic continuation, harmonic functions, the Riemann mapping theorem, Riemann surfaces.

Three lectures; one term

Prerequisite: MATH 3X03

STATISTICS ...

Department Note:

Students wishing to register in any Mathematics and Statistics specialization must take MATH 1AA3 and 1B03.

Courses

If no prerequisite is listed, the course is open.

STATS 1A03

STATISTICAL REASONING

The basic ideas of graphical displays, sampling methodology and probability are developed through diverse examples from a wide range of disciplines.

Three lectures, one tutorial; one term

Prerequisite: OSS Grade 11 Mathematics or OSIS Grade 12 Mathematics

Antirequisite: ECON 2B03, HTH SCI 2A03

Not open to students with credit or registration in PSYCH 2RR3, SOC SCI 2J03, STATS 1CC3, 2D03, 2MA3, 2MB3 or to students registered in the Faculties of Science, Business or in a Kinesiology or the Bachelor of Health Sciences (Honours) program.

STATS 1CC3

INTRODUCTORY COMPUTER-AIDED STATISTICS

Applied statistics including simple probability calculations based on binomial, Poisson and normal distributions, with emphasis on inferential methods and linear regression using computer statistics packages.

Two lectures, one lab (two hours); one term

Prerequisite: MATH 1M03, or credit or registration in MATH 1A03 or 1X03

Antirequisite: COMMERCE 2QA3, ECON 2B03, HTH SCI 1F03, 2A03, PSYCH 2G03, 2R03

Not open to students with credit in any Level II or above Statistics course, or to students registered in the Faculty of Business.

See Department Note above.

Last offered in 2007-2008.

STATS 1L03

PROBABILITY AND LINEAR ALGEBRA

The algebra of probability, conditional probability and independence, discrete and continuous random variables, mean and variance, matrices, determinants, Cramer's rule, solution of linear equations.

Three lectures, one tutorial; one term

Prerequisite: OSS Grade 11 Mathematics or OSIS Grade 12 Mathematics

Not open to students with credit in Grade 12 Mathematics of Data Management U or STATS 1CC3, 2D03, 2MA3, 2MB3.

Not open to students registered in the Faculties of Science or Engineering. Last offered in 2007-2008.

STATS 2B03

STATISTICAL METHODS FOR SCIENCE

Applied statistics, with emphasis on inferential methods relevant to the environmental and life sciences. Use of a computer statistics package.

Three lectures; one term

Prerequisite: One of Grade 12 Data Management U, STATS 1A03 or registration in Level II or above of a program in the Faculty of Science

Not open to students with credit or registration in COMMERCE 2QA3, ECON 2B03, HTH SCI 1F03, 2A03, SOC SCI 2J03, STATS 1CC3, 2D03, 2MA3, 2MB3. First offered in 2008-2009.

STATS 2D03

PROBABILITY THEORY

Combinatorics, independence, conditioning; Poisson-process; discrete and continuous distributions with statistical applications; expectation, transformations, order statistics. Distribution of sample mean and variance, moment-generating functions, central limit theorem.

Three lectures; one term

Prerequisite: One of MATH 1A03, 1M03 or 1X03; and credit or registration in MATH 1B03 or 1D03. One of MATH 1AA3, 1NN3; 1XX3 is strongly recommended.

Prerequisite (Beginning 2008-2009): One of MATH 1AA3, 1NN3, 1XX3

Antirequisite: PSYCH 2RA3

Not open to students with credit or registration in STATS 2A03, 2MA3.

STATS 2MA3

PROBABILITY AND STATISTICAL METHODS FOR SCIENCE

Combinatorics; discrete and continuous probability distributions; expectations; central limit theorem; point and interval estimation; hypothesis testing; regression and correlation; analysis of variance.

Three lectures; one term

Prerequisite: STATS 1CC3; and one of MATH 1A03, 1M03 or 1X03

Antirequisite: ECON 2B03

Not open to students with credit or registration in COMMERCE 2QA3, ECON 2B03, SOC SCI 2J03, STATS 2A03, 2D03, 2MB3.

Last offered in 2007-2008.

STATS 2MB3

STATISTICAL METHODS

Estimation; sampling distributions; confidence intervals; hypothesis testing; power; robustness; analysis of variance for one and two factor designs; linear regression; graphical methods; statistical computing using software package R.

Three lectures; one term

Prerequisite: STATS 2D03

Antirequisite: ECON 2B03, PSYCH 2R03, 2RB3, 2RR3, STATS 2R06

Not open to students with credit or registration in COMMERCE 2QA3, ECON 2B03, SOC SCI 2J03, STATS 2A03, 2MA3.

STATS 3A03

REGRESSION AND DESIGN OF EXPERIMENTS

Introduction to SAS, linear models, regression and inference, diagnostics, analysis of variance, randomized block designs, latin squares, and factorial experiments using SAS.

Three lectures; one term

Prerequisite: Credit or registration in STATS 3D03

Prerequisite (Beginning 2008-2009): STATS 2MB3

Antirequisite: STATS 4B03

STATS 3D03

MATHEMATICAL STATISTICS I

The multivariate normal distribution, sampling distributions, limiting distributions, introduction to statistical inference.

Three lectures; one term

Prerequisite: STATS 2D03 and one of MATH 2A03, 2L03, 2Q04, 2X03

Antirequisite: STATS 3D06

STATS 3DD3

MATHEMATICAL STATISTICS II

Estimation tests of hypotheses, sufficient statistics, inference about normal models, and selected topics from robust inference, Bayesian inference, nonparametric inference and resampling methods.

Three lectures; one term

Prerequisite: STATS 3D03

Antirequisite: STATS 3D06

STATS 3G03* ACTUARIAL MATHEMATICS I

Survival distributions, life tables, life insurance, life annuities, net premiums and reserves.

Three lectures; one term

Prerequisite: STATS 2D03 and credit or registration in MATH 2K03

Offered in alternate years.

Not offered in 2007-2008.

STATS 3H03* ACTUARIAL MATHEMATICS II

Multiple life functions, multiple decrement models, valuation theory for pension plans.

Three lectures; one term

Prerequisite: STATS 3G03

Offered in alternate years.

Not offered in 2007-2008.

STATS 3J04 PROBABILITY AND STATISTICS FOR ENGINEERING

Introduction to probability, data analysis, statistical inference, regression, correlation and analysis of variance, applications to civil and environmental engineering.

Three lectures, one tutorial; first term

Prerequisite: Registration in Level II or above of any program in Engineering

Antirequisite: MATH 3J04, STATS 3N03, 3Y03

STATS 3N03 STATISTICAL METHODS FOR ENGINEERING

Introduction to probability, data analysis, statistical inference, regression, correlation and analysis of variance.

Three lectures; one term

Prerequisite: Registration in a program in Engineering above Level I

Antirequisite: STATS 3Y03, 3J04

STATS 3S03 SURVEY SAMPLING

Survey design; simple random sampling; stratified sampling; proportional allocation; ratio estimation; cluster sampling; systematic sampling and sample size determination. A project associated with current research is required.

Three lectures; one term

Prerequisite: STATS 2D03, 2MB3

STATS 3U03 STOCHASTIC PROCESSES

Random walk, Markov chains, discrete and continuous parameter Markov processes, branching processes, birth and death processes, queuing processes.

Three lectures; one term

Prerequisite: MATH 2A03 or 2X03; and STATS 2D03

STATS 3Y03 STATISTICAL ANALYSIS FOR ENGINEERING

Introduction to probability, univariate and multivariate random variables and their distributions, statistical estimation and inference, regression and correlation, decision making, applications.

Three lectures; one term

Prerequisite: Registration in a program in Engineering above Level I

Antirequisite: STATS 3J04, 3N03

STATS 4A03* TIME SERIES

Stationary, auto-regressive and moving-average series, Box-Jenkins methods, trend and seasonal effects, tests for white noise, estimation and forecasting methods, introduction to time series in the frequency domain.

Three lectures; first term

Prerequisite: MATH 3A03, STATS 3DD3; and STATS 3A03 or 4B03

STATS 4C03* GENERALIZED LINEAR MODELS

Normal linear model, exponential family, iteratively-reweighted least squares, logistic regression, Poisson regression and log-linear models, other families of GLM's, analysis of deviance and model checking, residual analysis.

Three lectures; one term

Prerequisite: STATS 3A03 or 4B03; and STATS 3DD3

STATS 4D03* INTERMEDIATE PROBABILITY THEORY

Construction of probability spaces and random variables, integration, conditional expectation, law of large numbers, convergence of series, weak convergence, characteristic functions and central limit theorems, martingales.

Three lectures; one term

Prerequisite: MATH 3A03, STATS 2D03

STATS 4E03* BROWNIAN MOTION AND DIFFUSION

Brownian motion, stochastic integrals, one-dimensional Ito's formula, diffusion processes, option pricing and other financial applications. Simulation of the Black-Scholes formula and related models.

Three lectures; one term

Prerequisite: STATS 2D03

STATS 4F03* CATEGORICAL DATA ANALYSIS

Two-way and three-way contingency tables, logistic regression, loglinear models for contingency tables, collapsibility, ordinal associations, multcategory logit models.

Three lectures; one term

Prerequisite: STATS 3A03 or 4B03; and STATS 3DD3

STATS 4H03* OPERATIONS RESEARCH

Network models and algorithms, dynamic models, queuing models and other topics.

Three lectures; one term

Prerequisite: Credit or registration in STATS 3D03 (or 3D06)

STATS 4M03* MULTIVARIATE ANALYSIS

Multivariate distributions: Normal, Wishart, T2 and others; regression, correlation, factor analysis, general linear hypothesis.

Three lectures; first term

Prerequisite: MATH 2R03; and STATS 3D03 (or 3D06)

STATS 4P03* ADVANCED APPLIED STATISTICS

Statistical computing; statistical software packages; working with large data sets; exploratory data analysis; graphical methods; statistical consulting practice.

Three lectures, second term

Prerequisite: STATS 4M03 and credit or registration in STATS 3A03 or 4B03

Prerequisite (Beginning 2008-2009): STATS 3DD3; and credit or registration in STATS 3A03 or 4B03

STATS 4W03 TOPICS IN STATISTICS

Directed reading in areas of statistics of interest to the student and the instructor.

Prerequisite: Permission of the Chair of the Department

STATS 4W03 may be repeated, if on a different topic.

MECHANICAL ENGINEERING

WEB ADDRESS: <http://www.mech.mcmaster.ca>

John Hodgins Engineering Building, Room 316

Ext. 24294

Faculty as of January 15, 2007**Chair**

Samir Ziada

Professors

Mohamed Elbestawi/B.Sc. (Alexandria), M.Eng., Ph.D. (McMaster), P.Eng.

Mamdouh Shoukri/B.Sc. (Cairo), M.Eng., Ph.D. (McMaster), P.Eng.

Samir Ziada/B.Sc. (Cairo), M.Eng. (McMaster), Ph.D. (Lehigh)

Adjunct Professors

Don R. Metzger/B.A.Sc., M.A.Sc., Ph.D. (Waterloo), P.Eng.

Vincent M. Sowa/B.Sc. (Illinois), M.A. (Purdue), Ph.D. (Waterloo)

Associate Professors

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Mehran Kasra/B.Sc. (Tehran Polytechnic), M.Eng. (McGill), Ph.D. (Ecole Polytechnique)

Marilyn F. Lightstone/B.A.Sc. (Queen's), M.A.Sc., Ph.D. (Waterloo), P.Eng.

Joseph R. McDermid/B.Sc. (Queen's), M.Eng., Ph.D. (McGill), Stelco-NSERC Industrial Research Chair in Steel Product Application

Timothy J. Nye/B.A.Sc. (Waterloo), M.A.Sc. (Ohio State), Ph.D. (Waterloo), P.Eng.

Sumanth Shankar/B.Tech. (Banaras Hindu), Ph.D. (Worcester Polytechnic) Braley-Orlick Chair in Advanced Manufacturing

Mateusz P. Sklad/M.Sc., Ph.D. (Warsaw)

Allan D. Spence/B.Math., M.A.Sc. (Waterloo), Ph.D. (British Columbia), P.Eng.

Peidong Wu/B.Sc. (Zhejiang), M.Eng. (China University of Mining), Ph.D. (Delft)

Assistant Professors

Robert V. Fleisig/B.A.Sc. (Waterloo), M.Eng., Ph.D. (McMaster), P.Eng.

Hanspeter Frei/HTL (Bern), M.Sc. (Dundee), Ph.D. (British Columbia)

Philip Koshy/B.E. (Anna), M.Tech., Ph.D. (IIT Kanpur)
 Ponnambalam (Ravi) Selvaganapathy/B.S. (Madurai Kamaraj), M.S., Ph.D. (Michigan)
 Stephen W. Tullis/B.Sc., M.Sc. (Queen's), Ph.D. (Cambridge), P.Eng.
 Stephen C. Veldhuis/B.Eng.Mgt. (McMaster), M.Eng. (Carnegie Mellon), Ph.D. (McMaster), P.Eng.
 Gregory R. Wohl/B.Sc., M.Sc., Ph.D. (Calgary)

Associate Members

Anthony Adili/(Surgery) B.Eng.Mgt., M.D. (McMaster), P.Eng.
 David W. Capson/(Electrical and Computer Engineering) B.Sc. Eng. (New Brunswick), M.Eng., Ph.D. (McMaster), P.Eng.
 Justin de Villiers de Beer/(Surgery) Ch. B., M.B. (Cape Town)
 J.David Embury/(Materials Science and Engineering) B.Sc. (Manchester), Ph.D. (Cambridge), P.Eng.
 William J. Garland/(Engineering Physics) B.Eng., M.Eng., Ph.D. (McMaster), P.Eng.
 Andrew N. Hrymak/(Chemical Engineering) B.Eng. (McMaster), Ph.D. (Carnegie Mellon), P.Eng.
 Nicholas Kevlahan (Mathematics and Statistics) B.Sc. (British Columbia), Ph.D. (Cambridge)
 Philip E. Wood/(Chemical Engineering) B.A.Sc. (Waterloo), Ph.D. (California Institute of Technology), P.Eng.

Department Note:

Enrolment in Mechanical Engineering courses by students in programs other than those administered by the Department may be restricted.

Courses If no prerequisite is listed, the course is open.

MECH ENG 2B03 MECHANICAL ENGINEERING MEASUREMENTS

Static and dynamic characteristics of instruments, statistical analysis of measurement errors, variable conversion elements and signal amplification. Metrology, measurement of strain and force, pressure, flow, temperature and power. Technical writing and communication.

Two lectures, one lab (three hours); second term

Prerequisite: Registration in Level II of any Mechanical Engineering or Mechatronics Engineering program

Antirequisite: MECH ENG 2B02

MECH ENG 2C03 MECHANICAL ENGINEERING DESIGN I

Lectures on Geometric Dimensioning and Tolerancing. Design projects involving modelling, analysis, synthesis, computing and drawing.

Two lectures, one lab (three hours); second term

Prerequisite: Registration in Level II of any Mechanical Engineering program

MECH ENG 2D03 MECHANICAL ENGINEERING DESIGN ELEMENTS

Design synthesis, fundamental principles of standard design elements, mechanical and fluid power elements, formal mechanical design drawing requirements, component specification and optimization.

Three lectures; first term

Prerequisite: Registration in Level II of any Mechanical Engineering program

MECH ENG 2P04 STATICS AND MECHANICS OF MATERIALS

Principles of statics as applied to deformable solid bodies. Stress and strain, elastic behaviour of simple members under axial force, bending and torsion. Principle stresses; deflection of beams; statical indeterminacy. Three lectures, plus one unit comprising tutorials or lectures devoted to applications at the discretion of the instructor; first term

Prerequisite: PHYSICS 1D03

Antirequisite: ENGINEER 2P04

MECH ENG 2Q04 ENGINEERING MECHANICS: KINETICS AND DYNAMICS

Kinematics and dynamics of particles and rigid bodies. Analysis of planar mechanisms. Displacement, velocity and acceleration analysis methods. Motion with respect to a rotating frame reference. Work, energy and momentum principles.

Three lectures, plus one unit comprising tutorials or lectures devoted to applications at the discretion of the instructor; first term

Prerequisite: Registration in Level II of any Mechanical Engineering or Mechatronics Engineering program

Antirequisite: CIV ENG-2Q04, ENGINEER 2Q04

MECH ENG 2W04 THERMODYNAMICS

Introduction to the principles of thermodynamics, and applications in engineering. Basic concepts: energy systems, properties of pure substances, entropy. Laws of thermodynamics, power and refrigeration cycles.

Three lectures, one tutorial; second term

Prerequisite: Registration in Level II of any Mechanical Engineering program

Antirequisite: ENGINEER 2H03, 2W04

MECH ENG 3A03 ENGINEERING MECHANICS

Singularity functions, generalized Hooke's law; shear stress, shear flow in beams; shear centre. Biaxial and unsymmetrical bending, analysis of indeterminate beams and frames using energy methods, impact loads. Buckling of compression members. Introduction to yield criteria.

Three lectures; second term

Prerequisite: ENGINEER 2P04 or MECH ENG 2P04

MECH ENG 3C03 MANUFACTURING ENGINEERING

A general introduction, encompassing the wide field of activities from iron and steel making through casting, rolling, forging, to cold forming, metal cutting, welding, bonding, electrical machining, surface treatment, mechanical handling, assembly, cleaning, packaging.

Three lectures; second term

Prerequisite: Registration in any Mechanical Engineering or Chemical Engineering program

MECH ENG 3D03 THERMODYNAMICS OF ENERGY SYSTEMS

Re-examination of laws of thermodynamics, analysis using second law of thermodynamics, multicomponent systems, psychrometry, HVAC systems, combustion systems, steam power systems and micro-nano systems.

Three lectures; first term

Prerequisite: MECH ENG 2W04

MECH ENG 3E05 MECHANICAL ENGINEERING DESIGN II

3-D stress transformation, curved beams, thick walled pressure vessels, contact stresses, fatigue, bolted and welded joints, machine elements. The laboratories feature a major design project from concept development through analysis to formal report preparation.

Four lectures, one lab (two hours); second term

Prerequisite: ENGINEER 2P04 or MECH ENG 2P04; and MECH ENG 2Q04, 3A03

Antirequisite: MECH ENG 3E04

MECH ENG 3F04 MODELLING AND NUMERICAL SOLUTIONS

An introductory course in numerical analysis covering such topics as solution of differential and non-linear equations, matrices and systems of linear equations. One tutorial period, every other week, devoted to the modelling of mechanical systems.

Three lectures; one tutorial; first term

Prerequisite: Registration in any Mechanical Engineering program

MECH ENG 3M02 COMPOSITE LABORATORY

Laboratory exercises in fluid mechanics, thermodynamics and solid mechanics.

One lab (three hours); both terms

Prerequisite: Registration in any Mechanical Engineering program

MECH ENG 3O04 FLUID MECHANICS

Fluid properties and statics, conservation laws, applications of the continuity, momentum and energy equations, dimensional analysis and similarity, boundary layer flow, internal and external flows.

Three lectures, one tutorial (two hours); first term

Prerequisite: MATH 2M06 (or 2M03 and 2MM3) or both MATH 2P04 and 2Q04; and registration in any Mechanical Engineering program

MECH ENG 3R03 HEAT TRANSFER

Application of the laws of conduction, convection and radiation to problems in heat transfer. Steady and transient conduction in solids. Laminar and turbulent convection. Radiation heat transfer processes. Heat exchangers.

Three lectures; second term

Prerequisite: MATH 2M06 (or 2M03 and 2MM3), MECH ENG 2W04

MECH ENG 4B03 TOPICS IN PRODUCT DEVELOPMENT

Case studies using modern product development methods, value engineering, product specification, rapid product development, lean design and continuous improvement. Product liability and robust design.

Three lectures; first term

Prerequisite: Registration in Level IV or above of a Mechanical Engineering or Mechatronics Engineering program or permission of the department

MECH ENG 4BB3 BIOMECHANICS

Application of mechanical engineering principals to biomechanics problems including cellular biomechanics, hemodynamics, circulatory system, respiratory system, muscles and movement and skeletal biomechanics.

Three lectures; first term

Prerequisite: MECH ENG 2Q04, 3A03, 3O04; or permission of the department

MECH ENG 4CC3 EXPERIMENTAL AND COMPUTATIONAL BIOMECHANICS

Introduction to experimental and computational biomechanics including biomechanical testing concepts and application of finite element methods in simulations of biomechanical structures/systems.

Three lectures; second term

Prerequisite: MECH ENG 4BB3, 4T03, STATS 3Y03; or permission of the department

MECH ENG 4D03 MANUFACTURING PROCESSES (METAL REMOVAL)

Fundamentals of metal removing processes. Mechanics of material removal, tribological aspects of material removal, surface integrity and dimensional optimization of machining economies.

Three lectures; second term

Prerequisite: MECH ENG 3C03

MECH ENG 4E03 MICROELECTROMECHANICAL SYSTEMS (MEMS)

Introduction, microfabrication and micromachining fundamentals, scaling effects, mechanics and transduction at microscale, actuation and sensing methods - Electrostatic, piezoelectric, thermal, electromagnetic, resonant, tunneling and microfluidic techniques. Capacitive sensors, resonators, lab on chip devices, microfluidic devices, micromirrors, assembly techniques for MEMS, microsystem packaging.

Three lectures; second term

Prerequisite: Registration in Level IV or above of a Mechanical Engineering program or permission of the department

MECH ENG 4H03 MECHATRONICS

Integration of mechanical engineering with electronics and computer control. Sensors, actuators (including pneumatic and hydraulic), modeling using building block and state space methods, model-based control, programming of PLCs with practical demonstrations.

Three lectures; second term

Prerequisite: One of CHEM ENG 3P03, ELEC ENG 3CA3, 3TP4 or MECH ENG 4R03

MECH ENG 4I03 NOISE ANALYSIS AND CONTROL

Acoustic quantities; noise measurements and analysis; noise standards; sound generation, propagation, absorption, transmission; acoustic materials; noise control techniques; case studies.

Three lectures; second term

Prerequisite: MECH ENG 4Q03

MECH ENG 4J03 INTRODUCTION TO COMPUTATIONAL FLUID MECHANICS AND HEAT TRANSFER

Computational Methods for Fluid Mechanics and Heat Transfer covering: concepts of modelling and numerical analysis, governing equations of thermo-fluid problems, finite-difference discretization methods. Use of commercial computational software for solving thermo-fluid problems.

Three lectures; second term

Prerequisite: MECH ENG 3F04

MECH ENG 4K03 INTRODUCTION TO ROBOTIC MECHANICS

Spatial descriptions and transformations, manipulator kinematics, inverse kinematics, Jacobians, dynamics.

Three lectures; first term

Prerequisite: ENGINEER 2Q04 or MECH ENG 2Q04

MECH ENG 4L03 INDUSTRIAL DESIGN

Introduction for engineering students to the techniques of industrial design, case studies and introduction to illustration techniques.

Three lectures; second term

Prerequisite: MECH ENG 2C03

MECH ENG 4M06 PROJECT

A major mechanical or manufacturing engineering design or experimental project to be completed under the supervision or co-supervision of a faculty member holding an appointment in the Department of Mechanical Engineering.

Two labs (three hours), first term; four labs (three hours), second term

Prerequisite: Registration in Level IV Mechanical Engineering; or Level V Mechanical Engineering and Management or Mechanical Engineering and Society

MECH ENG 4P02 COMPOSITE LABORATORY

Laboratory exercises in vibration analysis, machine structures, controls, heat transfer, gas dynamics, fluid mechanics and thermodynamics.

One lab (three hours); both terms

Prerequisite: MECH ENG 3M02 and registration in any Mechanical Engineering program

MECH ENG 4Q03 MECHANICAL VIBRATIONS

Transient and steady state vibration of single- and multi-degree of freedom systems. Free and forced vibrations of single and multiple degree-of-freedom mechanical systems, transient response, damping and vibration isolation.

Three lectures; first term

Prerequisite: ENGINEER 2Q04 or MECH ENG 2Q04

MECH ENG 4R03 CONTROL SYSTEMS

Fundamentals of linear, continuous control systems. Control system performance in both time and frequency domains. Design and analysis of controllers.

Three lectures; second term

Prerequisite: Registration in Level III Mechanical Engineering; or Level IV Mechanical Engineering and Management or Mechanical Engineering and Society

Antirequisite: ELEC ENG 3CA3, 3CK4, 3TP4

MECH ENG 4S03 INCOMPRESSIBLE FLOW

Introduction to internal and external laminar and turbulent incompressible flows. Topics include turbulent boundary layers, aerodynamics and convective heat transfer.

Three lectures; first term

Prerequisite: MECH ENG 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 any Mechanical Engineering program

MECH ENG 4U03 COMPRESSIBLE FLOW AND TURBOMACHINERY

Compressible flows: Fanno and Rayleigh flows, normal and oblique shocks. Turbomachines: axial and radial flow gas and steam turbines, axial and radial flow compressors and fans.

Three lectures; second term

Prerequisite: MECH ENG 2W04, 3O04

MECH ENG 4V03 THERMO-FLUIDS SYSTEMS DESIGN AND ANALYSIS

Design, operation and application characteristics of equipment commonly used in thermal systems. Modelling performance characteristics of piping systems, pumps, compressors, fans, heat exchangers, boilers and cooling towers. System simulation and optimization. Selection criteria of thermal equipment. Design optimization and system performance evaluation.

Three lectures; first term

Prerequisite: MECH ENG 2W04, 3O04, 3R03

MECH ENG 4Z03 CAD/CAM/CAE

Solid modelling theory, part creation, assemblies and rigid bodies, mechanism simulation, B-Splines, data exchange, CNC machining and inspection. Major project using computer laboratory facilities.

Three lectures, one lab (one hour); second term

Prerequisite: Registration in Level IV or above of any Mechanical Engineering program

MECHATRONICS ENGINEERING

WEB ADDRESS: <http://www.cas.mcmaster.ca>

Information Technology Building, Room 202

Ext. 24614

Notes:

1. Courses in Mechatronics Engineering are administered within the Department of Computing and Software in the Faculty of Engineering.
2. All Mechatronics Engineering courses are open to students registered in a Mechatronics Engineering program, subject to prerequisite requirements. Prior permission of the Department is necessary for other students.
3. Students registered in Mechatronics Engineering are not allowed to substitute any of the required courses containing Engineering Science or Engineering Design content with any courses offered by a non-CEAB accredited Engineering program.

Courses**MECHTRON 3TA4 EMBEDDED SYSTEMS DESIGN I**

Interfacing to digital and analog systems, sensors and actuators. Signals and conditioning: data acquisition, active and passive filtering, optical and analog isolation, PWM, de/multiplexing. Architecture of micro-controllers and DSP. Embedded system design and documentation.

Three lectures, one tutorial (two hours) every other week, one lab (three hours) every other week; first term

Prerequisite: ENG PHYS 2E04

Corequisite: SFWR ENG 3K04

MECHTRON 3TB4 EMBEDDED SYSTEMS DESIGN II

Design and implementation of embedded systems interacting with analog systems. Software design and implementation for embedded systems and DSP systems. Simulation and testing of embedded systems.

Three lectures, one tutorial (two hours) every other week, one lab (three hours) every other week; second term

Prerequisite: MECHTRON 3TA4

MECHTRON 4TB6 MECHATRONICS CAPSTONE DESIGN PROJECT

Student teams prepare the requirements, design, documentation and implementation of a Mechatronics System taking economic, health, safety, cultural, legal and marketing factors into account. Students must demonstrate a working system and convincing test results.

Three hours (lectures, discussion, group project, seminar); two terms. Prerequisite: MECHTRON 3TB4 and registration in Level IV of any Mechatronics Engineering program.

First offered in 2008-2009.

MEDICAL PHYSICS AND APPLIED RADIATION SCIENCES

WEB ADDRESS: <http://www.science.mcmaster.ca/medphys/index.php>

Nuclear Research Building, Room 124

Ext. 27650, 26159

Faculty as of January 15, 2007

Chair

Fiona E. McNeill

Professors

David R. Chettle/B.Sc., M.Sc., Ph.D. (*Birmingham*)

Carmel E. Mothersill/B.Sc., Ph.D. (*University College Dublin*)

Michael S. Patterson/B.Sc. (*Queen's*), M.Sc. (*McMaster*), Ph.D. (*Toronto*)

Colin B. Seymour/DCR(RT) (*Guy's Hospital*), B.L. (*King's Inn*), Ph.D. (*Trinity College Dublin*)/Chair, Committee of Instruction, Honours Medical and Health Physics Co-op

Associate Professors

Douglas R. Boreham/B.Sc. (*Laurentian*), Ph.D. (*Ottawa*)/Chair, Committee of Instruction, Honours Medical and Health Physics Co-op

Thomas J. Farrell/B.Sc., B.Ed. (*Toronto*), M.Sc. (*Western Ontario*), Ph.D. (*McMaster*)

Fiona E. McNeill/B.Sc. (*Edinburgh*), Ph.D. (*Birmingham*)

John F. Valliant/B.Sc., Ph.D. (*McMaster*)

Douglas R. Wyman/B.Math (*Waterloo*), Ph.D. (*McMaster*)

Assistant Professors

Soo Hyun Byun/B.Sc., M.Sc., Ph.D. (*Seoul National University*)

Joseph E. Hayward/B.Eng., M.Eng., Ph.D. (*McMaster*)

Gianni Parise/B.Kin., M.Sc., Ph.D. (*McMaster*)

Associate Members

Richard G. Butler/(*Pathology*) B.Sc., M.Sc. (*Toronto*), Ph.D. (*A.N.U. Canberra*), M.B.A. (*McMaster*)

Troy Famcombe/(*Radiology*) B.Sc. (*Calgary*), M.Sc., Ph.D. (*British Columbia*)

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*)

Mohawk College of Applied Arts and Technology

Associate Dean, Medical Radiation and Rehabilitation Sciences School of Health Sciences

Diane Barrafato/Dipl. M.R.T. (R), RTR

Coordinator, Radiation Therapy Specialization

Lyn Paddon

Coordinator, Radiography Specialization

Caroline Falconi

Coordinator, Ultrasonography Specialization

Lori Koziol

Coordinator, Clinical Education

Lori Koziol

Faculty

Melanie Spence-Ariemma/B.Sc. (*McMaster*), M.R.T.(T), B.Ed.(ADED) (*Brock*)

Mary Ayre/ RTR, RDMS

Catherine Baxter/B.Sc. (*Toronto*), M.R.T.(R), RTR

Darrin Cournoyea/B.Sc. (*Guelph*), Dipl.H.S., RDMS, RVT

Caroline Falconi/Dipl. B.App.Sc.(Med Im), M.App.Sc.(Med Im) (*Charles Sturt*), M.R.T.(R) RTR

Maika Glasner/B.Sc. (*York*), Dipl.H.S., RDMS, CRGS

Janice Gyorffy/ Dipl. RTR, RDMS

Lori Koziol/B.App.Sc. (Med Im) (*Charles Sturt*), Dipl. RTR, RDMS, FSDMS, CRGS

Margaret MacDonald/Dipl. RTNM, RDMS, RDCS

Leslie R. Marshall/B.Sc. (*Q.M.U.C.*), C.T.Cert. (*Leeds Met*), DCR(R), M.R.T.(R)

Leslie Murray/B.App.Sc. (Med Im), M.App.Sc. (Med Im) (*Charles Sturt*), M.R.T.(R), RTR

Lyn Paddon/B.Sc. (*East Anglia*), M.R.T.(T), A.C.(T)

D. Edward Scott/ Dipl. M.App.Sc.(Med US) (*Charles Sturt*), RTR, RDMS, RDCS, RVT

Ajesh Singh/Dipl.H.S., B.App.Sc. (Med Im) (*Charles Sturt*), M.R.T.(R), RTR

Greg Toffner/Dipl.H.S., B.App.Sc. (Med Im) (*Charles Sturt*), M.R.T.(R), RTR

Mary Tuttle/Dipl. M.R.T.(R), RTR, RDMS

MEDICAL AND HEALTH PHYSICS ...

Courses If no prerequisite is listed, the course is open.

MED PHYS 2A03 PHYSICS IN MEDICINE AND BIOLOGY

Applications of introductory physics concepts to medicine and biology. Centrifugation; chromatography and electrophoresis; ultrasonography; confocal microscopy; photomolecular interactions and optical diagnostic techniques. Three lectures; one term

Prerequisite: One of MEDRADSC 1C03, PHYSICS 1B03 or permission of the instructor

MED PHYS 3R03 COMPUTATIONAL MEDICAL PHYSICS

A problem-based introduction to the use of numerical methods in medical physics.

Three lectures; second term

Prerequisite: Registration in Level III or above of a program in the Faculty of Science

Antirequisite: PHYSICS 3R03

MED PHYS 4A03 MEDICAL PHYSICS COMMUNICATIONS

This is an enquiry course that introduces students to scientific communication in medical physics. The course will educate students in individual research and presentation skills. It will comprise both traditional and self-directed learning.

One lecture (one hour); a full year course for students in the Honours program

Prerequisite: Registration in Level IV or above of a program in the Faculty of Science

Antirequisite: MED PHYS 3I01, 4AA1, 4AB2, 4I01, PHYSICS 3I01, 4A03, 4AA1, 4I01

MED PHYS 4AA1 MEDICAL PHYSICS COMMUNICATIONS A

Preparation and presentation of report on first work term.

One seminar (one hour); first term

Prerequisite: Registration in Level IV of Honours Medical and Health Physics Co-op

Antirequisite: MED PHYS 3I01, 4A03, PHYSICS 3I01, 4A03

MED PHYS 4AB2 MEDICAL PHYSICS COMMUNICATIONS B

Preparation and presentation of report on second work term.

One seminar (one hour); second term

Prerequisite: MED PHYS 4AA1

Antirequisite: MED PHYS 4A03, 4I01, PHYSICS 4A03, 4I01

MED PHYS 4B03 RADIOACTIVITY AND RADIATION INTERACTIONS

Radioactivity and radiation phenomenology: interaction of radiations with matter, dosimetry, radiation in medicine, biological effects, radiation levels and regulations, radiation protection.

Three lectures; one term

Prerequisite: One of MEDRADSC 1C03, PHYSICS 1BA3, 1BB3 or permission of the instructor

Antirequisite: BIOL 3L03, MED PHYS 3T03, PHYSICS 3T03

MED PHYS 4I03 INTRODUCTION TO BIOPHOTONICS

This is a survey course on basic principles of light interaction with biological systems and specific biomedical applications of photonics.

Three lectures; second term

Prerequisite: ENG PHYS 3E03 or PHYSICS 3N03

Cross-list: ENG PHYS 4I03

This course is administered by the Department of Engineering Physics.

MED PHYS 4R06 RADIATION AND RADIOISOTOPE METHODOLOGY

Techniques and theory of the measurement of radiation. Includes radioactivity and radioactive decay, solid state dosimetry, principles of radioactive detectors, counting statistics and data reduction, advanced multidetector systems.

Two lectures every week, one lab (three hours) every other week; two terms

Prerequisite: One of BIOLOGY 3L03, ENG PHYS 3D03, MED PHYS 3T03 or 4B03

Antirequisite: PHYSICS 4R06

**MED PHYS 4S23 PHOENIX:
OUT OF THE ASHES AND
INTO THE ATOMIC AGE**

This course will study the short and long term impact of nuclear weapons testing and use, upon humans and the environment. Students will visit critical sites where nuclear weapons were developed and detonated. The travel portion of the course will run for 10-12 days (dependent on available travel schedules) and will involve group discussions and field experiences. Students will be required to pay incidental fees over and above the normal tuition fees set by the Unit to cover travel costs.

Prerequisite: Registration in Level IV of any Honours program in the Faculty of Science

Cross-list: SCIENCE 4S23

Antirequisite: INQUIRY 4S23

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

**MED PHYS 4T03 CLINICAL APPLICATIONS
OF PHYSICS IN MEDICINE**

Basic physical concepts underlying medical imaging, nuclear medicine, physiological measurement, radiation therapy and biomedical laser applications with an overview of their technical implementation.

Three lectures; one term

Prerequisite: MATH 2A03 or 2Q04; and MATH 2C03 or 2P04; and one of BIOLOGY 3L03, ENG PHYS 3D03, MED PHYS 3T03, 4B03, PHYSICS 3T03

Antirequisite: PHYSICS 4T03

MED PHYS 4XX3 HUMAN BIOLOGY FOR PHYSICAL SCIENTISTS

An overview of the structure and the function of the major organ systems of the body with some reference to radiation interactions.

Three hours; first term

Prerequisite: Registration in Level IV of an Honours Science program; or permission of the instructor

Antirequisite: BIOLOGY 2A03, 3U03, 3UU3, 4G06, HTH SCI 1D06, 1H03, 1H06, 1HH3, 2F03, 2FF3, 2L03, 2LL3, KINESIOL 1A03, 1A06, 1AA3, 1Y03, 1YY3

MEDICAL RADIATION SCIENCES ...

WEB ADDRESS: <http://www.science.mcmaster.ca/MedRadSci>

Nuclear Research Building, Room 104

Ext. 26256

Notes:

1. Courses for Levels I, II, III and IV Medical Radiation Sciences, Radiography, Ultrasonography or Radiation Therapy specialization are available only to students registered in the Medical Radiation Sciences program.
2. Lab courses may be held at learning settings external to the University.
3. Students are responsible for arranging their own travel to and from or accommodation in learning settings external to the University and for covering any costs incurred. All students enrolled in the Medical Radiation Sciences program are expected to be able to travel to any learning setting in Ontario. The final assignment of learning settings for any clinical practicum course is constrained by the availability of the requested setting and resources. Students may, therefore, be required to complete a clinical practicum course in a learning setting that is not of their choosing.
4. All Level IV courses will commence in 2007-2008.

Courses**MEDRADSC 1A03 INTRODUCTION TO MEDICAL
RADIATION SCIENCES**

An introduction to the field of medical radiation sciences with particular emphasis on the medical radiation science professions and their subspecialties, examining current applications in health care and future trends.

One hour (lecture) first term; one hour (lecture), three hours (tutorial) second term; two terms

Prerequisite: Registration in Medical Radiation Sciences I

MEDRADSC 1B03 INTRODUCTION TO PATHOLOGY

Processes of disease and trauma, from damage and repair processes at the cellular level to tissues and systems. Disease development and recovery, immunity and heredity are examined.

Three hours (lectures); one term

Prerequisite: KINESIOL 1Y03 and registration in Medical Radiation Sciences I

Corequisite: Credit or registration in BIOLOGY 1A03, KINESIOL 1YY3

**MEDRADSC 1C03 INTRODUCTION TO PHYSICS FOR
MEDICAL RADIATION SCIENCES**

Fundamental physics relevant to Medical Radiation Sciences. Wave motion, electricity and magnetism, heat, radioactivity and radiation interaction, absorption and emission of light and applications in Medical Radiation Sciences.

Three lectures; one term

Prerequisite: PHYSICS 1P03 or a grade of at least 60% in Grade 12 Physics U; and registration in Medical Radiation Sciences I

MEDRADSC 1D03 INTRODUCTION TO PROFESSIONAL PRACTICE

Introduction to the legislative and regulatory frameworks of health care and health care professions, the behaviours and attitudes required of a health care professional and concepts of reflective practice.

Two hours (lectures), two hours (tutorial); one term

Prerequisite: Registration in Medical Radiation Sciences I

Antirequisite: MEDRADSC 2C03

First offered in 2008-2009.

MEDRADSC 2A03 PATIENT CARE

Theoretical foundation and skills development to enable the student to meet the physical and emotional needs of patients in the clinical setting while utilizing self-care concepts and safe practices.

This course is evaluated on a Pass/Fail basis.

Two hours (lectures), two hours (lab); one term

Prerequisite: Registration in Level II of a Medical Radiation Sciences Specialization

MEDRADSC 2B03 MEDICAL INFORMATICS

Examination of the acquisition, storage, communication and security of digital patient records in health care facilities.

Two hours (lectures), one hour (lab); one term

Prerequisite: Registration in Level II of a Medical Radiation Sciences Specialization

MEDRADSC 2C03 INTRODUCTION TO PROFESSIONAL PRACTICE

Introduction to the legislative and regulatory frameworks of health care and health care professions, the behaviours and attitudes required of a health care professional, and concepts of reflective practice.

Two hours (lectures), two hours (tutorial); one term

Prerequisite: Registration in Level II of a Medical Radiation Sciences Specialization

Last offered in 2008-2009.

MEDRADSC 2D03 RELATIONAL ANATOMY I

This course examines spatial relationships of anatomical structures (appendicular and axial skeleton, excepting skull, plus structures of the pelvic and thoracic cavities) using projection, sectional and volume-rendered images.

Two hours (lectures), two hours (lab); one term

Prerequisite: Registration in Level II of the Radiography or the Radiation Therapy Specialization

MEDRADSC 2E03 RADIOGRAPHIC IMAGE PRODUCTION

Image production, processing and display of analogue and digital radiographic images are covered. Image quality in terms of spatial and contrast resolution are explored.

Two hours (lectures), one hour (lab), one hour (tutorial); one term

Prerequisite: Registration in Level II of the Radiography or Radiation Therapy Specialization

MEDRADSC 2F03 RADIOGRAPHIC PHYSICS AND INSTRUMENTATION I

The course focuses on the production of x-rays in radiography and the interactions of x-rays with matter. Control of beam quality and quantity is related to image quality and dose minimization.

Two hours (lectures), one hour (lab), one hour (tutorial); one term

Prerequisite: Registration in Level II of the Radiography or the Radiation Therapy Specialization

MEDRADSC 2G03 RADIOGRAPHIC SKILLS I

Fundamental radiographic techniques and basic radiography of the appendicular skeleton through image production using anatomical phantoms and performance of simulated examinations on peers.

This course is evaluated on a Pass/Fail basis.

One hour (lectures), two labs, two hours each; one term

Prerequisite: Registration in Level II of the Radiography Specialization

MEDRADSC 2H03 RADIOGRAPHIC SKILLS II

Radiography of the axial skeleton, chest, abdomen and skull through image production using anatomical phantoms and performance of simulated examinations on peers.

This course is evaluated on a Pass/Fail basis.

One hour (lecture), four hours (lab); one term

Prerequisite: MEDRADSC 2G03 and registration in Level II of the Radiography Specialization

MEDRADSC 2I03 PATHOLOGY AND PROCEDURES I

Radiological procedures and associated pathologies of the skeletal, digestive, respiratory and urinary systems. Physiological properties of contrast media and their use in radiological procedures is studied.

Three hours (lectures); one term

Prerequisite: Registration in Level II of the Radiography Specialization

MEDRADSC 2J15 RADIOGRAPHY CLINICAL PRACTICUM I

Four month placement in a Diagnostic Imaging department. Students develop clinical and professional skills by participating in radiological procedures under direct supervision of a qualified professional.

This course is evaluated on a Pass/Fail basis.

One term (Offered in Spring/Summer session only)

Prerequisite: MEDRADSC 2A03, 2C03, 2D03, 2E03, 2F03, 2H03, 2I03 and registration in Level II of the Radiography Specialization

MEDRADSC 2K03 SONOGRAPHIC PHYSICS AND INSTRUMENTATION I

This course will examine the following topics: physical principles associated with propagation of ultrasound in tissues, attenuation of sound in tissues, ultrasound instrumentation, image quality and bioeffects.

Three hours (lectures), one hour (lab), one hour (tutorial); one term

Prerequisite: Registration in Level II of the Ultrasonography Specialization

MEDRADSC 2L03 ABDOMINAL ULTRASONOGRAPHY I

A comprehensive study of the relational anatomy, normal and anomalous conditions of major abdominal organs; general pathologic conditions; application to the vascular and reticulo-endothelial systems with sonographic correlation.

Three hours (lectures), one hour (tutorial); one term

Prerequisite: Registration in Level II of the Ultrasonography Specialization

MEDRADSC 2M03 OBSTETRICAL AND GYNECOLOGIC ULTRASONOGRAPHY I

A comprehensive study of the anatomy, physiology of the normal female pelvis including pregnancy. Sonographic technique, normal appearances, patient care and ethical issues will be examined.

Three hours (lectures), one hour (tutorial); one term

Prerequisite: Registration in Level II of the Ultrasonography Specialization

MEDRADSC 2N03 SONOGRAPHIC SKILLS I

Emphasis is on performance of sonography of the abdominal vasculature, liver and biliary systems to include routine and alternate techniques, image recognition, patient care, communication and ergonomics.

This course is evaluated on a Pass/Fail basis.

One hour (lecture), four hours (lab); one term

Prerequisite: Registration in Level II of the Ultrasonography Specialization

MEDRADSC 2O03 ABDOMINAL ULTRASONOGRAPHY II

A comprehensive study of the pathologic conditions of hepatic, biliary, pancreatic and urinary tract organs; relational anatomy and anomalous conditions of the thyroid; correlation of sonographic findings, clinical presentation and other diagnostic tests.

Three hours (lectures), one hour (tutorial); one term

Prerequisite: MEDRADSC 2L03 and registration in Level II of the Ultrasonography Specialization

MEDRADSC 2Q03 SONOGRAPHIC SKILLS II

Emphasis is on performance of sonography of the pancreas, urinary system, complete abdomen and female pelvis to include routine and alternate techniques, image recognition, patient care, communication and ergonomics.

This course is evaluated on a Pass/Fail basis.

One hour (lecture), four hours (lab); one term

Prerequisite: MEDRADSC 2N03 and registration in Level II of the Ultrasonography Specialization

MEDRADSC 2R15 ULTRASONOGRAPHY CLINICAL PRACTICUM I

Four month placement in a Diagnostic Imaging department. Students develop clinical and professional skills by participating in sonographic procedures under direct supervision of a qualified professional.

This course is evaluated on a Pass/Fail basis.

One term (Offered in Spring/Summer session only)

Prerequisite: MEDRADSC 2A03, 2C03, 2K03, 2M03, 2O03, 2Q03 and registration in Level II of the Ultrasonography Specialization

MEDRADSC 2S03 CLINICAL ONCOLOGY I

This course introduces the oncologic concepts that characterize all malignancies. Topics include epidemiology, etiology, signs and symptoms, routes of spread, staging and management. An in-depth study of some of the more common disease sites is also done.

Three hours (lectures); one term

Prerequisite: Registration in Level II of the Radiation Therapy Specialization

MEDRADSC 2T03 CLINICAL ONCOLOGY II

This course builds on MEDRADSC 2S03 (Clinical Oncology I) through an in-depth study of the remainder of prevalent malignancies.

Three hours (lectures); one term

Prerequisite: MEDRADSC 2S03 and registration in Level II of the Radiation Therapy Specialization

MEDRADSC 2U03 RADIATION THERAPY SKILLS I

Students are introduced to the professional behaviours and skills involved in interacting and treating cancer patients. Basic radiation therapy treatment techniques are taught and evaluated through simulated labs.

This course is evaluated on a Pass/Fail basis.

One hour (lecture), two labs (two hours each); one term

Prerequisite: MEDRADSC 2S03 and registration in Level II of the Radiation Therapy Specialization

MEDRADSC 2V15 RADIATION THERAPY CLINICAL PRACTICUM I

Four month placement in a Radiation Therapy department. Students develop clinical skills by participating in various areas of a Radiation Therapy Department under direct supervision of a qualified professional.

This course is evaluated on a Pass/Fail basis.

One term (Offered in Spring/Summer session only)

Prerequisite: MEDRADSC 2A03, 2C03, 2D03, 2E03, 2F03, 2T03, 2U03 and registration in Level II of the Radiation Therapy Specialization

MEDRADSC 3A03 DIGITAL IMAGE MANAGEMENT

Using concepts of digital databases in health care, picture archiving and communication systems are examined, with attention to DICOM conformance standards and interconnectivity of medical imaging devices.

Three hours (lectures), one hour (lab or tutorial); one term

Prerequisite: MEDRADSC 2B03 and registration in Level III of the Radiography or Ultrasonography Specialization

MEDRADSC 3B03 QUALITY MANAGEMENT IN MEDICAL RADIATION SCIENCES

Examination of various quality management methodologies in health care facilities, external accreditation processes and legislation associated with quality in Medical Radiation Sciences.

Two hours (lectures), two hours (tutorial); one term (Offered in Spring/Summer session only)

Prerequisite: Registration in Level III of a Medical Radiation Sciences Specialization

MEDRADSC 3C03 MULTIDISCIPLINARY INTERVENTIONAL PROCEDURES

A survey of changing approaches to treating pathologies of various organ systems through intervention using image guidance.

Three hours (lectures); one term (Offered in Spring/Summer session only)

Prerequisite: Registration in Level III of the Radiography or Ultrasonography Specialization

MEDRADSC 3DA3 SUBSPECIALTIES IN MEDICAL RADIATION SCIENCES - ADVANCED STUDIES IN COMPUTED TOMOGRAPHY

A study of clinical use of CT in diagnosis, including clinical indications, pathophysiology, imaging appearances, imaging protocols and post-processing tools. Three hours (lectures); one term (Offered in Spring/Summer session only). Prerequisite: Registration in Level III of the Radiation Therapy or the Radiography Specialization

MEDRADSC 3DB3 SUBSPECIALTIES IN MEDICAL RADIATION SCIENCES - BONE MINERAL DENSITOMETRY

Pathophysiology of osteoporosis, diagnosis and treatment are discussed. The principles and practice of bone density measurements, with emphasis on dual energy x-ray absorptiometry, are covered, with hands-on experience in a simulated clinical environment. Three hours (lectures); one term (Offered in Spring/Summer session only). Prerequisite: Registration in Level III of the Radiography Specialization

MEDRADSC 3DC3 SUBSPECIALTIES IN MEDICAL RADIATION SCIENCES - ULTRASONOGRAPHY OF THE BREAST

A comprehensive study of breast imaging technology. Sonographic appearance, technique and correlation with other diagnostic modalities are covered. Three hours (lectures); one term (Offered in Spring/Summer session only). Prerequisite: Registration in Level III of the Ultrasonography Specialization

MEDRADSC 3DD3 SUBSPECIALTIES IN MEDICAL RADIATION SCIENCES - MAMMOGRAPHY

Dedicated mammographic imaging technology (both film-screen and digital systems) plus mammographic imaging technique and appearances are covered, with correlation to other imaging modalities. Three hours (lectures); one term (Offered in Spring/Summer session only). Prerequisite: Registration in Level III of the Radiation Therapy or the Radiography Specialization

MEDRADSC 3DE3 SUBSPECIALTIES IN MEDICAL RADIATION SCIENCES - INTRODUCTION TO MAGNETIC RESONANCE IMAGING

Of magnetic resonance imaging, including instrumentation, image production, selection and control of magnetic fields, pulse sequences, safety and clinical application. Three hours (lectures); one term (Offered in Spring/Summer session only). Prerequisite: Registration in Level III of the Radiation Therapy or the Radiography Specialization

MEDRADSC 3DF3 SUBSPECIALTIES IN MEDICAL RADIATION SCIENCES - NEUROSONOGRAPHY

A comprehensive study of the diagnostic application of ultrasound in the neonatal brain and spinal cord. Sonographic appearance, technique and correlation with other diagnostic modalities are covered. Three hours (lectures); one term (Offered in Spring/Summer session only). Prerequisite: Registration in Level III of the Ultrasonography Specialization

MEDRADSC 3DG3 SUBSPECIALTIES IN MEDICAL RADIATION SCIENCES - FETAL ECHOCARDIOGRAPHY

A comprehensive study of the normal and pathologic structure of the fetal heart. Sonographic appearance and technique are covered. Three hours (lectures); one term (Offered in Spring/Summer session only). Prerequisite: Registration in Level III of the Ultrasonography Specialization

MEDRADSC 3E03 INQUIRY IN MEDICAL RADIATION SCIENCES

Independent study of the scientific literature, including the preparation of seminars and reports or research proposals on assigned topics. Three hours (lectures or seminars); one term (Offered in Spring/Summer session only). Prerequisite: Registration in Level III of a Medical Radiation Sciences Specialization

MEDRADSC 3F03 RADIOBIOLOGY AND PROTECTION

Radiation effects on cells, tissues and organs and bodies are covered with emphasis on clinical radiation hazards. Dose minimization and protective practices guidelines and regulations of provincial, federal and international bodies are examined. Three hours (lectures); one term. Prerequisite: Registration in Level III of the Radiography or the Radiation Therapy Specialization

MEDRADSC 3G03 RADIOGRAPHIC PHYSICS AND INSTRUMENTATION II

The main operations of radiographic and fluorographic equipment, from underlying physical principles to clinical application. Three hours (lectures), one hour (lab or tutorial); one term. Prerequisite: MEDRADSC 2F03 and registration in Level III of the Radiography Specialization

MEDRADSC 3H03 QUALITY CONTROL IN RADIOGRAPHY

Students perform quality control testing procedures on both analogue and digital radiographic equipment, comparing equipment performance to legislated standards and best practices concepts. One hour (lecture), two hours (lab), one hour (tutorial); one term. Prerequisite: MEDRADSC 3G03 and registration in Level III of the Radiography Specialization

MEDRADSC 3I03 RELATIONAL ANATOMY II

This course examines the spatial relationships of anatomical structures (contents of cranium, neck and abdominal cavity) using projection, sectional and volume-rendered images. Two hours (lectures), two hours (lab); one term. Prerequisite: MEDRADSC 2D03 and registration in Level III of the Radiography or the Radiation Therapy Specialization

MEDRADSC 3J03 PATHOLOGY AND PROCEDURES II

Radiological procedures and image appearances of associated pathologies of the cardiovascular, endocrine, nervous and reproductive systems. Three hours (lectures); one term. Prerequisite: MEDRADSC 2I03 and registration in Level III of the Radiography Specialization

MEDRADSC 3K03 COMPUTED TOMOGRAPHY

Processes of data acquisition, image reconstruction and post-processing are discussed. Scan protocol optimization in terms of image quality, demonstrated structures and patient dose are examined. Labs include scanning of anatomical phantoms. Three hours (lectures), one lab; one term. Prerequisite: MEDRADSC 3I03 and registration in Level III of the Radiation Therapy or Radiography Specialization

MEDRADSC 3L03 RADIOGRAPHIC SKILLS III

Radiography of cranio-facial structures and development of case management and adaptation skills in modifying standard radiographic procedures to the special needs patient. *This course is evaluated on a Pass/Fail basis.* One hour (lecture), four hours (lab); one term (Offered in Spring/Summer session only). Prerequisite: MEDRADSC 2J15 and registration in Level III of the Radiography Specialization

MEDRADSC 3M03 ABDOMINAL ULTRASONOGRAPHY III

A comprehensive overview with sonographic correlation of the relational anatomy, normal, anomalous and pathologic conditions of the adrenal glands, abdominopelvic and thoracic cavities, GI tract and specific superficial structures. Three hours (lectures), one hour (tutorial); one term. Prerequisite: MEDRADSC 2O03 and registration in Level III of the Ultrasonography Specialization

MEDRADSC 3N03 VASCULAR ULTRASONOGRAPHY

Vascular anatomy, physiology, flow hemodynamics, sonographic technique of normal and pathologic flow states; relevant alternative methods of assessing the vasculature of the head, neck, abdomen and extremities. Three hours (lectures); one term. Prerequisite: MEDRADSC 2K03 and registration in Level III of the Ultrasonography Specialization

MEDRADSC 3O03 SONOGRAPHIC SKILLS III

Emphasis is on performance of sonography of superficial structures, doppler of abdominal and peripheral vasculature to include routine and alternate techniques, image recognition, patient care, communication and ergonomics. *This course is evaluated on a Pass/Fail basis.* One hour (lecture), four hours (lab); one term. Prerequisite: MEDRADSC 2N03, 2R15 and registration in Level III of the Ultrasonography Specialization

MEDRADSC 3P03 OBSTETRICAL AND GYNECOLOGIC ULTRASONOGRAPHY III

A comprehensive study of obstetric anomalies and abnormal sonographic appearances of amniotic fluid, fetal growth, fetal syndromes, Doppler studies of the gravid patient and fetal anomalies of each system. Three hours (lectures), one hour (tutorial); one term. Prerequisite: MEDRADSC 3PA3 and registration in Level III of the Ultrasonography Specialization

MEDRADSC 3PA3 OBSTETRICAL AND GYNECOLOGICAL ULTRASONOGRAPHY II

A comprehensive study of gynaecological pathologies and abnormal sonographic appearances of the female pelvis. Pathologies of the obstetrical patient will be examined. Three hours (lectures), one hour (tutorial); one term. Prerequisite: MEDRADSC 2M03 and registration in Level III of the Ultrasonography Specialization. Antirequisite: MEDRADSC 2P03

MEDRADSC 3Q03 SONOGRAPHIC PHYSICS AND INSTRUMENTATION II

Recent and emerging technological advances in ultrasound instrumentation. Emphasis will be placed on the added diagnostic value provided by the technology and new applications for the instrumentation.

Three hours (lectures), one hour (lab), one hour (tutorial); one term
Prerequisite: MEDRADSC 2K03 and registration in Level III of the Ultrasonography Specialization

MEDRADSC 3R03 MUSCULOSKELETAL ULTRASONOGRAPHY

Sonographic correlation of upper/lower extremity joint anatomy; normal and pathologic musculoskeletal structures using standard scanning techniques and protocols.

Two hours (lectures), one hour (lab); one term (Offered in Spring/Summer session only)

Prerequisite: MEDRADSC 2R15, and registration in Level III of the Ultrasonography Specialization

MEDRADSC 3S03 TREATMENT PLANNING I

In this course students gain the skills required to plan and calculate radiation therapy treatments independently for a variety of sites under variable conditions.

Two hours (lectures), three hours (lab); one term

Prerequisite: MEDRADSC 2V15 and registration in Level III of the Radiation Therapy Specialization

MEDRADSC 3T03 APPLIED PATIENT CARE IN RADIATION THERAPY

This course presents the theory and skills to provide the radiation therapy patient with appropriate patient care. Patient assessment, professionalism and the management of radiation therapy toxicities will be emphasized.

Two hours (lectures); one hour (lab); one term

Prerequisite: MEDRADSC 2V15 and registration in Level III of the Radiation Therapy Specialization

MEDRADSC 3U03 RADIATION PROTECTION AND RADIATION BIOLOGY IN RADIATION THERAPY

This course provides an in depth understanding of radiation protection and radiobiological principles related to high energy radiation used in Radiation Therapy.

Three hours (lectures); one term (Offered in Spring/Summer session only)

Prerequisite: MEDRADSC 3F03, 3S03, 3T03 and registration in Level III of the Radiation Therapy Specialization

MEDRADSC 3V03 TREATMENT PLANNING II

This course further develops dosimetry problem-solving skills. Photon and electron beams, brachytherapy, conformal therapy and Intensity Modulated Radiation Therapy principles are emphasized.

Two lectures, one lab; one term

Prerequisite: MEDRADSC 3S03 and registration in Level III of the Radiation Therapy Specialization

MEDRADSC 3W03 RADIATION THERAPY SKILLS II

Students develop critical thinking, psychomotor and problem-solving skills that are required in the simulation and treatment of radiation therapy patients. The student will practice on simulators and treatment units.

This course is evaluated on a Pass/Fail basis.

One lecture, one lab; one term (Offered in Spring/Summer session only).

Prerequisite: MEDRADSC 3T03, 3V03 and registration in Level III of the Radiation Therapy Specialization

MEDRADSC 3X03 RESEARCH METHODS IN MEDICAL RADIATION SCIENCES

Prepares students for applied clinical research in Medical Radiation Sciences. Topics include systematic description of observations, testing hypotheses, distinctives of quantitative and qualitative research and critical review of published literature.

Three hours (lectures), one hour (tutorial), one hour (lab); one term

Prerequisite: STATS 1CC3 and registration in Level III of Medical Radiation Sciences

MEDRADSC 4A15 RADIOGRAPHY CLINICAL PRACTICUM II

Four month placement in a Diagnostic Imaging department. Students further develop clinical and professional skills, integrating theory, developing independent decision-making capacity in the management of cases, working towards competence in general radiography, fluoroscopy and computed tomography.

This course is evaluated on a Pass/Fail basis.

One term

Prerequisite: MEDRADSC 3F03, 3G03, 3H03, 3J03, 3K03, 3L03 and registration in Level IV of the Radiography Specialization

MEDRADSC 4B15 RADIOGRAPHY CLINICAL PRACTICUM III

Four month placement in a Diagnostic Imaging department. Students further develop clinical skill and professional skills, integrating theory, developing independent decision-making capacity in the management of cases, attaining competence in general radiography, fluoroscopy and computed tomography.

This course is evaluated on a Pass/Fail basis.

One term

Prerequisite: MEDRADSC 4A15 and registration in Level IV of the Radiography Specialization

MEDRADSC 4C15 ULTRASONOGRAPHY CLINICAL PRACTICUM II

Four month placement in the Sonography department. Students further develop clinical and professional skills, integrating theory, developing independent decision-making capacity in the management of cases, working towards competence in the generalist sonographic specializations.

This course is evaluated on a Pass/Fail basis.

One term

Prerequisite: MEDRADSC 2R15, 3M03, 3N03, 3O03, 3P03 and registration in Level IV of the Ultrasonography Specialization

MEDRADSC 4D15 ULTRASONOGRAPHY CLINICAL PRACTICUM III

Four month placement in the Sonography department. Students further develop clinical and professional skills, integrating theory, developing independent decision-making capacity in the management of cases, attaining competence in the generalist sonographic specializations.

This course is evaluated on a Pass/Fail basis.

One term

Prerequisite: MEDRADSC 4C15 and registration in Level IV of the Ultrasonography Specialization

MEDRADSC 4E15 RADIATION THERAPY CLINICAL PRACTICUM II

Four month placement in a Radiation Therapy department. Students further develop clinical and professional skills, integrating theory, developing independent decision-making capacity in the management of cases, working towards competence in radiation therapy.

This course is evaluated on a Pass/Fail basis.

One term

Prerequisite: MEDRADSC 3K03, 3T03, 3U03, 3V03, 3W03 and registration in Level IV of the Radiation Therapy Specialization

MEDRADSC 4F15 RADIATION THERAPY CLINICAL PRACTICUM III

Four month placement in a Radiation Therapy department. Students further develop clinical and professional skills, integrating theory, developing independent decision-making capacity in the management of cases, attaining competence in radiation therapy.

This course is evaluated on a Pass/Fail basis.

One term

Prerequisite: MEDRADSC 4E15 and registration in Level IV of the Radiation Therapy Specialization

MIDWIFERY

WEB ADDRESS: <http://www.fhs.mcmaster.ca/midwifery>

Michael G. DeGroote Centre for Learning and Discovery, Room 3103

Ext. 26654

Faculty as of January 15, 2007**Assistant Dean**

Eileen Hutton

Professor

Eileen Hutton/B.N.Sc. (Queen's), M.Sc.N., Ph.D. (Toronto)

Associate Professors

Paul Krueger/B.Sc., M.Sc. (Waterloo), M.H.Sc., Ph.D. (Toronto)

Derek Lobb/B.Sc. (Western Ontario), M.Sc. (Guelph), Ph.D. (Toronto)

Helen McDonald/M.H.Sc. (McMaster), R.M.

Patricia McNiven/M.Sc., Ph.D. (Toronto), R.M.

Bruce Wainman/B.Sc. (Laurentian), M.H.Sc. (McMaster), Ph.D. (York)

Assistant Professor

Anne Malott/B.Sc.N. (Windsor), M.S.N. (Case Western Reserve)

Courses

MIDWIF 1D03 THE MIDWIFERY PROFESSION

Seminar presentations, discussion and arranged experiences to introduce students to the history, philosophy of care, and role of the midwife in Canada and elsewhere.

Seminar (three hours); first term

Prerequisite: Registration in the Midwifery Education Program

Antirequisite: MIDWIF 1A06

MIDWIF 2F03 PHARMACOTHERAPY

This course is an overview of basic concepts in pharmacy, pharmacology and therapeutics relevant to the practice of midwifery in Ontario. Content areas include pharmacokinetics, toxicology, adverse drug reactions during pregnancy and lactation and pharmacology in the neonate.

Two lectures (three hours), one tutorial (one hour); one term

Prerequisite: HTH SCI 1D06

MIDWIF 2G03 CLINICAL SKILLS FOR MIDWIFERY PRACTICE

Lecture, demonstration and laboratory practice of fundamental skills for midwifery practice.

One lecture (three hours), one lab (three hours); first term

Prerequisite: MIDWIF 1D03

Antirequisite: MIDWIF 2A03

May be taken concurrently with MIDWIF 1D03 with permission of the Program Director.

MIDWIF 2H15 MIDWIFERY CARE I: NORMAL CHILDBEARING

First clinical placement under the supervision of a registered midwife: students focus on beginning level skills for the care of women experiencing normal childbearing. Weekly problem-based tutorials include normal antepartum, intrapartum, postpartum and newborn care situations.

Second term

Prerequisite: HTH SCI 2M03, MIDWIF 1D03, 2G03 (or 1A06); 2F03. A minimum CA of 6.0 in first term is required.

Antirequisite: MIDWIF 2E12

MIDWIF 3A09 COMMUNITY PLACEMENTS

Three one month placements will be organized over the term. One placement will be organized with a hospital labour and delivery department and one with an obstetrician. The third placement will be chosen by the student and may take place within or outside the province or country.

Second term

Prerequisite: MIDWIF 3G15 (or 2B15)

MIDWIF 3D03 HEALTH EDUCATION AND HEALTH PROMOTION

This course will incorporate concepts and principles from areas that contribute to the understanding of human behaviour in health related situations. Of special interest are teaching-learning situations that arise in primary health care settings for childbearing families.

Offered by WebCT/Print Management-based. The Program reserves the right to cancel the course due to low enrolment.

One term

Prerequisite: HTH SCI 1C06

MIDWIF 3F03 MIDWIFERY SYNTHESIS PAPER

The goal of this course is the synthesis of in-depth knowledge and critical analysis about a selected topic that leads to relevant application of the information for the midwifery profession. Each student is assigned to a faculty supervisor who will work closely with the student throughout the preparation of the paper.

Second term

Prerequisite: Registration in Level III of the Midwifery Education Program

MIDWIF 3G15 MIDWIFERY CARE II

Second clinical placement under the supervision of a registered midwife: students develop additional skills in planning and providing care to women and their newborn infants. Weekly problem-based tutorials focus on a range of normal and more common abnormal situations.

First term

Prerequisite: MIDWIF 2A03, 2E12

Antirequisite: MIDWIF 2B15

MIDWIF 3H15 MIDWIFERY CARE III

Third placement in a midwifery practice: students extend skills to more complex childbearing situations. Problem-based tutorials focus on expanding the knowledge base of maternal-newborn complications, for consultation and referral, and relationships with other health care providers.

Third term

Prerequisite: MIDWIF 3G15 (or 2B15)

Antirequisite: MIDWIF 2C15

MIDWIF 4A15 MIDWIFERY CARE IV

Fourth placement in a midwifery practice. In defined situations, supervision is indirect. Students care for an assigned caseload, including situations with complications. Problem-based tutorials focus on midwifery roles and responsibilities in highly complex and urgent situations.

First term

Prerequisite: MIDWIF 3H15 (or 2C15)

Antirequisite: MIDWIF 3B15

MIDWIF 4B15 MIDWIFERY CLERKSHIP

Final placement in a midwifery practice. Supervision is increasingly indirect. Students formulate and provide care to an entire caseload of women. Tutorials and workshops include case review, preparation for registration and establishing a practice in Ontario.

Second term

Prerequisite: MIDWIF 4A15 (or 3B15)

Antirequisite: MIDWIF 3C12, 3E03

MODERN LANGUAGES AND LINGUISTICS

(SEE LINGUISTICS AND LANGUAGES)

MOHAWK

(SEE INDIGENOUS STUDIES, MOHAWK)

MOLECULAR BIOLOGY

The Molecular Biology courses are administered within the Faculty of Science through a Committee of Instruction, and draw on the Departments of Biochemistry and Biomedical Sciences, Biology and Pathology and Molecular Medicine. Information may be obtained from the Program Administrators in Life Sciences Building, Room 118 or Health Sciences Centre, Room 4H43 who can refer students to the appropriate faculty counsellor.

Courses *If no prerequisite is listed, the course is open.*

MOL BIOL 2B03 CELL BIOLOGY

Basic treatment of cell structure and function, including transport and chemical signals; adaptation of structure and function in specialized cells. Three lectures, one lab (three hours), one tutorial; one term

Prerequisite: BIOLOGY 1A03, 1AA3, CHEM 1AA3 and registration in Honours Molecular Biology

Antirequisite: BIOLOGY 2B03, HTH SCI 2K03

This course is administered by the Department of Biology.

MOL BIOL 2L06 INQUIRY IN BIOCHEMICAL TECHNIQUES

An inquiry approach to learning about current techniques in biochemistry research. Students will work in small groups in labs and workshops, with a focus on how to search the primary literature, prepare and deliver written and oral presentations.

One lecture (one hour), one lab or workshop (four hours); two terms

Prerequisite: Credit or registration in BIOCHEM 2B03, 2BB3 and registration in Honours Molecular Biology

Cross-list: BIOCHEM 2L06

Antirequisite: BIOCHEM 3L03

This course is administered by the Department of Biochemistry and Biomedical Sciences.

MOL BIOL 3A03 CURRENT TOPICS IN MOLECULAR BIOLOGY

A review of current literature in molecular biology. A combination of lectures and student presentations on selected topics.

One lecture; one tutorial (two hours); one term

Prerequisite: Registration in Honours Molecular Biology

MOL BIOL 3I03 INDEPENDENT RESEARCH PROJECT

Students will conduct an independent research study in a faculty member's laboratory.

8-10 hours per week (scheduling to be arranged by supervisor); one term
Prerequisite: Registration in Honours Molecular Biology. Permission of the department is required. Application for permission must be received by March 1st of the academic year prior to registration. Students are expected to have a C.A. of at least 9.0. For further information, please refer to http://www.science.mcmaster.ca/biology/biology_undergraduate_CourseOfferings. Enrolment is limited. See the heading *Limited Enrolment Courses* in the Faculty of Science section of the Calendar.

This course is administered by the Department of Biochemistry and Biomedical Sciences.

MOL BIOL 3V03 TECHNIQUES IN MOLECULAR GENETICS

A laboratory course involving basic experiments in Molecular Genetics. One lecture, two labs (three hours each); one term

Prerequisite: Credit or registration in BIOLOGY 3O03 and registration in Level III or IV of Honours Molecular Biology

Antirequisite: BIOCHEM 3P03, BIOLOGY 3V03

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

This course is administered by the Department of Biology.

MOL BIOL 4A03 COMMUNICATIONS IN MOLECULAR BIOLOGY

How to structure and defend a research proposal. How to analyze and present data and write it as a contribution to the primary scientific literature. Two tutorials; two terms

Prerequisite: Registration in Level IV Honours Molecular Biology

MOL BIOL 4H03 MOLECULAR BIOLOGY OF CANCER

Cancer at the cellular and molecular level. Topics include: properties of cancer cells, activation of proto-oncogenes, function of oncoproteins, transgenic mouse models, and tumour viruses, tumour suppressor genes. Two lectures; one tutorial; one term

Prerequisite: One of BIOCHEM 3D03, 3G03, BIOLOGY 3H03, 3HH3; and registration in Level III or above of any Honours program

This course is administered by the Department of Biochemistry and Biomedical Sciences.

MOL BIOL 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: Either BIOLOGY 2B03 or HTH SCI 2K03 and either BIOLOGY 2C03 or HTH SCI 3D03, and either BIOLOGY 3X03 or HTH SCI 3I03 and HTH SCI 4I13; or permission of the instructor

Cross-list: BIOCHEM 4J03, HTH SCI 4J03

This course is administered by the Bachelor of Health Sciences (Honours) Program.

MOL BIOL 4R09 SENIORTHESIS

A thesis based on a research project in molecular biology supervised or co-supervised by a member of the Department of Biology or the Department of Biochemistry and Biomedical Sciences.

Prerequisite: Registration in Level IV Honours Molecular Biology and permission of the Course Coordinator. Application for permission should be made through the Department of Biology, Life Sciences Building, Room 118 by the end of March in Level III. Normally, a CA of at least 8.5 is required.

Antirequisite: BIOCHEM 4L03, 4P03, BIOLOGY 4C09, 4F06, 4FF3, 4GG9, 4I03, HTH SCI 3H03, 4A09, 4B06

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

MULTIMEDIA

(SEE COMMUNICATION STUDIES AND MULTIMEDIA)

MUSIC

WEB ADDRESS: <http://www.humanities.mcmaster.ca/~sofa/>

Togo Salmon Hall, Room 414

Ext. 27671

Courses and programs in Music are administered within the School of the Arts in the Faculty of Humanities.

Courses

If no prerequisite is listed, the course is open.

MUSIC 1A03 INTRODUCTION TO THE HISTORY OF MUSIC I

An introductory survey of Western music, from Gregorian chant to the time of Bach and Handel. Emphasis is on important composers and their works in relation to their society and culture. No previous knowledge of music required.

Three lectures; one term

Not open to students registered in any Music program.

MUSIC 1AA3 INTRODUCTION TO THE HISTORY OF MUSIC II

An introductory survey of Western music, from the time of Mozart to the present. Composers studied include Beethoven, Schubert, Chopin, Verdi, Wagner, Debussy, and Stravinsky. No previous knowledge of music required

Three lectures; one term

Not open to students registered in any Music program.

MUSIC 1CC3 HARMONY

The analysis and writing of functional harmony. Includes study of music by J.S. Bach and others.

Two lectures, term one; one lecture, term two; two terms

Prerequisite: Registration in a Music program; or a grade of at least B- in MUSIC 1C03; or qualifying tests

MUSIC 1D03 AURAL SKILLS

Sight-singing and dictation.

Two lectures, one lab; two terms

Prerequisite: Registration in a Music program, or qualifying tests

MUSIC 1E06 SOLO PERFORMANCE

Intensive study of the technique and repertoire of any orchestral instrument, piano, organ, harpsichord, voice, recorder, saxophone, or guitar.

12 one-hour meetings per term; two terms

Prerequisite: Registration in a Music program

Antirequisite: MUSIC 1EE6

MUSIC 1EE6 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: Successful audition at a minimum level of Honours Grade 8 RCM or equivalent and permission of the School of the Arts

Antirequisite: MUSIC 1E06

Lesson fees are charged to students taking MUSIC 1EE6. Lesson fees must be paid by September 1.

Not open to students in any Music Program.

MUSIC 1G03 ENSEMBLE PERFORMANCE

One of the McMaster Chamber Orchestra, McMaster University Choir, McMaster Concert Band, McMaster Jazz Band or McMaster Vocal Ensemble.

Prerequisite: Registration in a Music program

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 spiritual practices, the body in performance, and the roles musicians have in society. Both contemporary and historical musical examples will be drawn from various cultures. Competence in reading music is required.

Two lectures, one tutorial; one term

Prerequisite: Registration in a Music program

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

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 2Q03

Offered in alternate years.

MUSIC 2CC3 HARMONY

A continuation of MUSIC 1CC3. Chromatic harmony and the completed major-minor system.

One lecture, term one; two lectures, term two

Prerequisite: MUSIC 1CC3

MUSIC 2D03 KEYBOARD HARMONY

Keyboard Harmony.

Two lectures; two terms

Prerequisite: Registration in a Music program or qualifying tests

MUSIC 2E06 SOLO PERFORMANCE

A continuation of MUSIC 1E06.

12 one-hour meetings per term; two terms

Prerequisite: MUSIC 1E06; and registration in Level II of any program in Music

Antirequisite: MUSIC 2EE6

MUSIC 2EE6 SOLO PERFORMANCE

A continuation of MUSIC 1EE6.

12 one-hour meetings per term; two terms

Prerequisite: MUSIC 1EE6

Antirequisite: MUSIC 2E06

Lesson fees are charged to students taking MUSIC 2EE6. Lesson fees must be paid by September 1.

Not open to students in any Music Program.

MUSIC 2F03 MUSIC FOR FILM AND TELEVISION

An examination of how music functions to help create meanings in film and television programs. Examples will be drawn from throughout the history of film and television.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: CMST 2T03, THTR&FLM 2T03

Antirequisite: SADM 3A03

MUSIC 2G03 ENSEMBLE PERFORMANCE

One of the McMaster Chamber Orchestra, McMaster University Choir, McMaster Concert Band, McMaster Jazz Band or McMaster Vocal Ensemble.

Prerequisite: MUSIC 1G03 and successful audition

MUSIC 2H03 ANALYSIS

The traditional forms of Western art music as found in works by composers such as Bach, Mozart, Beethoven, and Brahms.

Three lectures; one term

Prerequisite: MUSIC 1CC3

MUSIC 2I03 POPULAR MUSIC IN NORTH AMERICA AND THE UNITED KINGDOM: PRE-WORLD WAR II

Two centuries of popular music, its social meanings, and media and technology interactions, emphasizing the early twentieth century. Topics include minstrelsy, early blues, and musical theatre.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: CMST 2RR3

MUSIC 2II3 POPULAR MUSIC IN NORTH AMERICA AND THE UNITED KINGDOM: POST-WORLD WAR II

Popular music, its social meanings, and media and technology interactions, from rock-and-roll to now. Topics include rhythm and blues (Chuck Berry), pop (Madonna), metal (Led Zeppelin).

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: CMST 2R03

Antirequisite: MUSIC 2AA3

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, 2BB3

MUSIC 2YY3 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

MUSIC 2Z03 INTRODUCTION TO MIDI AND COMPUTER MUSIC

Basic electroacoustic theory; introduction to techniques of digital music composition, emphasizing MIDI applications; computer music notation; aesthetics of music composition. Students will be expected to produce at least one original work. Prior experience with computers and/or music composition is strongly encouraged, though not required. Independent studio work will be required.

Two lectures, one tutorial; one term

Prerequisite: Registration in the Combined Honours in Multimedia Program or registration in Level II or above of a Music program

Cross-list: MMEDIA 2G03

This course is administered by the Department of Communication Studies and Multimedia.

MUSIC 3AA3 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 1AA3; or 18 units of Music

MUSIC 3CM3 MODAL COUNTERPOINT

The writing and analysis of modal counterpoint in the style of the late renaissance. Includes study of music by composers such as Palestrina and Lasso.

Seminar (two hours); one term

Prerequisite: MUSIC 2CC3 and registration in Honours Music

Antirequisite: MUSIC 2C03

Offered in alternate years.

MUSIC 3CT3 TONAL COUNTERPOINT

The writing and analysis of tonal counterpoint in Baroque style. Includes study of music by major composers of the 17th and early 18th centuries. Seminar (two hours); one term

Prerequisite: MUSIC 2CC3 and registration in Honours Music

Antirequisite: MUSIC 3C03

Offered in alternate years.

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 and registration in a program in Music

Antirequisite: MUSIC 3EE3, 3E06, 3EE6

Lesson fees are charged to students taking MUSIC 3E03 if the course is not a specific requirement for their music degree program. Lesson fees must be paid by September 1 for Term 1 and by January 1 for Term 2.

MUSIC 3E06 SOLO PERFORMANCE

A continuation of MUSIC 2E06.

12 one-hour meetings per term; two terms

Prerequisite: MUSIC 2E06 and registration in a program in Music

Antirequisite: MUSIC 3E03, 3EE6

Lesson fees are charged to students taking MUSIC 3E06 if the course is not a specific requirement for their music degree program. Lesson fees must be paid by September 1.

MUSIC 3EE3 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 2EE6

Antirequisite: MUSIC 3E03, 3EE6

Lesson fees are charged to students taking MUSIC 3EE3. Lesson fees must be paid by September 1 for Term 1 and by January 1 for Term 2. Not open to students in any Music Program.

MUSIC 3EE6 SOLO PERFORMANCE

A continuation of MUSIC 2EE6.

12 one-hour meetings per term; two terms

Prerequisite: MUSIC 2EE6

Antirequisite: MUSIC 3EE3, 3E03, 3E06

Lesson fees are charged to students taking MUSIC 3EE6. Lesson fees must be paid by September 1. Not open to students in any Music Program.

MUSIC 3G03 ENSEMBLE PERFORMANCE

One of the McMaster Chamber Orchestra, McMaster University Choir, McMaster Concert Band, McMaster Jazz Band or McMaster Vocal Ensemble.

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 2CC3, 2H03 and registration in Honours Music

Offered in alternate years.

MUSIC 3J03 ORCHESTRATION AND ARRANGING

A study of the orchestral/band instruments, scoring of music for various ensembles.

Two lectures; two terms

Prerequisite: MUSIC 2CC3, 2H03 and registration in a Music program

Offered in alternate years.

MUSIC 3K03 BRASS METHODS

Basic techniques of playing brass instruments. Brass literature for various educational levels. The instruments studied differ from those studied in MUSIC 4K03.

Two lectures, one lab; one term

Prerequisite: Registration in Honours Music

Alternates with MUSIC 4K03.

MUSIC 3L03 WOODWIND METHODS

Basic techniques of playing woodwind instruments. Woodwind literature for various educational levels. The instruments studied differ from those studied in MUSIC 4L03.

Two lectures, one lab; one term

Prerequisite: Registration in Honours Music

Alternates with MUSIC 4L03.

MUSIC 3M03 STRING METHODS

Basic techniques of playing string instruments. String literature for various educational levels. The instruments studied differ from those studied in MUSIC 4M03.

Two lectures; two terms

Prerequisite: Registration in Honours Music

Alternates with MUSIC 4M03.

MUSIC 3N03 VOCAL METHODS

Basic techniques of singing; organization, conducting, and rehearsing a choir; choral literature for primary and junior levels.

Two lectures; one term

Prerequisite: Registration in Honours Music

Alternates with MUSIC 4N03.

MUSIC 3O03 CONDUCTING

Fundamental conducting techniques applied to works selected from the standard repertoire.

Three lectures; one term

Prerequisite: MUSIC 2CC3, 2H03 and registration in Honours Music

MUSIC 3P03 PERCUSSION METHODS

Basic techniques of playing percussion instruments. Percussion literature for various educational levels.

Two lectures; one term

Prerequisite: Registration in Honours Music

Alternates with MUSIC 4P03

MUSIC 3SS3 SPECIAL STUDIES IN CHAMBER MUSIC OR ACCOMPANYING I

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 program; and permission of the School of the Arts. Students requesting this course must submit a written proposal to the School of the Arts by April 15. This course is primarily for students pursuing the Diploma in Music Performance.

Antirequisite: MUSIC 3S03

Fees are charged to students taking MUSIC 3SS3. Lesson fees must be paid by September 1 for Term 1 and by January 1 for Term 2.

MUSIC 3T03 CANADIAN MUSIC

A historical survey of music in Canada, in the context of social and political developments, from c. 1600 to the present.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level II or above

Offered in alternate years.

MUSIC 3U03 JAZZ

An historical survey of jazz, focusing on selected performers and arrangers.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level II or above

MUSIC 3V03 FOUNDATIONS OF MUSIC EDUCATION

A study of the philosophical, psychological and sociological foundations of music education, leading to the formation of a personal philosophy of music education.

Seminar (two hours); one term

Prerequisite: Registration in Level III or IV of an Honours Music program

Offered in alternate years.

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, 1880-present.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level III or IV of an Honours Music program

Alternates with MUSIC 3YY3.

MUSIC 3YY3 TOPICS IN MUSIC HISTORY: OPERA AND/OR MUSICAL THEATRE

A study of selected music for the stage in its historical, socio-political and artistic contexts. Possible topics include: Mozart's operas, Wagner's Ring, American musical theatre.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level III or IV of an Honours Music program

Alternates with MUSIC 3Y03.

MUSIC 3Z03 ADVANCED MIDI AND DIGITAL AUDIO FOR MULTIMEDIA

The creation of digital music and audio. Students work individually and in teams to develop skills for multimedia audio production. Topics include: advanced MIDI, mixing, audio processing and frequency equalization.

Two lectures, one tutorial; one term

Prerequisite: MMEDIA 2G03 or MUSIC 2Z03

Cross-list: MMEDIA 3C03

This course is administered by the Department of Communication Studies and Multimedia.

MUSIC 4C03 TOPICS IN HARMONY AND COUNTERPOINT

Advanced studies in writing an analysis. Possible topics include: sonatas, songs, jazz arranging and scoring.

Seminar (two hours); one term

Prerequisite: MUSIC 2CC3 and registration in Honours Music

Offered in alternate years.

MUSIC 4E03 SOLO PERFORMANCE

A continuation of MUSIC 3E03 or 3E06.

12 one-hour meetings; one term

Prerequisite: MUSIC 3E03 or 3E06; and registration in a program in Music

Antirequisite: MUSIC 4E06, 4E09, 4EE3

Lesson fees are charged to students taking MUSIC 4E03 if the course is not a specific requirement for their music degree program. Lesson fees must be paid by September 1 for Term 1 and by January 1 for Term 2.

MUSIC 4E06 SOLO PERFORMANCE

A continuation of MUSIC 3E03 or 3E06.

12 one-hour meetings per term; two terms

Prerequisite: MUSIC 3E03 or 3E06; and registration in a Music Program

Antirequisite: MUSIC 4E03, 4E09, 4EE6

Lesson fees are charged to students taking MUSIC 4E06 if the course is not a specific requirement for their music degree program. Lesson fees must be paid by September 1.

MUSIC 4E09 SOLO PERFORMANCE, DIPLOMA

Advanced technique and repertoire of any approved instrument, leading to a final examination in a recital presentation of approximately forty minutes duration.

Individual instruction; two terms

Prerequisite: MUSIC 3E06 or 3EE6 with a grade of at least A-; and permission of the School of the Arts

Antirequisite: MUSIC 4E03, 4E06, 4EE3, 4EE6

Open only to students pursuing the Diploma in Music Performance. Students requesting this course must apply in writing to the School of the Arts in March. Fees are charged to students taking MUSIC 4E09. Lesson fees must be paid by September 1.

MUSIC 4EE3 SOLO PERFORMANCE

A continuation of MUSIC 3EE3 or 3EE6.

12 one-hour meetings per term; two terms

Prerequisite: MUSIC 3EE3 or 3EE6

Antirequisite: MUSIC 4E03, 4E09, 4EE6

Lesson fees are charged to students taking MUSIC 4EE3. Lesson fees must be paid by September 1 for Term 1 and by January 1 for Term 2. Not open to students in any Music Program.

MUSIC 4EE6 SOLO PERFORMANCE

A continuation of MUSIC 3EE3 or 3EE6.

12 one-hour meetings per term; two terms

Prerequisite: MUSIC 3EE3 or 3EE6

Antirequisite: MUSIC 4E06, 4E09, 4EE3

Lesson fees are charged to students taking MUSIC 4EE6. Lesson fees must be paid by September 1.

Not open to students in any Music Program.

MUSIC 4G03 ENSEMBLE PERFORMANCE

One of the McMaster Chamber Orchestra, McMaster University Choir, McMaster Concert Band, McMaster Jazz Band or McMaster Vocal Ensemble.

Prerequisite: MUSIC 3G03 and successful audition; or a grade of at least A- in MUSIC 2E06 and registration in the Diploma in Music Performance program

Those students registered in the diploma program must, where possible, perform in this course in the same medium as they do in their other diploma courses.

MUSIC 4H03 TOPICS IN ANALYSIS

Advanced studies in analysis. Possible topics include: Schenkerian analysis, song cycles of Schubert, advanced set theory.

Seminar (two hours); one term

Prerequisite: MUSIC 2CC3, 2H03 and registration in Honours Music

Offered in alternate years.

MUSIC 4K03 BRASS METHODS

A study of the basic techniques of playing brass instruments. Brass literature for various educational levels. The instruments studied differ from those studied in MUSIC 3K03.

Two lectures; one lab; one term

Prerequisite: Registration in Honours Music

Alternates with MUSIC 3K03.

MUSIC 4L03 WOODWIND METHODS

A study of the basic techniques of playing woodwind instruments. Woodwind literature for various educational levels. The instruments studied differ from those studied in MUSIC 3L03.

Two lectures; one lab; one term

Prerequisite: Registration in Honours Music

Alternates with MUSIC 3L03.

MUSIC 4M03 STRING METHODS

A study of the basic techniques of playing string instruments. String literature for various educational levels. The instruments studied differ from those studied in MUSIC 3M03.

Two lectures; two terms

Prerequisite: Registration in Honours Music

Alternates with MUSIC 3M03.

MUSIC 4N03 VOCAL METHODS

Basic techniques of singing; organization, conducting, and rehearsing a choir; choral literature for intermediate and senior levels.

Two lectures; one term

Prerequisite: Registration in Honours Music

Alternates with MUSIC 3N03.

MUSIC 4O03 ADVANCED CONDUCTING: CHORAL

Rehearsal and conducting techniques, including warm-up exercises, tone, intonation, balance, attack, sustain, cueing, repertoire, score reading, and score preparation.

Three lectures; one term

Prerequisite: MUSIC 3O03 and registration in Honours Music

Alternates with MUSIC 4O13.

MUSIC 4O13 ADVANCED CONDUCTING: INSTRUMENTAL

A continuation of MUSIC 3O03. Refinement and development of conducting techniques. Exploration of in-depth score preparation, rehearsal techniques, odd and shifting meters, subdivision.

Three lectures; one term

Prerequisite: MUSIC 3O03 and registration in Honours Music

Alternates with MUSIC 4O03.

MUSIC 4P03 PERCUSSION METHODS

A continuation of MUSIC 3P03.

Two lectures; one term

Prerequisite: Registration in Honours Music

Alternates with MUSIC 3P03.

MUSIC 4Q03 PIANO LITERATURE AND PEDAGOGY

Study of piano repertoire and teaching methods for various age groups.

Three lectures; one term

Prerequisite: Registration as a piano major in Level III or IV of an Honours Music program

Offered in alternate years.

MUSIC 4R03 ISSUES AND METHODS IN CURRENT MUSICOLOGY

An exploration of historical, analytical and critical methods of research in music, including models of analysis derived from cultural studies, gender studies, literary theory, etc.

Seminar (two hours); one term

Prerequisite: Registration in Level III or IV of an Honours Music program

Antirequisite: MUSIC 3R03, 4I03

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 program and permission of the School of the Arts. Students requesting this course must submit a written proposal to the School of the Arts by April 15th.

MUSIC 4SS3 SPECIAL STUDIES IN CHAMBER MUSIC OR ACCOMPANYING II

Advanced supervised studies in chamber music performance or instrumental accompanying.

Times to be arranged between the students and instructor; one term

Prerequisite: MUSIC 3SS3; and registration in Level III or IV of a Music program, and permission of the School of the Arts. Students requesting this course must submit a written proposal to the School of the Arts by April 15th. This course is primarily for students pursuing the Diploma in Music Performance.

Fees are charged to students taking MUSIC 4SS3. Lesson fees must be paid by September 1 for Term 1 and by January 1 for Term 2.

MUSIC 4U03 JAZZ IMPROVISATION

Study and performance of jazz improvisations in various styles.

Two hours; one term

Prerequisite: MUSIC 3U03 and permission of the instructor

Offered in alternate years.

MUSIC 4V03 CURRENT ISSUES IN MUSIC EDUCATION

An investigation of new political initiatives, philosophical views, developing research, and curricular and administrative changes that are currently influencing the practice of music in the schools.

Seminar (two hours); one term

Prerequisite: Registration in Level III or IV of an Honours program in Music

Alternates with MUSIC 3V03.

MUSIC 4Y03 TOPICS IN MUSIC HISTORY

An intensive examination of a composer, period, genre, or issue from the style areas of "classical" music, film music, popular music, or jazz.

Seminar (two hours); one term

Prerequisite: Registration in Level III or IV of an Honours Music program

MUSIC 4Z03 COMPOSITION

The composition of various instrumental or vocal works.

Times to be arranged between the student and instructor; one term

Prerequisite: Registration in Level III or IV of an Honours Music program and permission of the instructor

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 program; and permission of the instructor.

NURSE PRACTITIONER

(SEE NURSING, NURSE PRACTITIONER CERTIFICATE)

NURSING

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

Health Sciences Centre, Room 2J36

Ext. 22694

Faculty as of January 15, 2007

Associate Dean of Health Sciences (Nursing)
and Director of the School of Nursing

Catherine Tompkins

Professors

Heather Arthur/B.Sc.N. (McMaster), M.Sc.N., Ph.D. (Toronto), R.N.

Andrea Baumann/B.Sc.N. (Windsor), M.Sc.N. (Western Ontario), Ph.D. (Toronto), R.N.

Gina Browne/B.Sc.N. (Catherine Spaulding), M.S. (Boston), M.Ed.; Ph.D. (Toronto), R.N.

Donna Ciliska/B.Sc.N., M.Sc.N. (Western Ontario), Ph.D. (Toronto), R.N.

Alba DiCenso/B.Sc.N., M.Sc. (McMaster), Ph.D. (Waterloo), R.N.

Basanti Majumdar/B.Sc.N., M.Sc.N. (Delhi), M.Ed. (Columbia), Ph.D. (Michigan), R.N.

Janet Pinelli/B.S. (Boston), M.Sc.N. (Toronto), D.N.S. (Buffalo), R.N.

John Vickers/B.Sc. (McMaster), Ph.D. (York)

Associate Professors

Margaret Black/B.Sc.N. (McGill), M.Sc.N. (Case Western Reserve), Ph.D. (Michigan), R.N.

Jennifer Blythe/B.A. (Hull), M.A., Ph.D. (McMaster), M.L.S. (Toronto)
 Sheryl Boblin/B.Sc.N. (Alberta), M.Ed. (Alberta), Ph.D. (Toronto), R.N.
 Barbara Brown/B.A., B.Sc.N. (Windsor), M.Sc.N. (Toronto), R.N.
 Barbara Carpio/B.Sc.N. (Alberta), M.Sc.N. (Toronto), M.Sc. (T.) (McMaster), R.N.
 Maureen Dobbins/B.Sc.N. (McMaster), Ph.D. (Toronto), R.N.
 Anita Fisher/B.A. (Windsor), M.H.Sc. (McMaster), R.N.
 Eileen Grace/M.H.Sc. (McMaster), M.Sc. (Toronto), Ph.D. (Waterloo), R.N.
 Carolyn Ingram/B.Sc.N. (Pittsburg), M.Sc.N. (Maryland) D.S.N. (SUNY), R.N.
 Janet Landeen/B.Sc.N. (Connecticut), M.Ed. (Victoria), Ph.D. (Toronto), R.N.
 Ann Mohide/B.Sc.N. (Toronto), M.H.Sc., M.Sc. (McMaster), R.N.
 Linda O'Mara/B.N., M.Sc.N. (McGill), Ph.D. (Toronto), R.N.
 Marilyn Parsons/B.N.Sc. (Queen's), M.H.Sc. (McMaster), R.N.
 Jenny Ploeg/B.Sc.N., M.Sc.N. (Western Ontario), Ph.D. (Toronto), R.N.
 Jennifer Skelly/M.H.Sc., M.Sc. (McMaster), Ph.D. (Toronto), R.N.
 Wendy Sword/B.Sc.N., M.Sc. (T.) (McMaster), Ph.D. (Guelph), R.N.
 Helen Thomas/B.N.Sc. (Queen's), M.Sc. (Waterloo), R.N.
 Catherine Tompkins/B.Sc.N. (Western Ontario), M.Ed. (Toronto), Ph.D. (California), R.N.
 Ruta Valatis/B.A., B.Sc.N. (Windsor), M.H.Sc. (McMaster), Ph.D. (Toronto), R.N.

Assistant Professors

Noori Akhtar-Danesh, B.Sc., M.Sc. (Iran), Ph.D. (Newcastle-upon-Tyne)
 Pamela Baxter/B.Sc.N., M.Sc. (McMaster), Ph.D. (McMaster), R.N.
 Gertrude Benson/B.N. (McGill), M.Sc.N. (Boston), R.N.
 Lynda Bentley Poole/B.Sc.N. (McMaster), M.Sc.N. (Toronto), R.N.
 Denise Bryant-Lukosius/B.Sc.N. (McMaster), M.Sc. (D'Youville), Ph.D. (McMaster), R.N.
 Michelle Butt/B.Sc., B.N. (Memorial), M.Sc. (Queen's), Ph.D. (McMaster), R.N.
 Patricia Caldwell/B.Sc.N. (McMaster), M.Sc. (Guelph), Ph.D. (McMaster), R.N.
 Ruth Chen/B.A. (California-Berkeley), M.Sc. (Yale), R.N.
 Kirsten Culver/B.Sc. (Queen's), Ph.D. (McMaster), R.N.
 Michele Drummond-Young/B.Sc.N., M.H.Sc. (McMaster), R.N.
 Anne Ehrlich/B.N.Sc. (Queen's), M.H.Sc. (Toronto), R.N.
 Ruth Hannon/B.N.Sc. (Queen's), M.H.A. (Wales), M.S.F.N.P. (D'Youville)
 Susan Jack/B.Sc.N. (Alberta), Ph.D. (McMaster), R.N.
 Sharon Kaasalainen/B.Sc.N. (McMaster), M.Sc. (Toronto), Ph.D. (McMaster), R.N.
 Michael Ladouceur/B.S.N. (Victoria), M.P.H. (Boston), R.N.
 Yvonne Lawlor/B.N. (New Brunswick), M.Ed. (Brock), R.N.
 Jeannette LeGris/B.N. (Manitoba), M.H.Sc. (McMaster), R.N.
 Ola Lunyk-Child/B.Sc.N. (McMaster), M.Sc.N. (Toronto), R.N.
 Mauréen Markle-Reid/B.Sc.N. (McMaster), M.Sc.N. (Toronto), Ph.D. (McMaster), R.N.
 Lynn Martin/B.Sc.N. (McMaster), M.Sc.N. (Western Ontario), Ph.D. (McMaster), R.N.
 Colleen McKey/B.Sc.N. (Niagara), M.Sc. (D'Youville), Ph.D. (Capella), R.N.
 Iris Mujica/B.Sc.N., M.Sc.N. (McMaster), R.N.
 Charlotte Noesgaard/B.N. (McGill), M.Sc.N. (Western Ontario), R.N.
 Chris Patterson/B.Sc. (Waterloo), B.Sc.N. (McMaster), M.Sc.N. (Western Ontario), R.N.
 Gladys Peachey/B.N., M.Ed. (Memorial), M.H.Sc. (Toronto), Ph.D. (McMaster)
 Joanna Pierazzo/B.Sc.N., M.Sc.N. (Western Ontario), R.N.
 Jennine Salfi/B.Sc.N., M.Sc., Ph.D. (McMaster), R.N.
 Ruth Schofield/B.Sc.N., M.Sc. (T.) (McMaster), R.N.
 Dyanne Semogas/B.N. (McGill), M.N. (Washington), R.N.
 Kathy Sleeth/B.Sc.N., M.Sc. (T.) (McMaster), R.N.
 Eric Staples/B.A.A. (N.) (Ryerson), Ms.N. (D'Youville), Ph.D. (Case Western Reserve), R.N.
 Olive Wahoush/M.Sc. (Ulster), R.N.

Lecturers

Valerie Abbott-Mitchell/B.Sc.N., M.Sc.N. (McMaster), R.N.
 Kristine Rogers/B.Sc.N. (Ryerson), M.N. (Toronto), 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. All students are required to have a satisfactory Police Record Check completed annually. Students may be required to produce documentation of this at some clinical placements. Students may elect to use the services of the Ontario Education Services Corporation (OESC) web site (www.oesc-cseo.org) to request a Police Record Check. All costs associated with this procedure are the responsibility of the student. Registered students who have been convicted of an offense under the criminal code for which they have not been pardoned may be denied the opportunity to enter clinical placement.
4. Students are responsible for arranging their own travel to and from learning settings external to the University and for covering any costs incurred. All students who enrol in the B.Sc.N. program are expected to travel to any learning setting in Hamilton and the surrounding area, including Halton, Peel, Brant, Haldimand-Norfolk, Niagara and Wellington regions (McMaster and Mohawk); and Kitchener-Waterloo and surrounding area, including Wellington, Brant and Halton regions (Conestoga).
5. Students in any stream who register for a clinical lab course in Level III or above must also submit a placement request to the Placement Coordinator. Students who fail to meet the published deadline but who register for the course at least two months prior to the date it is to commence will be assigned a placement setting without consideration of their preferences. Students who do not register two months in advance and who fail to meet the submission deadline will normally be required to defer their placement until the next term in which the course is offered.
 The final assignment of learning settings for any course is constrained by the availability of the requested setting and faculty resources. Students may therefore be required to complete the practicum component of a course in a learning setting that is not of their choosing.
6. For Level IV students in Basic Streams (A) and (D) who are interested in International or Outpost placements, one of the many prerequisites includes attaining a Cumulative Average of 7.0 for all required Level I and Level II Health Science courses and NURSING 3U02. For Post-Diploma Streams (B) and (E), students are required to attain a Cumulative Average of 7.5 upon completion of Level III (45 units) and a minimum grade of B- in NURSING 3VV3.
7. Specialized/atypical placements in Level IV are only available to students with a Cumulative Average of 7.0 in the following Health Science courses: HTH SCI 1AA3, 1BB3, 1H06 (or 1H03 and 1HH3), 2H03, 2HH3, NURSING 3U02.
8. 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.

NURSING ...

Courses

NURSING 1A00 WHMIS, HEALTH AND SAFETY

Basic safety course including the safety guidelines, acceptable safety conduct and positive safety attitudes and practice in laboratories and clinical practice settings and Workplace Hazardous Materials Information System (WHMIS). Evaluation: One multiple choice questions examination graded pass or fail; students who fail will be required to attend the course again during the same academic term.
 One session (two hours)

Prerequisite: Registration in the B.Sc.N. Program or the Ontario Primary Health Care Nurse Practitioner Certificate program

Antirequisite: ENGINEER 1A00, ENG TECH 1A00, SCIENCE 1A00

NURSING 1F04 INTRODUCTION TO NURSING AND HEALTH I

An introduction to definitions of nursing and health. Emphasis is on the relevance of context and on caring. Nursing process, beginning level skills in assessment, including physical assessment, and communication are stressed. A clinical practice component includes laboratory and community experience.

Two and one half hours (lecture/problem-based tutorials); four hours (clinical lab); one term

Prerequisite: Registration in Level I of the B.Sc.N. (A) or (D) Stream

NURSING 1G04 INTRODUCTION TO NURSING AND HEALTH II

A continuation of NURSING 1F04. An introduction to reflective practice. Concepts and theories related to specific priority health issues are studied. There is continued development of skills in health assessment and an introduction to health education. A clinical practice component includes laboratory and community experience.

Two and one half hours (lecture/problem-based tutorials), four hours (clinical lab); one term

Prerequisite: NURSING 1F04

NURSING 1H03 PATIENT AND FAMILY PERSPECTIVE OF LIVING WITH THE LABEL "DISABLED"

Theoretical, attitudinal and practical knowledge relevant to people labeled as "disabled" is explored. Students explore health care provider attitudes and values and how these impact individuals and families. Nursing practice will be examined using a patient centered approach.

Three hours (lecture/tutorials), community-based experience; one term
Prerequisite: Registration in Nursing I

NURSING 2A04 TRANSITION TO BACCALAUREATE NURSING I

Role differences between R.P.N. and B.Sc.N. are explored. Problem-based, small group learning is introduced. Biological, physical, psychological, social science and nursing theories/concepts are integrated and applied to health care problems and clinical practice.

Three hours (lecture/problem based tutorials), three hours (clinical), self study; one term

Prerequisite: NURSING 1A00 and registration in Level II of the B.Sc.N. (E) Stream

NURSING 2AA4 TRANSITION TO BACCALAUREATE NURSING II

A continuation of NURSING 2A04. Theories/concepts from a variety of disciplines are integrated and applied to complex health care problems and clinical practice settings. Nursing concepts related to health and illness across the continuum of individual and family growth and development are examined.

Two hours (lecture/problem based tutorials), six hours (clinical), self study; one term
Prerequisite: NURSING 2A04

NURSING 2I06 INTRODUCTION TO PROFESSIONAL NURSING

Students will be introduced to core concepts related to nursing and health through small-group, problem-based tutorials. Biological, physical, psychological, social science and nursing theories/concepts are integrated and applied to health care problems.

Three hours (tutorial/lecture, twice weekly); one term

Prerequisite: Registration in Level III of the B.Sc.N. (F) Stream

NURSING 2J04 INTRODUCTION TO NURSING PRACTICE

Nursing concepts basic to health and illness are examined across the continuum of individual and family growth and development. Planned and guided experiences are provided in the clinical laboratory and acute care institutions. *This course is evaluated on a Pass/Fail basis.*

12 hours (clinical lab); one term

Prerequisite: NURSING 2I06

NURSING 2L03 GUIDED NURSING PRACTICE I

Nursing concepts basic to health and illness are examined across the continuum of individual and family growth and development. Planned and guided experiences are provided in acute care institutions, including adult medical and surgical settings.

This course is evaluated on a Pass/Fail basis.

Nine hours (clinical lab); one term

Prerequisite: NURSING 1A00, 1F04, 1G04

Normally to be taken concurrently with NURSING 2M03.

NURSING 2M03 NURSING CONCEPTS IN HEALTH AND ILLNESS I

Integration of nursing, biological, psychological and social sciences theory is developed through work in problem-based tutorials, in which students apply concepts related to nursing, teaching-learning and group processes to a variety of patient situations.

Three hours (lecture/problem-based tutorials); one term

Prerequisite: NURSING 1F04, 1G04

Normally to be taken concurrently with NURSING 2L03.

NURSING 2N03 NURSING CONCEPTS IN HEALTH AND ILLNESS II

A continuation of NURSING 2M03. Integration of nursing, biological, psychological, and social sciences theory in problem-based tutorials.

Three hours (lecture/problem-based tutorials); one term

Prerequisite: NURSING 2M03

Normally to be taken concurrently with NURSING 2P03.

NURSING 2P03 GUIDED NURSING PRACTICE II

A continuation of NURSING 2L03. Planned and guided clinical practice in institutional settings.

This course is evaluated on a Pass/Fail basis.

Nine hours (clinical lab); one term

Prerequisite: NURSING 2L03

Normally to be taken concurrently with NURSING 2N03.

NURSING 2Q03 POPULATION HEALTH

An introduction to the major factors that determine the health of populations. Approaches to the assessment of the health status of communities will be considered. This course provides experience in conducting a community assessment.

Three hours (clinical lab) and two hours (tutorial and self-study); one term

Prerequisite: NURSING 1G04 or registration in Level II B.Sc.N. (E) Stream

Antirequisite: NURSING 2Q02

NURSING 3L3 CLIENT HEALTH ASSESSMENT

This course focuses on knowledge and skills related to the assessment of the client in a community-based health care setting. History-taking and physical assessment skills are developed.

Three hours (problem-based tutorials, clinical lab, self-study); one term

Prerequisite: Registration in Level III or IV of the B.Sc.N. (B) or (E) Stream or permission of the instructor

Antirequisite: NURSING 3AA3

NURSING 3MM3 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

Antirequisite: NURSING 3H03

Not open to students with credit in NURSING 3H03.

NURSING 3N03 INTRODUCTION TO NURSING CONCEPTS AND THEORIES IN HEALTH AND ILLNESS

Biological, physical, psychological, social sciences, and nursing theory are integrated and applied to health care situations through problem-based learning. Principles and strategies for life-long learning are introduced.

Three hours (lecture/problem-based tutorials); one term

Prerequisite: Registration in Level III of the B.Sc.N. (B) Stream

Antirequisite: NURSING 3CC3, 3E03, 3P03, 3S03

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: Registration in Level III of any stream of the B.Sc.N. program

Antirequisite: NURSING 3CC3, 3E03, 3N03, 3P03

Normally to be taken concurrently with NURSING 3X04 (for (A), (D) and (E) 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 3N03, 3S03

Antirequisite: NURSING 3DD3, 3F03, 3Q03

Normally to be taken concurrently with NURSING 3Y04 (for (A) and (D) Stream students).

NURSING 3U02 INTEGRATIVE NURSING PRACTICE SEMINAR

This course is an in-depth analysis of the scientific basis of nursing practice. Selected scientific mechanisms are studied and applied to nursing practice.

Two hours (lecture/student presentations); one term

Prerequisite: Registration in Level III of the B.Sc.N. (A) or (D) Stream

Normally to be taken concurrently with NURSING 3X04 or 3Y04.

NURSING 3VV3 COMMUNITY HEALTH

Introduction to assessment of the health status of communities within a Primary Health Care framework. Models of community development and community assessment, health promotion and health education are critiqued and applied to clinical scenarios.

Three hours (lecture/problem-based tutorials); one term

Prerequisite: HTH SCI 3B03 and registration in B.Sc.N. (B) and (F) Streams

Antirequisite: NURSING 3M05, 3VV2

Normally to be taken concurrently with NURSING 3T03.

NURSING 3X04 GUIDED NURSING PRACTICE III

Planned and guided clinical practice in a variety of institutional and community settings emphasizing that nursing is contextual and relational. Nursing practice roles and selected theories/models are tested with individuals and groups. Emphasis is given to formulating nursing interventions. *This course is evaluated on a Pass/Fail basis.*

Twelve hours (clinical lab); one term

Prerequisite: NURSING 2AA4, 2P03

Normally to be taken concurrently with NURSING 3S03.

NURSING 3Y04 GUIDED NURSING PRACTICE IV

A continuation of NURSING 3X04 with emphasis on integration of scientific mechanisms.

Twelve hours (clinical lab); one term

Prerequisite: NURSING 3X04

Normally to be taken concurrently with NURSING 3T03.

NURSING 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 4DD6 ADVANCED LEADERSHIP AND MANAGEMENT IN HEALTH CARE ORGANIZATIONS

This advanced course builds upon NURSING 4B06 content. It integrates theories and research in leadership and management to enhance the health care provider's knowledge of key issues in today's workplace. Offered in tutorial or distance format.

Four hours (tutorial or equivalent); six hours (independent study in an organization); one term

Prerequisite: NURSING 4B06

Antirequisite: HTH SCI 4DD6

NURSING 4FF3 INTEGRATIVE LEADERSHIP PROJECT

Students integrate learning and demonstrate a leadership role in addressing a real health care issue. Students work with both a tutor and a health care leader to address a mutually agreed upon leadership issue in the workplace.

Three hours (seminar and clinical lab); one term

Prerequisite: NURSING 4B06, 4DD6, 4I03, 4HH3, 4Z03

Antirequisite: NURSING 4FF3

Normally to be taken concurrently with NURSING 4K07 or NURSING 4T06.

NURSING 4G03 SELECTED TOPICS IN NURSING

Topics of contemporary interest in nursing. Emphasis may be upon theory, research or clinical application. Consult the School regarding the topics to be examined.

Three hours (problem-based tutorial or equivalent); one term

Prerequisite: Permission of the instructor

NURSING 4H03 ISSUES IN INTERNATIONAL AND INTERCULTURAL HEALTH

An introduction to health issues in a rural/Canadian and international context including theories of: development; political economy; medical and social anthropology; and intercultural health care practice.

Three hours (lecture/problem-based tutorials); one term

Prerequisite: HTH SCI 3B03; and registration in Level III or IV of the B.Sc.N. Program; and permission of the instructor

Antirequisite: COLLAB 4H03, HTH SCI 4H03

NURSING 4HH3 QUALITY MANAGEMENT IN HEALTH CARE ORGANIZATIONS

This course focuses on the role of leadership in quality management in health care organizations. Theories, concepts and best practices are utilized to examine issues in the health care work environments. Concepts studied include patient safety, safety culture, benchmarks and scorecards, program evaluation and risk/utilization management.

Three hours (lecture/seminar); one term

Prerequisite: Registered Nurse and permission of the instructor

Antirequisite: HTH SCI 4HH3

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 3X04 or 3Y04

Normally to be taken concurrently with NURSING 4P04.

NURSING 4K07 GUIDED NURSING PRACTICE VI

A continuation of Nursing 4J07.

This course is evaluated on a Pass/Fail basis.

Twenty-four hours (clinical lab, including tutorials); one term

Prerequisite: NURSING 4J07

Normally to be taken concurrently with NURSING 4Q04.

NURSING 4P04 ADVANCED NURSING CONCEPTS I

Students focus on the integration and application of scientific and humanistic theories and concepts to the exploration and suggested resolution of client/patient case scenarios.

Three and one half hours (student-facilitated tutorials), resource lectures; one term.

Prerequisite: Registration in Level IV of any stream of the B.Sc.N. Program

Antirequisite: NURSING 4E03

Normally to be taken concurrently with NURSING 4J07, 4S06 or 4T06

NURSING 4Q04 ADVANCED NURSING CONCEPTS II

A continuation of NURSING 4P04. Students focus on the integration and application of relevant concepts and theories to the exploration of professional issues in nursing and the health care system.

Three and one half hours (student-facilitated tutorials), resource lectures; one term.

Prerequisite: NURSING 4P04

Antirequisite: NURSING 4F03

Normally to be taken concurrently with NURSING 4K07, 4S06 or 4T06

NURSING 4S06 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.

Twelve hours (clinical lab), two hours (tutorials); one term

Prerequisite: NURSING 1A00, 3VV3 and registration in Level IV of the B.Sc.N. (B) Stream

Normally to be taken concurrently with either NURSING 4P04 or 4Q04.

NURSING 4T06 GUIDED NURSING PRACTICE II

An applied nursing practice course which emphasizes integration of theory and development of independent decision-making capacity in a selected area of clinical practice.

This course is evaluated on a Pass/Fail basis.

Twelve hours (clinical lab), two hours (tutorials); one term

Prerequisite: NURSING 1A00 and registration in Level IV of the B.Sc.N. (B) Stream

Not open to students with credit in NURSING 4L06, 4M06 or 4N06.

Normally to be taken concurrently with either NURSING 4P04 or 4Q04.

NURSING 4Z03 NURSING CONFLICT MANAGEMENT IN HEALTH CARE ORGANIZATIONS

An introduction to the types and processes of conflict in health care organizations. Exploration and application of theories and principles of conflict and negotiations to situations in the health care environment. Offered in both tutorial and distance format.

Three hours (tutorial); one term

Prerequisite: A minimum of one year clinical work experience in a health care profession or permission of the instructor

Antirequisite: HTH SCI 4Z03

NURSE PRACTITIONER CERTIFICATE ...**Notes:**

1. The following courses are available to those students currently completing the Nurse Practitioner Certificate program.
2. Distance education modalities are employed in all courses in the Nurse Practitioner Certificate program. Tutorial sessions are held on site at the University. Field experience is required for several courses. Students must attend McMaster for the clinical laboratory components of the program.

Courses**NURSPRAC 4AA5 ADVANCED HEALTH ASSESSMENT AND DIAGNOSIS I**

This course focuses on the development of clinical decision making and advanced health assessment knowledge and skills in providing primary health care for the adult client.

Three hours (tutorial), three hours (clinical lab); one term

Prerequisite: NURSING 1A00; and credit or registration in NURSPRAC 4P03; and registration in the Primary Health Care Nurse Practitioner Certificate Program

Antirequisite: NURSPRAC 4A05, 4A10

NURSPRAC 4AB5 ADVANCED HEALTH ASSESSMENT AND DIAGNOSIS II

A continuation of NURSPRAC 4AA5. This course applies frameworks, concepts and methods of health assessment and clinical decision making to specific populations across the lifespan, families and communities.

Three hours (tutorial), three hours (clinical lab); one term

Prerequisite: NURSPRAC 4AA5; and credit or registration in NURSPRAC 4P03

Antirequisite: NURSPRAC 4A05, 4A10

NURSPRAC 4C13 NURSE PRACTITIONER INTEGRATIVE PRACTICUM

An intensive field study with a focus on assessment, diagnosis and management of the care of clients. Emphasis is on synthesizing advanced knowledge and applying evidence-based health care to clinical practice.

29 hours (clinical lab; six hours tutorial); one term

Prerequisite: NURSPRAC 4A10, (or NURSPRAC 4AA5 and 4AB5), 4P03, 4R03, 4T10, (or 4TA5 and 4TB5)

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: Registration in the Primary Health Care Nurse Practitioner Certificate Program

NURSPRAC 4R03 NURSE PRACTITIONER ROLES AND RESPONSIBILITIES

This course examines and analyzes the political, economic, social, ethical and legal issues related to the role and scope of practice of Nurse Practitioners.

Three hours (tutorial); two terms

Prerequisite: Registration in the Primary Health Care Nurse Practitioner Certificate Program

NURSPRAC 4TA5 THERAPEUTICS IN PRIMARY HEALTH CARE I

Concepts integral to pharmacotherapy, advanced counselling and complementary therapies related to episodic conditions across the lifespan are introduced. The therapeutic care plan approach is emphasized.

Three hours (tutorial), three hours (clinical lab); one term

Prerequisite: NURSING 1A00; and credit or registration in NURSPRAC 4AA5, 4P03; and registration in the Primary Health Care Nurse Practitioner Certificate Program

Antirequisite: NURSPRAC 4T05, 4T10, 4TT5

NURSPRAC 4TB5 THERAPEUTICS IN PRIMARY HEALTH CARE II

A continuation of NURSPRAC 4TA5. This course applies the frameworks and concepts of pharmacotherapy, advanced counselling and complementary therapies to clients with chronic conditions and to specific populations.

Three hours (tutorial), three hours (clinical lab); one term

Prerequisite: NURSPRAC 4TA5

Antirequisite: NURSPRAC 4T05, 4T10, 4TT5

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 program with the exception of COLLAB 2F03 (Medical Informatics) and COLLAB 2K03 (Introduction to Health Informatics) which are also open to students registered in the B.Sc.N. (A), (E) and (F) Streams.

Courses**COLLAB 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 B.Sc.N. (D) Stream (Mohawk College site)

Antirequisite: COLLAB 1C03, NURSECON 1C03

Not open to students with credit or registration in PSYCH 1A03.

COLLAB 1B03 DEVELOPMENTAL PSYCHOLOGY

The study of human psychological development from the pre-natal period to old age.

Three hours; one term

Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)

Antirequisite: COLLAB 1D03, NURSECON 1B03, 1D03

Not open to students with credit or registration in PSYCH 1AA3.

COLLAB 1C03 PSYCHOLOGY: BASIC PROCESSES OF BEHAVIOUR

Basic concepts of psychological research methods, learning, memory, perception, states of consciousness, motivation and emotion.

Three hours; one term

Prerequisite: Registration in B.Sc.N. (D) Stream (Conestoga College site)

Antirequisite: COLLAB 1A03, NURSECON 1A03, 1C03

Not open to students with credit or registration in PSYCH 1A03.

COLLAB 1D03 PSYCHOLOGY: DYNAMICS OF HUMAN BEHAVIOUR

Stress and stress management, thinking and intelligence, the biological basis of behaviour, social psychology, personality theory and measurement, abnormal behaviour and therapies.

Three hours; one term

Prerequisite: Registration in B.Sc.N. (D) Stream (Conestoga College site)

Antirequisite: COLLAB 1B03, NURSECON 1B03, 1D03

Not open to students with credit or registration in PSYCH 1AA3.

COLLAB 1E03 ESSENTIALS OF CANADIAN HISTORY

A study of recurrent themes in public affairs within the historical context of Canada from Confederation to the present.

Three hours; one term

Prerequisite: Registration in B.Sc.N. (D) Stream (Conestoga College site)

Antirequisite: HISTORY 2J06, NURSECON 1E03

COLLAB 1F03 POLITICAL STRUCTURES AND ISSUES

Introduction to the study of politics within the Canadian context.

Three hours; one term

Prerequisite: Registration in B.Sc.N. (D) Stream (Conestoga College site)

Antirequisite: NURSECON 1F03

COLLAB 1G03 MULTICULTURALISM

An examination of the ethnic and cultural diversity of Canadian society, including an investigation of Canada's multicultural policy.

Three hours; one term

Prerequisite: Registration in B.Sc.N. (D) Stream (Conestoga College site)

Antirequisite: NURSECON 1G03

COLLAB 1H03 INTRODUCTION TO CRITICAL THINKING IN THE SOCIAL SCIENCES

The basic principles of the social sciences disciplines, Economics, Sociology and Politics. The development of critical thinking by focusing on inequalities in contemporary Canadian society.

Three hours; one term

Prerequisite: Registration in B.Sc.N. (D) Stream (Conestoga College site)

Antirequisite: NURSECON 1H03

COLLAB 1I03 SOCIOLOGY I

An analysis of Canadian social institutions and social processes.

Three hours; one term

Prerequisite: Registration in B.Sc.N. (D) Stream (Conestoga College site)

Antirequisite: NURSECON 1I03

COLLAB 2A03 ABNORMAL PSYCHOLOGY

Applied principles and related theories of normal and abnormal personality development.

Three hours; one term

Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)

Antirequisite: NURSECON 2A03

COLLAB 2B03 FRENCH IN A CANADIAN CONTEXT

An introduction to French culture in a Canadian context.

Three hours; one term

Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)

Antirequisite: NURSECON 2B03

COLLAB 2C03 SOCIOLOGY 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 B.Sc.N. (D) Stream (Mohawk College site)

Antirequisite: NURSECON 2C03

COLLAB 2D03 HUMAN SEXUALITY

An introduction to biological, behavioural and cultural aspects of human sexuality.

Three hours; one term

Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)

Antirequisite: NURSECON 2D03

COLLAB 2E03 LITERATURE: A PRACTICAL APPROACH

Various literary, cinematic and non-fiction works will be used to develop aesthetic judgment.

Three hours; one term

Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)

Antirequisite: NURSECON 2E03

COLLAB 2F03 MEDICAL INFORMATICS

A study of current topics in Medical Informatics and their practical application in the workplace.

Three hours; one term

Prerequisite: Registration in B.Sc.N. (A) or (D) Stream (Mohawk College site)

Antirequisite: NURSECON 2F03

Enrolment is limited.

COLLAB 2G03 QUEST FOR MEANING

Using insights from the arts, humanities and sciences, students will explore ways in which meaning is sought.

Three hours; one term

Prerequisite: Registration in B.Sc.N. (D) Stream (Conestoga College site)

Antirequisite: NURSECON 2G03

COLLAB 2H03 PRINCIPLES OF ETHICAL REASONING

A study of ways to clarify values and establish a framework for ethical decision making. Students examine professional ethical codes and apply ethical decision making models to dilemmas in their personal and professional lives.

Three hours; one term

Prerequisite: Registration in B.Sc.N. (D) Stream (Conestoga College site)

Antirequisite: NURSECON 2H03

COLLAB 2I03 THE USES OF LAUGHTER: COMEDY AND SATIRE

This course will explore the history of comedy and satire through works ranging from ancient Greek comedy to contemporary film and fiction.

One hour (lecture), two hours (discussion/seminar); one term

Prerequisite: Registration in B.Sc.N. (D) Stream (Conestoga College site)

COLLAB 2J03 DESIRE IN LITERATURE

The historical and cross-cultural coverage of this course will lead to in-depth consideration of the ways culture, society and art shape desire and are in turn informed by it.

One hour (lecture), two hours (discussion/seminar); one term

Prerequisite: Registration in B.Sc.N. (D) Stream (Conestoga College site)

COLLAB 2K03 INTRODUCTION TO HEALTH INFORMATICS

An introduction to the theory of data and information needs of health care professionals and the role of information management in patient care. Topics include decision support systems, electronic records, telemedicine, security, privacy and future trends.

Three hours; one term

Prerequisite: Registration in B.Sc.N. (A) or (D) Stream (Conestoga College site)

COLLAB 2L03 INTRODUCTION TO STATISTICS

An introductory course in statistics which includes organizing and graphing univariate and bivariate data; measures of central tendency and variation; regression and correlation; collecting data, experiments and surveys; probability distributions; sampling distribution confidence interval and hypothesis testing; use of MINITAB.

Three hours (lecture); one term

Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)

COLLAB 3A03 SOCIOLOGY: SOCIETY, TECHNOLOGY AND SOCIAL ISSUES

An examination of technologies that have influenced society.

Three hours; one term

Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)

Antirequisite: NURSECON 3A03

COLLAB 3B03 SOCIOLOGY: DIVERSITY AND INEQUALITY

A study of the problems of daily life and social issues.

Three hours; one term

Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)

Antirequisite: NURSECON 3B03

COLLAB 4H03 ISSUES IN INTERNATIONAL AND INTERCULTURAL HEALTH

An introduction to health issues in a rural Canadian and international context including theories of: development; political economy; medical and social anthropology; and Intercultural health care practice.

Three hours (lecture/problem-based tutorial); one term

Prerequisite: HTH SCI 3B03; and registration in Level III or IV of the B.Sc.N. (D) Stream; and permission of the instructor

Antirequisite: HTH SCI 4H03 or NURSING 4H03

NURSING CONSORTIUM

(SEE NURSING, NURSING CONSORTIUM (D) STREAM)

OJIBWE

(SEE INDIGENOUS STUDIES, OJIBWE)

ORIGINS

WEB ADDRESS: <http://origins.mcmaster.ca>

Life Sciences Building, Room 327

Ext. 26136

Note:

ORIGINS courses usually are available to students who are registered in the Origins Research Specialization.

Courses If no prerequisite is listed, the course is open.

ORIGINS 2B03 BIG QUESTIONS

An introductory survey concerning ultimate questions in modern science, with an emphasis on physical sciences: origin of space-time, elements, structure in the cosmos, conditions for life and the search for life on other planets.

Three lectures, one tutorial; first term.

Prerequisite: Registration in Level II or above of an Origins Research Specialization and credit or registration in ORIGINS 2S03; or permission of the instructor

Cross-list: SCIENCE 2B03

ORIGINS 2FF3 ORIGINS AND EVOLUTION OF ORGANISMS

An introductory survey concerning the origin and evolution of organisms. A tree-of-life will be examined internally from the root to terminal branch tips, by evaluating critically the data with which the tree was constructed.

Three lectures, one tutorial; one term.

Prerequisite: BIOLOGY 1AA3, CHEM 1A03, MATH 1A03, PHYSICS 1B03

ORIGINS 2S03 ORIGINS SEMINAR I

An introductory survey concerning the concepts, literature, and research skills relevant to origins research. Members from or visitors to the Origins Institute will provide papers for discussion.

Seminar (one hour); two terms.

Prerequisite: Registration in an Origins Research Specialization or permission of the instructor

Enrolment is limited. See the heading *Limited Enrolment Courses* in the Faculty of Science section of the Calendar.

ORIGINS 3A03 ORIGIN OF SPACE-TIME

The mathematics, particle physics, and astronomy that are required to understand the Big Bang and how our universe formed will be explored.

Three hours; one term

Prerequisite: ORIGINS 2S03 or permission of the instructor

Offered in alternate years.

Not offered in 2007-2008.

Enrolment is limited. See the heading *Limited Enrolment Courses* in the Faculty of Science section of the Calendar.

ORIGINS 3B03 ORIGIN OF THE ELEMENTS

The chemistry, nuclear physics and astrophysics that are required to understand how the elements formed and are distributed in our universe will be explored.

Three hours; one term

Prerequisite: ORIGINS 2S03 or permission of the instructor

Offered in alternate years.

Offered in 2007-2008.

Enrolment is limited. See the heading *Limited Enrolment Courses* in the Faculty of Science section of the Calendar.

ORIGINS 3C03 ORIGINS OF STRUCTURE IN OUR UNIVERSE

Topics about structure in our universe will be explored: planet, star, galaxy, and large-scale structure formation.

Three hours; one term

Prerequisite: ORIGINS 2S03 or permission of the instructor

Offered in alternate years.

Offered in 2007-2008.

Enrolment is limited. See the heading *Limited Enrolment Courses* in the Faculty of Science section of the Calendar.

ORIGINS 3D03 ORIGIN OF LIFE

Topics in astrobiology will be explored: planetary system formation, conditions in extra-solar systems, criteria for defining and sustaining life, and 'extremophile' systems on Earth and, possibly, elsewhere in our solar system.

Three hours; one term

Prerequisite: ORIGINS 2S03 or permission of the instructor

Offered in alternate years.

Not offered in 2007-2008.

Enrolment is limited. See the heading *Limited Enrolment Courses* in the Faculty of Science section of the Calendar.

ORIGINS 3E03 ORIGINS OF SPECIES AND BIODIVERSITY

The concepts that are required to understand how species originate will be explored: natural selection, adaptations species definitions, temporal and spatial origins for organisms on Earth.

Three hours; one term

Prerequisite: ORIGINS 2S03 or permission of the instructor

Offered in alternate years.

Offered in 2007-2008.

Enrolment is limited. See the heading *Limited Enrolment Courses* in the Faculty of Science section of the Calendar.

ORIGINS 3F03 ORIGIN OF HUMANITY

The concepts that are required to understand when, where, and how human beings arose will be explored: topics from genetics, anthropology, and archaeology.

Three hours; one term

Prerequisite: ORIGINS 2S03 or permission of the instructor

Offered in alternate years.

Not offered in 2007-2008.

Enrolment is limited. See the heading *Limited Enrolment Courses* in the Faculty of Science section of the Calendar.

ORIGINS 3S03 ORIGINS SEMINAR II

Practical experience with the concepts, literature, and research skills relevant to origins research. Members from or visitors to the Origins Institute will present their research for discussion.

Seminar (one hour); two terms

Prerequisite: ORIGINS 2S03 or permission of the instructor

Enrolment is limited. See the heading *Limited Enrolment Courses* in the Faculty of Science section of the Calendar.

ORIGINS 4A09 ORIGINS RESEARCH THESIS

An individual thesis involving a research project conducted by a student under supervision by a faculty member in the Origins Institute (with a committee including at least one faculty member from the Honours program with which the student is combining the Origins Research Specialization). Two terms

Prerequisite: Registration in Level IV of the Origins Research Specialization

Enrolment is limited. See the heading *Limited Enrolment Courses* in the Faculty of Science section of the Calendar.

PEACE STUDIES

WEB ADDRESS: <http://www.humanities.mcmaster.ca/~peace>

Togo Salmon Hall, Room 726

Ext. 24265

Acting Director

Appointment Pending

Committee of Instruction**Chair**

Mark Vorobej (*Philosophy*)

James Alsop (*History*)

Andrew Bone (*History*)

Chandrima Chakraborty (*English and Cultural Studies*)

Juanita DeBarros (*History*)

Martin Horn (*History*)

Violetta Ighesi (*Philosophy; Communication Studies and Multimedia*)

Joanna Santa-Barbara (*Health Sciences*)

Susan Searls-Giroux (*English and Cultural Studies*)

Pamela Swett (*History*)

Courses If no prerequisite is listed, the course is open.**PEACE ST 1A03 INTRODUCTION TO PEACE STUDIES**

An introduction to the discipline of peace research, focusing on the concepts of peace, war, security, conflict, violence and nonviolence, and examining the roles of values and ideologies in the attainment of peace.

Three hours (two lectures, one tutorial); one term

PEACE ST 1B03 INTRODUCTION TO THE STUDY OF WAR

A Peace Studies approach to the study of war, including the effects of war on people, societies and the earth. War prevention processes will be examined at the levels of interstate and state politics, social movements, and individual peace.

Three hours (two lectures, one tutorial); one term

PEACE ST 2A03 CONFLICT TRANSFORMATION: THEORY AND PRACTICE

An examination of ways of preventing, resolving and transforming conflicts in everyday life, in our own culture and others, and in the arenas of family, business, the law, schools and large-scale political conflicts.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

Antirequisite: CMST 2V03

PEACE ST 2AA3 THE MODERN CARIBBEAN

An examination of the nineteenth- and twentieth-century Caribbean, focusing on the end of slavery; the arrival of indentured Asian immigrants; pan-Africanism; anti-colonial movements and revolution.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

Cross-list: HISTORY 2AA3

This course is administered by the Department of History.

PEACE ST 2I03 SOCIAL AND POLITICAL ISSUES

A philosophical examination of some contemporary issues in public policy, such as environmental problems, the question of a just distribution of society's goods and services, and problems of liberty and coercion.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level II or above

Cross-list: PHILOS 2G03

This course is administered by the Department of Philosophy.

PEACE ST 2I13 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 2I13

Antirequisite: HISTORY 3Q03, PEACE ST 3G03

This course is administered by the Department of History.

PEACE ST 2S03 WAR IN THE WEST, 1850-1945

A survey of the development of warfare in the Western world from 1850 to 1945. Particular attention is paid to the two World Wars in the 20th century.

Three hours; one term

Prerequisite: Registration in Level II or above

Cross-list: HISTORY 2S03

This course is administered by the Department of History.

PEACE ST 3A03 CRITICAL RACE STUDIES

This course examines contemporary debates in critical race theory in an attempt to critically decode the operations of race in literary and cultural texts.

Three hours; one term

Prerequisite: Registration in a program in Comparative Literature, Cultural Studies and Critical Theory, English, Peace Studies or Women's Studies

Cross-list: COMP LIT 3RR3, CSCT 3A03, ENGLISH 3A03, WOMEN ST 3H03

This course is administered by the Department of English and Cultural Studies.

PEACE ST 3B03 PEACE-BUILDING THROUGH HEALTH INITIATIVES

An examination of the multiple links between health and peace, concentrating on the strategic use of health initiatives to encourage peace in zones of potential or existing armed conflict.

Three hours (lectures and discussion); one term.

Prerequisite: Registration in Level II or above

PEACE ST 3E06 POSTCOLONIAL CULTURES: THEORY AND PRACTICE

A study of contemporary texts including literature, film, art and other forms of popular culture that engage the implications of living in a postcolonial world. Close consideration will be given to issues of imperialism, globalization, race, gender, ethnicity, nation, language and representation.

Three hours; two terms

Prerequisite: Registration in the Combined Honours in Peace Studies Program
Cross-list: COMP LIT 3R06, CSCT 3R06, ENGLISH 3R06

This course is administered by the Department of English and Cultural Studies.

PEACE ST 3F03 THE MODERN MIDDLE EAST

A survey of the political and social history of the Middle East from 1800 to the present, with an emphasis on contemporary issues, such as the Islamic impulse and the Arab-Israeli conflict.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

Cross-list: HISTORY 3AA3

This course is administered by the Department of History.

PEACE ST 3I03 THE INTERNATIONAL RELATIONS OF THE EUROPEAN POWERS, 1870-1945

An examination of the origins and course of the First World War; the failure of post-war stabilization; and the origins and course of the Second World War.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: HISTORY 3I03

This course is administered by the Department of History.

PEACE ST 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 program; or registration in Level III or IV of the Combined Honours in Peace Studies Program

Cross-list: PHILOS 3P03

Offered in alternate years.

This course is administered by the Department of Philosophy.

PEACE ST 3MM3 THE LITERATURE OF ISRAEL AND PALESTINE

Through the study of relevant literature and film, with a focus on contemporary Israeli and Arab texts, students gain a context for the exploration of conflicts in the Middle East.

Three hours; one term

Prerequisite: Registration in Level II or above

Cross-list: COMP LIT 3MM3

This course is administered by Comparative Literature.

PEACE ST 3N03 ETHICAL ISSUES IN COMMUNICATION

This course will examine ethical issues as they arise in interpersonal communication and mass communication. The dominant moral theories and approaches to moral decision-making will be analysed and put to use to help students understand and evaluate concrete examples.

Three hours (lectures and discussion groups); one term

Prerequisite: CMST 2C03; and one of CMST 2A03 or 2B03; and registration in Level III or above of a program in Communication Studies or Peace Studies
Cross-list: CMST 3N03

Not open to students with credit in CMST 3A03, TOPICS IN COMMUNICATION, if the topic was Ethical Issues in Communication.

This course is administered by the Department of Communication Studies and Multimedia.

PEACE ST 3O03 SLAVERY IN THE ATLANTIC WORLD

An examination of slavery in the Americas, from the fifteenth to the nineteenth centuries. Topics to be examined include plantations and labour regimes, gender, slave health, slave resistance, Afro-creole cultures, emancipation.

Three hours (lecture and discussion); one term

Prerequisite: Registration in Level II or above

Cross-list: HISTORY 3O03

This course is administered by the Department of History.

PEACE ST 3RR3 WAR AND SOCIETY IN 20TH-CENTURY BRITAIN

Imperialism and Society in Britain: the impact of World War I and World War II on the British Empire.

Three hours (lectures and discussion groups); one term

Prerequisite: Registration in Level II or above

Cross-list: HISTORY 3RR3

This course is administered by the Department of History.

PEACE ST 3VV3 WAR AND SOCIETY IN EARLY MODERN BRITAIN, 1485-1815

A thematic study of the nature of British warfare and its relationship to society during the period when Britain developed as a major military and naval power.

Three hours (lectures and discussion groups); one term

Prerequisite: Registration in Level II or above

Cross-list: HISTORY 3VV3

This course is administered by the Department of History.

PEACE ST 3W03 CONTEMPORARY NATIVE LITERATURE IN CANADA

A study of significant works by Native writers who give voice to their experience in Canada. Issues examined include appropriation of voice, native identity, women in indigenous societies, and stereotyping.

Three hours (lectures and seminars); one term

Prerequisite: Six units of Level II Indigenous Studies or six units of Level II English or permission of the instructor

Cross-list: CSCT 3W03, ENGLISH 3W03, INDIG ST 3D03

This course is administered by Indigenous Studies.

PEACE ST 3X03 CONTEMPORARY NATIVE LITERATURE IN THE UNITED STATES

A study of contemporary works by Native writers in the United States within the context of American society and Post-Modern and Post-Colonial Literary Theory.

Three hours (lectures and seminars); one term

Prerequisite: Six units of Level II Indigenous Studies or six units of Level II English or permission of the instructor

Cross-list: CSCT 3X03, ENGLISH 3X03, INDIG ST 3E03

This course is administered by Indigenous Studies.

PEACE ST 3Y03 SPECIAL TOPICS IN PEACE STUDIES

Guided reading in and/or independent study of selected topics of relevance to Peace Studies.

Prerequisite: Registration in Level III or IV of the Combined Honours in Peace Studies Program and permission of the Director of Peace Studies

PEACE ST 3Z03 WOMEN AND MEN IN WAR AND PEACE

This course focuses on how gender and other differences shape our experiences of war and struggles for a more peaceful world.

Three hours; one term

Prerequisite: Registration in Level III or IV of the Combined Honours in Women's Studies Program or Peace Studies Program or permission of the Director of either program

Cross-list: WOMEN ST 3Z03

PEACE ST 4A03 RESEARCH SEMINAR

An interdisciplinary examination of selected topics of current relevance to peace research.

Seminar (two hours); one term

Prerequisite: Registration in Level III or IV of the Combined Honours in Peace Studies Program

PEACE ST 4B03 INDEPENDENT RESEARCH

Students develop and execute their own research projects, in regular consultation with a faculty supervisor, and produce and orally defend a substantial paper. May include a practicum component.

Prerequisite: Registration in Level III or IV of the Combined Honours in Peace Studies Program with a Cumulative Average of at least 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.

PEACE ST 4D03 LITERATURE AS PEACE RESEARCH

An exploration of new ways of thinking about war, peace, human security and conflict transformation, with emphasis on a close study of selected literary texts.

Two hours; one term

Prerequisite: Registration in Level III or IV of a program in Comparative Literature or Peace Studies, or permission of the Director of either program

Cross-list: COMP LIT 4D03

This course is administered by Comparative Literature.

PHARMACOLOGY

WEB ADDRESS: <http://www.science.mcmaster.ca/biopharm>

These courses are available only to those students registered in Honours Biology and Pharmacology.

Note:

PHARMAC 3A06, 3B06, 4A03, 4AA3, 4C03, 4D03 and 4E03 will be based on self-directed problem based learning.

Courses**PHARMAC 3A06 INTRODUCTION TO PHARMACOLOGY**

Principles of pharmacodynamics, principles of pharmacokinetics. Drugs acting on the CNS, female reproductive system, autonomic nervous system and respiratory system. Antimicrobials.

One tutorial (three hours); two terms

Prerequisite: Registration in the Honours Biology and Pharmacology program

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

Receptor classification, receptor theory, stimulus response coupling, second messengers.

One tutorial (three hours); one term

Prerequisite: PHARMAC 3A06

PHARMAC 4AA3 ADVANCED TOPICS IN PHARMACOLOGY

New developments in pharmacology, with an emphasis on mechanisms of drug action.

One tutorial (three hours); one term

Prerequisite: PHARMAC 4A03

PHARMAC 4C03 PRINCIPLES OF TOXICOLOGY

General principles of toxicology, adverse effects of selected agents on man and other organisms.

One tutorial (three hours); one term

Prerequisite: PHARMAC 3A06

PHARMAC 4D03 DRUG DESIGN

Principles of drug design based on drug transport, metabolism and selectivity of action at the target sites with emphasis on quantitative structure-activity relationships.

One tutorial (three hours); one term

Prerequisite: PHARMAC 3A06, 4A03

PHARMAC 4E03 SOCIAL PHARMACOLOGY

Epidemiological analysis of drug use in humans; adverse drug reactions; legal and economic aspects of drug utilization, prescribing patterns in national and international contexts.

One tutorial (three hours); one term

Prerequisite: PHARMAC 3A06

PHARMAC 4F09 SENIOR THESIS

A thesis based upon a research project carried out under the direction of a supervisor approved by the Committee of Instruction.

Prerequisite: PHARMAC 3A06

Antirequisite: BIOLOGY 4C09, 4F06, 4FF3, 4GG9, 4I03, HTH SCI 3H03, 4A09, 4B06, MOL BIOL 4R09

PHILOSOPHY

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

University Hall, Room 310

Ext. 24275

Faculty as of January 15, 2007

Chair

Richard T.W. Arthur

Professors

Barry Allen/B.A. (Lethbridge), Ph.D. (Princeton)

Richard T.W. Arthur/B.A. (Oxford), M.A. (McGill), Ph.D. (Western Ontario)

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)

Adjunct Professor

Kenneth M. Blackwell/(Russell Archivist, Mills Library), B.A. (Victoria), M.L.S. (Western Ontario), M.A. (McMaster), Ph.D. (Guelph)

Associate Professors

Elisabeth Gedge/B.A., M.A. (Alberta), Ph.D. (Calgary), MTh. (Newman Theological College)

Jill LeBlanc/B.A. (McMaster), M.A., Ph.D. (Toronto)

Spiro Panagiotou/B.Sc., M.A. (Guelph), Ph.D. (St. Andrews)

Brigitte Sassen/B.A. (Toronto), M.A., Ph.D. (Pennsylvania State)

Mark Vorobej/B.A. (Carleton), M.A., Ph.D. (Toronto)

Assistant Professors

Diane Enns/B.A. (Ottawa), M.A. (Carleton), Ph.D. (SUNY-Binghamton)

Brian Garrett/B.A., M.A. (Auckland), Ph.D. (McGill)

Violetta Ignieski/B.A., M.A. (Western Ontario), Ph.D. (Toronto)

Associate Members

Caroline Bayard/(French) L. ès L., M. ès L. (Toulouse), M.A., Ph.D. (Toronto)

Geoffrey Rockwell/(School of the Arts), B.A. (Haverford), M.A., Ph.D. (Toronto)

Department Notes:

1. The Department of Philosophy offers courses in four major areas of Philosophy, namely History of Philosophy, Logic, Ethics and Theory of Value, and Theory of Knowledge and Metaphysics. Students are advised to include courses from each of these areas in their programs.
2. Students who do not meet the specified prerequisites for a course may, in exceptional circumstances, obtain permission of the instructor to take the course.
3. An Undergraduate Philosophy Handbook is available in the Departmental Office.
4. Students interested in registering in PHILOS 3W03, 4W03 or 4Z06 are strongly encouraged to obtain permission from the Departmental Undergraduate Counsellor by the end of May of the preceding year. Access to these courses cannot be guaranteed beyond that date.

Courses

If no prerequisite is listed, the course is open.

PHILOS 1A03 PHILOSOPHICAL TEXTS

An introduction to philosophy through the close reading of selected classical texts. Authors to be considered may include Plato, Descartes, Hobbes, Hume, Marx, Mill, Nietzsche, Russell, and De Beauvoir.

Two lectures, one tutorial; one term

PHILOS 1B03 PHILOSOPHY, LAW AND SOCIETY

An introduction to social, political, legal and moral philosophy. Topics to be discussed may include ecology, health-care ethics, civil rights, and alternative views of human nature, the state, social conflict, inequality and justice.

Two lectures, one tutorial; one term

Alternates with PHILOS 1C03.

PHILOS 1C03 PHILOSOPHY IN LITERATURE

An introduction to philosophy through the study of literature. The course shows how works of literary art treat such philosophical issues as the nature of morality, the possibility of freedom, human nature, the self, and religious belief.

Two lectures, one tutorial; one term

Alternates with PHILOS 1B03.

PHILOS 1D03 PHILOSOPHY AND THE SCIENCES

An introduction to philosophical issues arising from modern science and technology. Topics to be discussed may include science versus pseudoscience, the nature of scientific explanation, the impact of science on society, and the contribution of society to the development of science.

Two lectures, one tutorial; one term

Not open to students with credit or registration in PHILOS 3D03.

PHILOS 1E03 PROBLEMS OF PHILOSOPHY

A critical investigation of philosophical arguments concerning such topics as God, politics, morality, human nature, knowledge, and art.

Two lectures, one tutorial; one term

PHILOS 2A06 ANCIENT GREEK PHILOSOPHY

A study of Western philosophical thought from its earliest beginnings to late Roman times, with emphasis on Plato and Aristotle.

Three lectures; two terms

Prerequisite: One of three units of Philosophy, ARTS&SCI 1A06, registration in a program in Classics or Philosophy, or permission of the Department
Cross-list: CLASSICS 2P06

PHILOS 2B03 INTRODUCTORY LOGIC

Sentential and quantification logics are introduced and applied to arguments in English.

Three lectures; one term

Prerequisite: Registration in Level II or above

PHILOS 2C06 DESCARTES TO HUME

A comprehensive survey of early modern philosophy, concentrating on the metaphysical and epistemological innovations of the period.

Three lectures; two terms

Prerequisite: Registration in Level II or above

PHILOS 2D03 MORAL ISSUES

An introduction to moral philosophy, through a consideration of issues in health care ethics. Topics such as abortion, human experimentation, euthanasia, and genetic screening will be investigated.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level II or above

Cross-list: RELIG ST 2C03

PHILOS 2E03 CLASSICAL CHINESE PHILOSOPHY

Introductory survey of classical Chinese philosophy, especially Confucianism and Daoism. Readings include Confucius, Mencius, Laozi and Zhuangzi.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level II or above

PHILOS 2F03 PHILOSOPHICAL PSYCHOLOGY

A consideration of such questions as: In what terms might human nature be described? How do intentional and unintentional behaviour differ? How do physical and mental states differ? When is action free? Can intelligence be duplicated artificially?

Three lectures; one term

Prerequisite: Registration in Level II or above

PHILOS 2G03 SOCIAL AND POLITICAL ISSUES

A philosophical examination of some contemporary issues in public policy, such as environmental problems, the question of a just distribution of society's goods and services, and problems of liberty and coercion.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level II or above

Cross-list: PEACE ST 2I03

PHILOS 2H03 AESTHETICS

An introduction to some main theories of the nature of art, criticism, and the place of art in life and society.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level II or above

Cross-list: ART HIST 2H03, CMST 2O03

Offered in alternate years.

PHILOS 2N03 BUSINESS ETHICS

An analysis of ethical issues arising in contemporary business life. Sample topics include: fair and unfair competition; responsibilities towards employees, society and the environment; honesty and integrity in business; the moral status of corporations.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level II or above

Cross-list: COMMERCE 2SB3

PHILOS 3A06 FROM KANT TO HEGEL

The philosophies of Kant and Hegel viewed in relation to each other and to other philosophies of the period, such as those of Rousseau or Schelling.

Three lectures; two terms

Prerequisite: PHILOS 2C06

PHILOS 3B03 PHILOSOPHIES OF EXISTENCE

An examination of the 19th-century forerunners of contemporary existential philosophy, concentrating principally on the thought of Kierkegaard and Nietzsche.

Three lectures; one term

Prerequisite: At least six units of Philosophy and registration in Level III or above

Offered in alternate years.

PHILOS 3C03 ADVANCED BIOETHICS

An advanced study of the application of ethical theory to selected problems in health care, such as our reproductive practices, care of the dying, the therapeutic relationship.

Three lectures; one term

Prerequisite: A grade of at least B in PHILOS 2D03 or RELIG ST 2C03, and at least three additional units of Philosophy; or registration in Level III or above of an Honours program in Philosophy

Offered in alternate years.

PHILOS 3D03 PHILOSOPHY OF SCIENCE

A survey of philosophical problems concerning science. Topics to be considered include explanation, causation, scientific laws, and instrumentalism vs. realism.

Three lectures; one term

Prerequisite: At least six units of Philosophy and registration in Level III or above

Offered in alternate years.

PHILOS 3E03 PHILOSOPHY OF LANGUAGE

A survey of philosophical problems concerning language. Topics to be considered include reference, synonymy, truth, and linguistic knowledge.

Three lectures; one term

Prerequisite: At least six units of Philosophy or PHILOS 2B03; and registration in Level III or above

Cross-list: CMST 3Y03

Offered in alternate years.

PHILOS 3F03 INTERMEDIATE LOGIC

Selected topics in the study of formal languages and their interpretations, metalogic, and the philosophy of logic.

Three lectures; one term

Prerequisite: PHILOS 2B03

Offered in alternate years.

PHILOS 3G03 ETHICS

An introduction to the major types of ethical theory and the problem of their justification.

Three lectures; one term

Prerequisite: At least six units of Philosophy and registration in Level III or above

PHILOS 3H03 PHILOSOPHY OF RELIGION

An analysis of the concept of religion in light of the philosophical claims of religious experience, practice, and belief.

Three lectures; one term

Prerequisite: Six units of Philosophy and registration in Level III or above

Offered in alternate years.

PHILOS 3I03 PHILOSOPHY AND FEMINISM

A study of philosophical issues in feminist thought.

Three lectures; one term

Prerequisite: Six units of Philosophy or WOMEN ST 1A03, 1AA3 (or 1A06); and registration in Level III or above

Cross-list: WOMEN ST 3I03

Offered in alternate years.

PHILOS 3J03 MODERN JEWISH THOUGHT

Introduction to different conceptions of the connection between Jewish traditions and philosophical questioning. Authors may include: Maimonides, Spinoza, Mendelssohn, Cohen, Buber, Rosenzweig, Strauss, Levinas, Soloveitchik.

Three hours (lectures and discussion); one term

Cross-list: RELIG ST 3A03

This course is administered by the Department of Religious Studies.

PHILOS 3L03 ENVIRONMENTAL PHILOSOPHY

A consideration of the characterization of nature and/or our evaluative responses to it.

Three lectures; one term

Prerequisite: At least six units of Philosophy and registration in Level III or above

Offered in alternate years.

PHILOS 3M03 ARGUMENTATION THEORY

A study of some theoretical issues concerning the identification, analysis and evaluation of arguments.

Three hours (lectures and discussion); one term

Prerequisite: One of ARTS&SCI 1B06, CMST 2W03, HUMAN 2C03 or PHILOS 2B03; and registration in Level II or above

Cross-list: CMST 3E03

PHILOS 3N03 POLITICAL PHILOSOPHY

A study of major political concepts and issues, such as social contract, ideology, justice, freedom vs. equality, reform vs. revolution, state vs. individual. Three lectures; one term

Prerequisite: At least six units of Philosophy and registration in Level III or above

Offered in alternate years.

PHILOS 3O03 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 Program

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 program in Philosophy, with a Cumulative Average of at least 8.5 and permission of the Department

PHILOS 4A03 EARLY MODERN PHILOSOPHY

A critical study of one or more 17th or 18th-Century European or British philosophers, such as Descartes, Leibniz, Hume.

Seminar (Two hours); one term

Prerequisite: PHILOS 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 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 program 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.

PHILOS 4K03 ANCIENT PHILOSOPHY

A critical study of one or more ancient Greek philosophers such as Parmenides, Plato, Aristotle.

Seminar (two hours); one term

Prerequisite: PHILOS 2A06 and registration in Level III or above

Antirequisite: PHILOS 4C03, 4J03

Cross-list: CLASSICS 4K03

Offered in alternate years.

PHILOS 4W03 INDEPENDENT STUDY

In consultation with a member of the Department of Philosophy, students will prepare an essay on an approved topic, on the basis of a list of readings outside normally available course offerings. It is the student's responsibility to secure the agreement of an instructor and to complete a proposal form (available in the Philosophy Department office), before attempting to register in the course.

Prerequisite: Registration in Level IV of any Honours program in Philosophy, with a Cumulative Average of at least 8.5 and permission of the Department

Antirequisite: PHILOS 4Z06

PHILOS 4Z06 THESIS

Reading and research under the supervision of two members of the Department. A major paper is required as well as a formal examination. It is the student's responsibility to secure the agreement of an instructor and to complete a proposal form (available in the Philosophy Department office), before attempting to register in the course.

Prerequisite: Registration in Level IV of any Honours program in Philosophy, with a Cumulative Average of at least 8.5 and permission of the Department

Antirequisite: PHILOS 4W03

PHYSICS AND ASTRONOMY

WEB ADDRESS: <http://www.physics.mcmaster.ca/>

A.N. Bourns Science Building, Room 241

Ext. 24559

Faculty as of January 15, 2007**Chair**

D.E. Venus

Associate Chair

K. Dalnoki-Veress

Professors

A. John Berlinsky/B.Sc. (Fordham), M.Sc., Ph.D. (Pennsylvania)

Cliff Burgess/B.Sc. (Waterloo), Ph.D. (Texas)

Hugh M. Couchman/B.A., M.A., Ph.D. (Cambridge)

Bruce D. Gaulin/B.Sc. (McGill), Ph.D. (McMaster), Brockhouse Chair in the Physics of Materials

William E. Harris/B.Sc. (Alberta), M.Sc., Ph.D. (Toronto)

Harold K. Haugen/B.Sc. (Acadia), M.Eng. (McMaster), Ph.D. (Aarhus)

Paul G. Higgs/B.Sc., Ph.D. (Cambridge), Senior Canada Research Chair

Takashi Imai/B.Sc., M.Sc., Ph.D. (Tokyo)

Catherine Kallin/B.Sc. (British Columbia), A.M., Ph.D. (Harvard), Senior Canada Research Chair

Graeme M. Luke/B.Sc. (Queen's), Ph.D. (British Columbia)

Ralph E. Pudritz/B.Sc. (British Columbia), M.Sc. (Toronto), Ph.D. (British Columbia)

An-Chang Shi/B.Sc. (Fudan), M.Sc., Ph.D. (Illinois)

Eric Sorensen/B.Sc., M.Sc. (Århus), Ph.D. (California-Santa Cruz)
 Peter G. Sutherland/B.Sc. (McGill), M.S., Ph.D. (Illinois)
 David E. Venus/B.Sc. (Queen's), Ph.D. (Toronto)
 Douglas L. Welch/B.Sc., Ph.D. (Toronto)
 Christine D. Wilson/B.Sc. (Toronto), Ph.D. (California Institute of Technology)

Associate Professors

Kari Dalnoki-Veress/B.Sc., M.Sc., Ph.D. (Guelph)
 Alison Sills/B.Sc. (Western Ontario), Ph.D. (Yale)

Assistant Professors

Alan A. Chen/B.Sc. (Toronto), Ph.D. (Yale)
 Cécile Fradin/B.Sc., M.Sc. (Ecole Normale Supérieure), Ph.D. (Paris VI),
 Canada Research Chair
 Karen Hughes/B.Sc. (Lakehead), M.Sc., Ph.D. (McMaster)
 Brian E. King/B.Sc. (Simon Fraser), M.Sc., Ph.D. (Colorado)
 Sung-Sik Lee/B.Sc. (Korea Advanced Institute of Science and Technology),
 M.Sc., Ph.D. (Pohang)
 Neil McKay/B.Sc. (Queen's), M.Sc., Ph.D. (McMaster)
 Reza Nejat/B.Sc. (Tehran), M.Sc., Ph.D. (Missouri-Rolla)
 Duncan O'Dell/B.Sc. (Imperial), Ph.D. (Bristol)
 James Wadsley/B.Sc. (Monash), M.Sc., Ph.D. (Toronto)

Associate Member

John S. Preston/(Engineering Physics) B.Sc. (McMaster), M.Sc., Ph.D. (Toronto)

Adjunct Assistant Professor

Ken Sills/B.Sc. (Western Ontario), M.Sc. (St. Mary's)

Instructional Assistant

Alex Vorobyov/M.S., Ph.D. (Kharkov)

Department Notes:

1. The Department reserves the right to withdraw a Level III or IV course which is not specifically required in a Physics program if the registration falls below four.
2. Students in Level III or IV of Physics programs will find a number of relevant electives among the offerings of the Department of Biology, the Department of Engineering Physics and the School of Geography and Earth Sciences.

ASTRONOMY...

Courses If no prerequisite is listed, the course is open.

ASTRON 1F03 INTRODUCTION TO ASTRONOMY AND ASTROPHYSICS

Topics include orbital motion, electromagnetic radiation, the solar system, stars and stellar evolution, the Milky Way Galaxy, galaxies and quasars, the evolution of the universe.

Three lectures; one term

Prerequisite: Grade 12 Advanced Functions and Introductory Calculus U and Grade 12 Physics U; or PHYSICS 1P03

Prerequisite (Beginning 2008-2009): One of Grade 12 Advanced Functions U, Grade 12 Advanced Functions and Introductory Calculus U or MATH 1E03; and Grade 12 Physics U or PHYSICS 1L03

Cross-list: PHYSICS 1F03

Antirequisite: SCIENCE 1D03

ASTRON 2E03 PLANETARY ASTRONOMY

Physical and mathematical foundation of planetary astronomy. Historical development of ideas about the solar system. A modern view of the planets; the origin and evolution of the solar system and planets around other stars.

Three lectures; one term

Prerequisite: One of PHYSICS 1B03, 1D03 or ARTS&SCI 2D06; and one of MATH 1A03, 1N03 or ARTS&SCI 1D06

ASTRON 3X03 GALAXIES AND COSMOLOGY

Stellar populations, star formation and the interstellar medium in galaxies. The Milky Way Galaxy; normal and active galaxies and large scale structure in the universe; observational and theoretical cosmology.

Three lectures and occasional lab periods; one term

Prerequisite: PHYSICS 2D03 or 2E03; and one of ENG PHYS 2A03, 2A04, PHYSICS 2A03 or 2B06; and either one of CHEM 2R03, ENG PHYS 2H04 or PHYSICS 2H04, or both CHEM 2PA3 and 2PB3

Alternates with ASTRON 3Y03.

ASTRON 3Y03 STELLAR STRUCTURE

The physics of stellar interiors. The main sequence and the life cycle of a star. Stellar evolution, including white dwarfs, neutron stars, and black holes. Taught in an inquiry style.

Three lectures; one term

Prerequisite: PHYSICS 2D03 or 2E03; and one of ENG PHYS 2A03, 2A04, PHYSICS 2A03 or 2B06; and either one of CHEM 2R03, ENG PHYS 2H04 or PHYSICS 2H04, or both CHEM 2PA3 and 2PB3. PHYSICS 2G03 is strongly recommended.

Alternates with ASTRON 3X03.

Not offered in 2007-2008.

PHYSICS ...

Courses If no prerequisite is listed, the course is open.

PHYSICS 1B03 MECHANICS AND WAVES

Mechanics of a point particle, emphasising work and energy. Fluids. Simple Harmonic Motion and Waves, including properties of sound and light waves; interference and diffraction.

Three lectures, one lab (two hours) every week; one term

Prerequisite: Either PHYSICS 1P03 or at least 60% in Grade 12 Physics U; and credit or registration in SCIENCE 1A00 and either MATH 1A03 or 1AA3

Prerequisite (Beginning 2008-2009): One of Grade 12 Physics U, PHYSICS 1L03 or 1P03; and one of Grade 12 Calculus and Vectors U, MATH 1F03 or 1LS3; and credit or registration in SCIENCE 1A00

PHYSICS 1BA3 INTRODUCTION TO MODERN PHYSICS A

A course for students intending to proceed in the physical sciences. Linear and angular momentum. Electric and magnetic fields. Atomic and quantum physics. Nuclear and Particle Physics.

Three lectures, one lab (three hours) every other week; one term

Prerequisite: PHYSICS 1B03

Antirequisite: PHYSICS 1BB3

PHYSICS 1BB3 INTRODUCTION TO MODERN PHYSICS B

Linear and angular momentum. Electric fields. Atomic and quantum physics. Nuclear Physics. Applications directed to topics in the life sciences.

Three lectures, one lab (three hours) every other week; one term

Prerequisite: PHYSICS 1B03

Antirequisite: PHYSICS 1BA3

PHYSICS 1D03 INTRODUCTORY MECHANICS

A course for engineering students. Statics, kinematics, Newtonian dynamics, energy.

Three lectures; one lab (three hours) every other week; one term

Prerequisite: Registration in Engineering

PHYSICS 1E03 WAVES, ELECTRICITY AND MAGNETIC FIELDS

A course for engineering students. Oscillations and waves, interference; electrostatics, electric potential, circuit elements; magnetic fields.

Three lectures, one lab (three hours) every other week; one term

Prerequisite: Registration in Engineering

Antirequisite: PHYSICS 2A03

PHYSICS 1F03 INTRODUCTION TO ASTRONOMY AND ASTROPHYSICS

Topics include orbital motion, electromagnetic radiation, the solar system, stars and stellar evolution, the Milky Way Galaxy, galaxies and quasars, the evolution of the universe.

Three lectures; one term

Prerequisite: Grade 12 Advanced Functions and Introductory Calculus U and Grade 12 Physics U; or PHYSICS 1P03

Prerequisite (Beginning 2008-2009): One of Grade 12 Advanced Functions U, Grade 12 Advanced Functions and Introductory Calculus U or MATH 1E03; and Grade 12 Physics U or PHYSICS 1L03

Cross-list: ASTRON 1F03

Antirequisite: SCIENCE 1D03

PHYSICS 1L03 PHYSICS OF LIVING SYSTEMS

Fundamental physical principles are introduced with an emphasis on applications to biological processes. Topics include energy, light, sound, electromagnetics and their interaction with or use by biological systems.

Three lectures; one term

Prerequisite: One of Grade 12 Advanced Functions U, Grade 12 Advanced Functions and Introductory Calculus U or MATH 1E03

First offered in 2008-2009.

PHYSICS 1P03 INTRODUCTORY PHYSICS

Foundations of physics for students without Grade 12 Physics U. Topics include vectors, graphical analysis, kinematics and Newton's Laws. Three lectures; one term

Prerequisite: Any Grade 12 U or M Mathematics credit

Not open to students with 60% or higher in Grade 12 Physics U.
Last offered in 2007-2008.

PHYSICS 2A03 INTRODUCTORY ELECTRICITY AND MAGNETISM

Electrostatics; circuits; the magnetic field; Faraday's law of induction. Three lectures; one term

Prerequisite: PHYSICS 1B03; and one of ARTS&SCI 1D06, MATH 1AA3 or 1XX3

Antirequisite: PHYSICS 1E03, 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; and credit or registration in MATH 2A03 (or 2XX3), 2C03

Antirequisite: PHYSICS 2A03

PHYSICS 2C03 MODERN PHYSICS

Special Relativity. Introductory quantum physics.

Three lectures; first term

Prerequisite: PHYSICS 1BA3 or 1BB3

Antirequisite: PHYSICS 3M03

PHYSICS 2D03 MECHANICS

Dynamics of a particle, simple harmonic motion and resonance, many-particle systems, the mechanics of rigid bodies, Lagrange's equations, non-inertial systems.

Three lectures, first term

Prerequisite: Registration in a program in the Faculty of Engineering; or permission of the instructor

Antirequisite: PHYSICS 2E03

PHYSICS 2E03 MECHANICS

Dynamics of a particle, simple harmonic motion and resonance, central field problem, many-particle systems, non-inertial systems, generalized coordinates and Lagrange's equations.

Three lectures; second term

Prerequisite: Registration in a program in Physics or Medical and Health Physics; or PHYSICS 1B03, and credit or registration in MATH 2A03 (or 2XX3), 2C03

Antirequisite: PHYSICS 2D03

PHYSICS 2G03 SCIENTIFIC COMPUTING

A comprehensive introduction to modern, scientific structured programming using FORTRAN 95. The course will discuss modules, operator overloading, scripting, program management, etc., and features a series of programming problems under Linux.

Three lectures; one term

Prerequisite: MATH 1A03 or 1X03

PHYSICS 2H04 THERMODYNAMICS

An introduction to thermodynamics and its statistical basis at the microscopic level, with applications.

Three lectures, one tutorial every other week, one lab (three hours); second term

Prerequisite: PHYSICS 1B03; and credit or registration in MATH 2A03 (or 2XX3), 2C03, PHYSICS 1BA3 (or 1BB3)

Cross-list: ENG PHYS 2H04

Antirequisite: CHEM 2PA3, 2R03, ENGINEER 2H03, MATLS 2B03

This course is administered by the Department of Engineering Physics.

PHYSICS 3A03 RELATIVITY

An introduction to general relativity.

Three lectures; one term

Prerequisite: PHYSICS 2C03; and registration in any Honours program in the Faculty of Science or any program in the Faculty of Engineering
Alternates with PHYSICS 3C03.

Not offered in 2007-2008.

PHYSICS 3BA3 ELECTRONICS I

P-N junctions, diodes, bipolar junction transistors, field effect transistors, dc and ac modeling, differential amplifiers and operational amplifiers, feedback and oscillators, digital circuits and multivibrators, signal processing.

Two lectures, one lab (two hours); first term

Prerequisite: One of ENG PHYS 2A03, 2A04, 2E04 or PHYSICS 2B06

Antirequisite: PHYSICS 3B06

PHYSICS 3BB3 ELECTRONICS II

Design and synthesis project in electronics, based on the material presented in PHYSICS 3BA3.

One tutorial (one hour), two labs (three hours); second term

Prerequisite: PHYSICS 3BA3

Antirequisite: PHYSICS 3B06

PHYSICS 3C03 ANALYTICAL MECHANICS

Motion of rigid bodies; coupled oscillators and normal modes; Lagrangian and Hamiltonian dynamics; transformation theory and action-angle variables; perturbation theory; non-integrable systems and chaos.

Three lectures; one term

Prerequisite: PHYSICS 2D03 or 2E03, and credit or registration in MATH 3C03 and registration in any Honours program in the Faculty of Science or any program in the Faculty of Engineering; or permission of the instructor
Alternates with PHYSICS 3A03.

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 PHYSICS 2C03 or 3M03

Antirequisite: PHYSICS 3H04, 3HC1

PHYSICS 3HC1 INTERMEDIATE LABORATORY (I)

Experiments in atomic physics, neutron physics, optics, spectroscopy, mechanics.

One lecture, one lab (three hours), first term

Prerequisite: PHYSICS 2B06; and credit or registration in PHYSICS 2C03 or 3M03; and registration in Level III of Honours Physics Co-op or Honours Medical and Health Physics Co-op

Antirequisite: PHYSICS 3H03, 3H04

PHYSICS 3HD2 INTERMEDIATE LABORATORY (II)

The continuation of PHYSICS 3HC1.

One lab (three hours); second term

Prerequisite: PHYSICS 3HC1

PHYSICS 3K03 THERMODYNAMICS AND STATISTICAL MECHANICS

The laws of thermodynamics, with emphasis on the mathematical structure of the theory; classical and quantum statistical mechanics.

Three lectures; one term

Prerequisite: MATH 2A03 (or 2XX3), 2C03, PHYSICS 2H04; or registration in Honours Mathematics and Physics

PHYSICS 3MM3 QUANTUM MECHANICS I

Quantum physics in 1D and 3D systems, with applications including the hydrogen atom.

Three lectures; one term

Prerequisite: MATH 3C03 and either PHYSICS 2C03 or 3M03; or registration in Honours Mathematics and Physics

PHYSICS 3N03 PHYSICAL OPTICS

Interference; Fraunhofer and Fresnel diffraction; Maxwell's equations and the electromagnetic character of light; polarization and double refraction; interference of polarized light; selected topics in modern optics.

Three lectures; one term

Prerequisite: One of MATH 2A03, 2Q04 or 2XX3; and MATH 2C03 or 2P04; and either PHYSICS 2B06 or both ENG PHYS 2A04 (or 2A03) and 2E04

PHYSICS 3S03 SOFT CONDENSED MATTER PHYSICS

Soft materials include polymers, liquid crystals, surfactants and colloids. The course will cover structure, dynamics, phase transitions and self-assembly, and discuss applications and links to the life sciences.

Three lectures; first term

Prerequisite: CHEM 2R03 or PHYSICS 2H04

PHYSICS 4A03 INQUIRY IN PHYSICS

Independent study of the scientific literature, including the preparation of seminars and reports on assigned topics.

Two lectures or seminars; two terms

Prerequisite: Registration in a program in which PHYSICS 4A03 is required or is a specified option

Antirequisite: MED PHYS 4A03, 4AA1, 4AB2, PHYSICS 4AA1

PHYSICS 4AA1 INQUIRY IN PHYSICS (I)

Independent study of the scientific literature, including the preparation of seminars and reports on assigned topics.

Two lectures or seminars; first term

Prerequisite: Registration in Level IV of Honours Physics Co-op

Antirequisite: MED PHYS 4A03, PHYSICS 4A03

PHYSICS 4AB2 INQUIRY IN PHYSICS (II)

The continuation of PHYSICS 4AA1.

Two lectures or seminars; second term

Prerequisite: PHYSICS 4AA1

PHYSICS 4B03 ELECTROMAGNETIC THEORY

Potential theory, electrostatics and magnetostatics in matter, electrodynamics, electromagnetic waves and wave guides.

Two lectures; one term

Prerequisite: MATH 3D03 and either PHYSICS 2B06 or both ENG PHYS 2A04 (or 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 2A04 (or 2A03) and 2E04

Antirequisite: COMP ENG 3DJ4, PHYSICS 4DA3, 4DB3

PHYSICS 4DA3 DIGITAL LOGIC AND COMPUTER SYSTEMS I

The design and use of digital logic systems and their application to data acquisition and control techniques. The project-oriented laboratory involves both hardware and software.

Two lectures, one lab (three hours); first term

Prerequisite: PHYSICS 2B06; or ENG PHYS 2A04 (or 2A03) and 2E04

Antirequisite: COMP ENG 3DJ4, PHYSICS 4D06

PHYSICS 4DB3 DIGITAL LOGIC AND COMPUTER SYSTEMS II

The continuation of PHYSICS 4DA3

Two lectures, one lab (three hours); second term

Prerequisite: PHYSICS 4DA3

Antirequisite: PHYSICS 4D06

PHYSICS 4E03 NUCLEAR PHYSICS

Nuclear masses and stability; radioactivity and nuclear reactions; elementary nuclear models.

Three lectures; one term

Prerequisite: PHYSICS 3MM3

PHYSICS 4F03 QUANTUM MECHANICS II

Advanced quantum mechanics with applications such as scattering, perturbation theory and the variational method.

Three lectures; one term

Prerequisite: MATH 3D03, PHYSICS 3MM3; or registration in Honours Mathematics and Physics

PHYSICS 4G03 COMPUTATIONAL PHYSICS

A course using computers to solve selected problems in physics. The emphasis is in applying computational methods to physics, rather than numerical methods or computer programming.

One lab (three hours); one term

Prerequisite: PHYSICS 2G03, 3MM3

PHYSICS 4K03 SOLID STATE PHYSICS

Crystal structure and binding; lattice vibrations; electron energy bands; metals and semiconductors; magnetism.

Three lectures; one term

Prerequisite: PHYSICS 3MM3 or registration in Level IV of an Honours Medical and Health Physics program

PHYSICS 4L03 LITERATURE REVIEW

A directed reading and review of the literature in any field of physics or astronomy, associated with a faculty member's research area. A report will be required. Students in the Mathematics and Physics program may be supervised by a faculty member in the Department of Mathematics and Statistics.

Occasional tutorial (2 hours); one term

Prerequisite: Registration in Level IV of Honours Mathematics and Physics or any Honours Physics program; and permission of the Chair of the Department

Enrolment is limited See the heading *Limited Enrolment Courses* in the *Faculty of Science* section of the Calendar.

PHYSICS 4P06 SENIOR RESEARCH PROJECT

An experimental or theoretical project to be carried out under the supervision of a faculty member. A report will be required. Students registered in the Mathematics and Physics program may be supervised by a faculty member in the Department of Mathematics and Statistics.

One occasional tutorial (two hours); two terms

Prerequisite: Registration in Level IV of any Honours Physics or the Honours Mathematics and Physics program; and a CA of at least 9.0; and permission of the Chair of the Department

Antirequisite: PHYSICS 4Q03, 4Q04

Enrolment is limited See the heading *Limited Enrolment Courses* in the *Faculty of Science* section of the Calendar.

PHYSICS 4S03 INTRODUCTION TO MOLECULAR BIOPHYSICS

A presentation of recent contributions made to the fields of molecular and cell biology by the use of physical approaches. In particular, the following topics are discussed: physical properties of biomolecules, protein folding, molecular motors, cell motion and cell adhesion. Emphasis on the critical evaluation of current research literature.

Three lectures; first term

Prerequisite: One of CHEM 2R03, MATLS 2B03 or PHYSICS 2H04. PHYSICS 3S03 is recommended.

Cross-list: BIOCHEM 4S03

POLISH

(SEE LINGUISTICS AND LANGUAGES, POLISH)

POLITICAL SCIENCE

WEB ADDRESS: <http://www.socsci.mcmaster.ca/polisci/>

Kenneth Taylor Hall, Room 527

Ext. 24741

Faculty as of January 15, 2007**Chair**

Tony Porter

Distinguished University Professor

William D. Coleman/B.A. (Carleton), A.M., Ph.D. (Chicago)/Canada Research Chair in Global Governance and Public Policy

Professors

Barbara A. Carroll/B.A. (Manitoba), M.A. (Carleton), Ph.D. (American)

Henry J. Jacek/B.S.S. (Fairfield), M.A., Ph.D. (Georgetown)

Robert J. O'Brien/B.A. (Carleton), M.Sc. (London), Ph.D. (York)

Tony Porter/B.A. (McGill), M.A., Ph.D. (Carleton)

Mark Sproule-Jones/B.Sc. (London), M.A., Ph.D. (Indiana)/V.K. Copps

Chair in Urban Studies

Charlotte A. B. Yates/(Labour Studies) B.A. (Winnipeg), M.A. (Queen's), Ph.D. (Carleton)

Associate Professors

Karen Bird/B.A. (Wilfrid Laurier), Ph.D. (Minnesota)

Nibaldo H. Galleguillos/B.A. (Chile), M.A., Ph.D. (Toronto)

Stefania Szlek Miller/M.A. (McMaster), Ph.D. (Toronto)

John W. Seaman/B.A. (Mount Allison), M.A. (Dalhousie), Ph.D. (Toronto)

Donald M. Wells/(Labour Studies) B.A. (Western Ontario), M.A. (British Columbia), Ph.D. (Toronto)

Assistant Professors

Marshall Beier/B.A., M.A., Ph.D. (York)

Catherine Frost/(Communication Studies and Multimedia) B.A. (Lakehead), M.A., Ph.D. (Toronto)

Alina Gildiner/(Health, Aging and Society) B.Sc., M.Sc., Ph.D. (Toronto)

Peter Graefe/B.A. (McGill), M.A. (York), Ph.D. (Montreal)

Martin Hering/B.A., M.A. (Philipps-Universität Marburg), Ph.D. (Johns Hopkins)

Ahmed Shafiq Huque/B.A., M.A. (Dhaka), M.A. (Manitoba), Ph.D. (British Columbia)

Greg McElligott/(Labour Studies) B.A., M.A. (Carleton), Ph.D. (York)

Peter Nyers/B.A., M.A. (Victoria), Ph.D. (York)

Lana Wylie/B.A. (McMaster), M.A. (Calgary), Ph.D. (Massachusetts)

Associate Members

Julia Abelson/(C.E.P.A.) B.A., B.Sc. (McMaster), M.Sc. (Harvard), Ph.D. (Bath)

Robert C. A. Andersen/(Sociology) B.A., M.A. (Western), Ph.D. (McMaster)

Scott Davies/(Sociology) B.A. (Toronto), M.A. (McMaster), Ph.D. (Toronto)

John Lavis/(C.E.P.A.) M.D. (Queen's), M.Sc. (LSE), Ph.D. (Harvard)

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.

- All students are encouraged to seek advice from members of the Department in developing a program of study. All Honours students are strongly advised to discuss their program with an undergraduate advisor to ensure that it meets Departmental requirements.
- POL SCI 2006 (previously 2F06) and 3N06 are required for students in Honours Political Science programs. These two courses are recommended for students in B.A. programs.
- 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.
- Some Level III courses do not have course prerequisites. However, students without related Level II courses should contact one of the Department's undergraduate advisors or the course instructor to determine whether they have the appropriate academic background for any specific Level III course.
- Admission to Level IV limited enrolment courses is by preregistration preferential ballot. Permission from the Department of Political Science is required before students can register in any Level IV Political Science course. POL SCI 4Z06 requires written permission from the faculty member supervising the Honours Essay. Permission to take all other Level IV courses will be granted based on a preferential ballot which all full- and part-time students are required to fill out and submit to the Department of Political Science (Kenneth Taylor Hall, Room 527) no later than **15 March, 2008**. Priority for all Level IV courses will be given to students registered in Level IV of any Honours Political Science program. Ballots may be picked up from the Department of Political Science in mid-January, or will be available on the Department's web site.

Courses *If no prerequisite is listed, the course is open.*

POL SCI 1G06 POLITICS AND GOVERNMENT

An introduction to the study of politics, emphasizing critical discussion of issues such as: social conflict, prospects for democracy, citizens' rights and responsibilities and Canada's future as a state and its role in the world. Antirequisite: POL SCI 1B03, 1C03, 2G06

POL SCI 2A06 COMPARATIVE POLITICS

An introduction to comparative politics with emphasis on the different forms of government in a number of selected countries including Canada. Three hours (lectures and tutorials); two terms

POL SCI 2B03 U.S. POLITICS

An examination of the development and functioning of the American political system including institutions, processes, and public participation. Three hours (lectures and tutorials); one term
Antirequisite: POL SCI 2B06

POL SCI 2BB3 U.S. FOREIGN POLICY

An examination of the development as well as theories and practice of American foreign policy. Three hours (lectures and tutorials); one term
Not open to students with credit or registration in POL SCI 3I03 if the topic was U.S. Foreign Policy.

POL SCI 2C03 FORCE AND FEAR

This course examines the use of state force as a means of addressing and instilling fear in North America and the United Kingdom. Three hours (lectures and tutorials); one term

POL SCI 2D03 CANADIAN CITIZENSHIP: INSTITUTIONAL FOUNDATIONS

An introduction to institutions delimiting the practice of citizenship in Canada and of the political values they embody. Three hours (lectures and tutorials); one term
Antirequisite: POL SCI 2K03

POL SCI 2DD3 PARTICIPATION AND ELITIST POLITICS IN CANADA

An examination of the changing impact of citizen participation and of elitist politics on major Canadian political institutions and on the overall performance of the Canadian political system. Three hours (lectures and tutorials); one term
Antirequisite: POL SCI 3DD3, 3DD6

POL SCI 2F03 POLITICS, POWER AND INFLUENCE IN CANADA

This course analyzes who gets represented and whose interests get translated into public policies in Canada, including issues of inequality, immigration and citizenship, and representation by parties, interest groups and social movements. Three hours (lectures and tutorials); one term

POL SCI 2H03 GLOBALIZATION AND THE STATE

An overview of the impact that globalization has had on the powers of the state and an assessment of how states have tried to preserve their authority in the face of globalization. Three hours (lectures and tutorials); one term

POL SCI 2I03 GLOBAL POLITICS

A study of institutions and processes of the international political system. Three hours (lectures and tutorials); one term
Antirequisite: POL SCI 2E06

POL SCI 2J03 GLOBAL POLITICAL ECONOMY

A study of institutions and processes of the international political economy. Three hours (lectures and tutorials); one term
Antirequisite: POL SCI 2E06

POL SCI 2L03 BUREAUCRACY IN CANADIAN POLITICS

An examination of the structures and processes of public administration in Canada, including an assessment of their effectiveness, efficiency, and accountability. Three hours (lectures and tutorials); one term
Antirequisite: POL SCI 3ZZ3

POL SCI 2N03 POLITICS OF INDIA AND SOUTH ASIA

An examination of the political systems of South Asia with emphasis on the government, politics and administration of India and other selected countries in the region, such as Pakistan. Three hours (lectures and tutorials); one term

POL SCI 2006 POLITICAL THEORY

An introduction to political theory that includes Classical Greek thought, early modern natural right theory and contemporary political theory. Three hours (lectures and tutorials); two terms
(See Note 4 above.)

POL SCI 2XX3 POLITICS OF THE THIRD WORLD

An examination of major theoretical approaches to the study of development and underdevelopment, such as modernization, politics of order, dependency and modes of production. Three hours (lectures and tutorials); one term
Antirequisite: POL SCI 3XX3

POL SCI 2Z03 POLITICS AND THE MEDIA

Theories and practices of the reciprocal relationship between the communications media and the political system. Three hours (lectures and tutorials); one term
Prerequisite: CMST 1A03 and 1B03; or POL SCI 1G06
Cross-list: CMST 2Z03

POL SCI 3AA3 INTERNATIONAL POLITICS IN THE POSTWAR PERIOD

A survey of international relations from 1945 focusing on the various approaches to international politics. Three hours; one term
Prerequisite: Registration in Level III or above
Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

POL SCI 3BB3 POLITICAL COMMUNICATION

The relationship between politics and the media is analysed in terms of issues such as political news coverage, electioneering, political marketing, policy formation and publicity, and agenda setting and public opinion. Three hours; one term
Prerequisite: Registration in a Communication Studies or Political Science program
Cross-list: CMST 3D03

POL SCI 3CC3 POLITICAL AUTHORITY: 20TH CENTURY POLITICAL THEORY

An examination of major themes in political theory in the twentieth century focusing on concerns about legitimate political authority and the nature of power and human relations in modern society. Three hours (lectures and discussion); one term
Prerequisite: POL SCI 2006 and registration in Level III or above. (See Note 7 above.)

POL SCI 3D03 POLITICS OF RESTRUCTURING: THE STATE AND THE ECONOMY

An examination of the politics of economic restructuring in selected industrialized countries during the past decade; major issues include privatization, labour policies, and trade agreements. Three hours; one term
Prerequisite: Registration in Level III or above. (See Note 7 above.)

POL SCI 3E03 THE POLITICS OF INTERNATIONAL ECONOMIC ORGANIZATIONS

An analysis of the structure, function and politics of the principal multilateral organizations governing the postwar international economy.

Three lectures; one term

Prerequisite: Registration in Level III or above

Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

POL SCI 3EE3 INTERNATIONAL RELATIONS: NORTH-SOUTH

An examination of recent North-South relations concentrating on such issues as commodity trade, protectionism, the debt crisis and negotiations over a new international economic order.

Three hours; one term

Prerequisite: Registration in Level III or above

Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

POL SCI 3F03 CONTEMPORARY SOCIAL MOVEMENTS AND POPULAR COALITIONS

An examination of selected social movements and popular coalitions primarily in Canada and the United States. Movements may include the labour, environmental, peace, feminist, indigenous rights, and/or religious fundamentalist movements.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level III or above. (See Note 7 above.)

POL SCI 3FF3 CANADIAN FOREIGN POLICY

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.

Three hours; one term

Prerequisite: Registration in Level III or above

Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

POL SCI 3G03 ETHNICITY AND MULTICULTURALISM: THEORY AND PRACTICE

An examination of ethnicity, multiculturalism and citizenship in theoretical and comparative perspectives, principally in industrially advanced societies.

Three hours (lectures and discussion); one term

Prerequisite: Six units of Political Science and registration in Level III or above. (See Note 7 above.)

Not open to students with credit in POL SCI 3WW3 if the topic was *Ethnicity and Multiculturalism: Theory and Practice*.

POL SCI 3GG3 FEDERALISM: THEORETICAL, CONSTITUTIONAL AND INSTITUTIONAL ISSUES

An analysis of the constitutional framework, evolution, and structure of the federal system in Canada and/or other Western countries.

Three hours; one term

Prerequisite: Registration in Level III or above. (See Note 7 above.)

POL SCI 3HH3 INTERGOVERNMENTAL POLICY ISSUES IN CANADA

A survey of the policy processes and substantive policy concerns in the operation of the federal system of Canada, including economic, social and ethno-cultural policy areas.

Three hours; one term

Prerequisite: Registration in Level III or above. (See Note 7 above.)

POL SCI 3I03 TOPICS IN AMERICAN POLITICS

The study of a central component of the U.S. political system.

Three hours; one term

Prerequisite: Registration in Level III or above

Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

POL SCI 3I03 may be repeated, if on a different topic, to a total of six units.

POL SCI 3JJ3 PROVINCIAL POLITICS IN CANADA

A study of the development, nature and functioning of the political systems of the Canadian provinces.

Three hours; one term

Prerequisite: Registration in Level III or above. (See Note 7 above.)

POL SCI 3KK3 GENOCIDE: SOCIOLOGICAL AND POLITICAL PERSPECTIVES

An examination of genocide and other extreme crimes against humanity.

Three hours; one term

Prerequisite: Registration in Level III or above

Cross-list: SOCIOL 3KK3

Antirequisite: SOC SCI 2C03

Priority will be given to students registered in a Political Science or Sociology program. (See Notes 6 and 7 above.)

POL SCI 3LL3 DEVELOPMENT AND PUBLIC POLICY

An examination of critical issues in public policy as they impact on the process of development.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level III or above

Not open to students with credit in POL SCI 3YY3 if the topic was *Development or Public Policy*.

POL SCI 3M03 HEALTH POLICY IN A CHANGING WORLD

This course examines major models of health care and policy systems, and the key ideas and instruments that underlie health policy in selected countries such as Canada.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level III or above of a Political Science or Health Studies program

Cross-list: HEALTHST 3M03

Not open to students with credit in POL SCI 3YY3 if the topic was *Health Policy in a Changing World*.

POL SCI 3MM3 THE INTERNET AND PUBLIC LIFE

This course examines how the Internet and other digital media may be reshaping political and personal relationships and altering the nature of the public sphere.

Three hours; one term

Prerequisite: One of CMST 2Z03 or POL SCI 2Z03; and registration in Level III or above

Cross-list: CMST 3MM3

POL SCI 3N06 RESEARCH METHODS, STATISTICS AND POLITICAL ANALYSIS

An introduction to the study of concept and theory formation, and an overview of the scope, research methods and statistical techniques of political science.

Three hours; two terms

Prerequisite: Registration in Level III or above

Antirequisite: POL SCI 2F06

(See Notes 4 and 7 above.)

POL SCI 3NN6 PUBLIC LAW

A study of the nature and function of public law, with special reference to constitutional law and judicial behaviour.

Three hours; two terms

Prerequisite: Registration in Level III or above

Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

POL SCI 3P03 THE POLITICAL ECONOMY OF REGIONAL INTEGRATION

An examination of regional integration in Europe, the Americas and Asia-Pacific and the implications for global politics and global economics.

Three hours; one term

Prerequisite: POL SCI 2E06; or POL SCI 2I03 and 2J03

POL SCI 3Q03 THE CAUSES OF WAR

An examination of theoretical perspectives on the causes of war and conditions for peace between and within political communities.

Three hours; one term

Prerequisite: Registration in Level III or above

Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

POL SCI 3QQ3 WEAPONS AND WAR IN THE DIGITAL AGE

An examination of the social and political implications of new military technologies, new ways of war, and the implications of both for the future of arms control and disarmament.

Three hours (lectures and discussion); one term

Prerequisite: POL SCI 2I03

POL SCI 3S03 LOCAL GOVERNMENT AND POLITICS IN CANADA

A description of the laws and institutions of local government; examination of relationships with citizens and other levels of government; the dynamics of local politics.

Three hours; one term

Prerequisite: Registration in Level III or above

Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

302 POLITICAL SCIENCE

POL SCI 3SP3

SERVICE DELIVERY IN THE MODERN CANADIAN CITY: PLACEMENT EXPERIENCE

A civic placement providing students the opportunity to gain valuable experience and insight into the municipal administration and political process. Provides the essential links between classroom knowledge and civic internship practice. Students may be involved in academic placements within the community. Placement experience requires a minimum of 80 hours; one term
Prerequisite: Credit or registration in POL SCI 3S03; and permission of the instructor

POL SCI 3T03

PROBLEMS OF POSTCOMMUNIST TRANSITION

An examination of the legacy of communism and system transformation in selected countries, including Poland and the successor states of Czechoslovakia and the former Yugoslavia.
Three hours; one term
Prerequisite: Registration in Level III or above. (See Note 7 above.)
Antirequisite: POL SCI 3M06, 4J06

POL SCI 3U03

POLITICS IN EUROPE

Politics, government and policies of the European Union and/or selected countries within Europe.
Three hours; one term
Prerequisite: Registration in Level III or above
Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

POL SCI 3UU3

READING COURSE

Topics to be arranged between an individual student and instructor.
One term
Prerequisite: Registration in Level III or IV of any program in Political Science; and the written permission of an Undergraduate Advisor on behalf of the Department. A written proposal must be submitted to the Department by the instructor prior to the term in which the course is to be taken.

POL SCI 3V03

WOMEN AND POLITICS

An introduction to a broad range of theoretical and empirical approaches to the study of women and politics, including feminist theory and the history and evolution of the organized women's movement.
Three hours; one term
Prerequisite: Registration in Level III or above. (See Note 7 above.)

POL SCI 3X03

CONTEMPORARY SECURITY ISSUES

This course critically examines developments in theory and practice of international security since the end of the cold war.
Three hours (lectures and discussion); one term
Prerequisite: One of POL SCI 2E06, 2I03, 2J03; and registration in Level III or above

POL SCI 3Y03

DEMOCRATIZATION AND HUMAN RIGHTS

A review of the process of democratization and the forces that drive it and an assessment of the place of human rights in emerging democracies.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level III or above. (See Note 7 above.)

POL SCI 3YY3

TOPICS IN PUBLIC POLICY

An examination of emerging theoretical and substantive issues in the field of public policy studies.
Three hours; one term
Prerequisite: Registration in Level III or above
POL SCI 3YY3 may be repeated, if on a different topic, to a total of six units.
Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

POL SCI 3Z03

CANADIAN PUBLIC SECTOR: IMPLEMENTATION OF POLICIES

The organizational arrangements for implementing public policies in Canada, including an assessment of their efficiency, effectiveness and accountability.
Three hours; one term
Prerequisite: Registration in Level III or above. (See Note 7 above.)
Antirequisite: POL SCI 3Z06

POL SCI 4A03

SOCIAL POLICY AND THE AGING POPULATION

Critical examination of the social and economic implications of the aging population and the nature of social welfare policy with respect to the elderly.
Three hours (problem-based tutorial); one term
Prerequisite: Registration in Level IV of an Honours Political Science program and permission of the Department. (See Note 8 above.)
Antirequisite: GERONTOL 4S03, SOC WORK 4A03, 4L03, 4V03
This course is administered by the Department of Health, Aging and Society.

POL SCI 4A06

PROBLEMS IN AMERICAN POLITICS

An examination in depth of one of the important dimensions of the American political system.
Three hours (seminar); two terms
Prerequisite: One course in American or Comparative Politics and permission of the Department

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: One of POL SCI 2E06, 2I03, 2J03, 3Y03; and permission of the Department
Antirequisite: POL SCI 4D03, 4F06
(See Note 8 above.)

POL SCI 4E06

ISSUES IN LIBERAL-DEMOCRATIC THEORY

An analysis of liberal and liberal-democratic approaches to a select issue, such as justice, religion, education, political authority or community.
Three hours (seminar); two terms
Prerequisite: Registration in Level IV of any Honours program; and a course in Political Theory; and permission of the Department
Not open to students with credit in POL SCI 4U06 PROBLEMS OF POLITICAL PHILOSOPHY if taken in 1995-1996.
(See Note 8 above.)

POL SCI 4G06

POLITICS OF PUBLIC POLICY

An examination of the political causes and mechanisms that shape public policies, such as political parties, interest groups, policy legacies, and how they influence policy choices on challenging issues as well as account for cross-national differences.
Three hours (seminar); two terms
Prerequisite: Six units of Comparative Politics and permission of the Department

POL SCI 4L03

THE POLITICS OF CHANGE IN SOCIAL WELFARE

An examination of how social welfare policy establishes the boundary between public and private roles, and how the boundary changes.
Three hours (seminar); one term
Prerequisite: HEALTHST 3M03 or POL SCI 3M03; and registration in Level IV of an Honours Health Studies or Political Science program; and permission of the Department
Cross-list: HEALTHST 4L03
(See Note 8 above.)

POL SCI 4M06

TOPICS IN INTERNATIONAL POLITICS

An examination of selected topics in international politics and foreign policy.
Three hours (seminar); two terms
Prerequisite: POL SCI 2I03 and 2J03 (or POL SCI 2E06); and permission of the Department
(See Note 8 above.)

POL SCI 4MM6

TOPICS IN INTERNATIONAL POLITICAL ECONOMY

An examination of selected topics in the international political economy.
Three hours (seminar); two terms
Prerequisite: POL SCI 2I03 and 2J03 (or POL SCI 2E06); and permission of the Department
(See Note 8 above.)

POL SCI 4O06

CANADIAN PUBLIC POLICY

An examination of the patterns of public policy in Canada and a critical evaluation of several types of explanation.
Three hours (seminar); two terms
Prerequisite: POL SCI 1G06 or 2G06; and registration in Level IV of any honours program; and permission of the Department
(See Note 8 above.)

POL SCI 4P06

TOPICS IN POLITICAL THEORY

An examination of selected topics in political theory
Three hours (seminar); two terms
Prerequisite: POL SCI 2O06 and permission of the Department
Antirequisite: POL SCI 4BB6
(See Note 8 above.)

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 2XX3 and permission of the Department

**POL SCI 4R06 INNOVATION AND ACCOUNTABILITY
IN PUBLIC SECTOR GOVERNANCE**

An examination of the theory and practice of public sector governance with emphases on Canadian, comparative, and international organizations. Three hours (seminar); two terms
Prerequisite: One of POL SCI 2L03, 3Z03, 3ZZ3; and permission of the Department
(See Note 8 above.)

POL SCI 4T06 TOPICS IN CANADIAN POLITICS

An examination of major issues in contemporary Canadian politics. Three hours (seminar); two terms
Prerequisite: POL SCI 1G06 or 2G06; and permission of the Department
(See Note 8 above.)

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 3UU3, if the student is registered or has credit in that course.
Prerequisite: Registration in Level IV of an Honours Political Science program and written permission of the faculty member supervising the student's Honour Essay.

POL SCI 4ZZ6 EXPERIENTIAL LEARNING IN RESEARCH

A major collaborative research project supervised by a faculty member and involving a unique course of instruction.
Prerequisite: Registration in Level IV of an Honours Political Science program and written permission of the faculty member supervising the research.
Not open to students with credit in POL SCI 3UU3 or 4Z06 if on a similar topic.

PROCESS AUTOMATION TECHNOLOGY

(SEE TECHNOLOGY, PROCESS AUTOMATION TECHNOLOGY)

**PSYCHOLOGY, NEUROSCIENCE
AND BEHAVIOUR**

WEB ADDRESS: <http://www.mcmaster.ca/psychology>

Psychology Building, Room 102

Ext. 23000

Faculty as of January 15, 2007

Chair

Betty A. Levy

Associate Chairs

Bruce Milliken/Graduate Studies
Louis Schmidt/Undergraduate Studies
Tracy Vaillancourt/Undergraduate Studies

Professors

Suzanna Becker/B.A., M.Sc. (Queen's), Ph.D. (Toronto)
Patrick Bennett/B.Sc. (Tufts), Ph.D. (California-Berkeley)/Senior Canada Research Chair
Martin Daly/B.A. (Toronto), M.A. (McGill), Ph.D. (Toronto)
Denys deCatanzaro/B.A., M.A. (Carleton), Ph.D. (British Columbia)
Betty A. Levy/B.A. (Dalhousie), M.A., Ph.D. (Toronto)
Terri L. Lewis/B.A. (Toronto), Ph.D. (McMaster)
Daphne M. Maurer/B.A. (Swarthmore), M.A. (Pennsylvania), Ph.D. (Minnesota)
Bruce Milliken/B.A., Ph.D. (Waterloo)
Kathryn M. Murphy/B.A. (Western Ontario), M.A., Ph.D. (Dalhousie)
Ronald J. Racine/B.Sc. (Oregon), M.Sc., Ph.D. (McGill)
Allison Sekuler/B.A. (Pomona), Ph.D. (California-Berkeley)/Canada Research Chair
Laurel J. Trainor/B.Mus., M.A., Ph.D. (Toronto)
Margo I. Wilson/B.A. (Alberta), M.A. (California), Ph.D. (London)

Adjunct Professors

Mertice M. Clark/B.A., Ph.D. (McMaster)
Ivan Kiss/B.Sc. (Toronto), M.A., Ph.D. (Concordia)
Bruce A. Linder/B.E.S. (Minnesota), Ph.D. (McMaster)

Associate Professors

Sigal Balshine/B.Sc. (Toronto), Ph.D. (Cambridge)

Richard B. Day/B.A. (Massachusetts), M.A. (Iowa), Ph.D. (McMaster)
Daniel Goldreich/B.Sc. (California-San Diego), Ph.D. (California-San Francisco)
Louis A. Schmidt/B.A. (Maryland), M.S. (Baltimore), Ph.D. (Maryland)
Judith M. Shedden/B.Sc. (Alberta), M.S., Ph.D. (Pittsburgh)
David I. Shore/B.Sc. (McMaster), M.A., Ph.D. (British Columbia)
Hongjin Sun/B.Sc., M.Sc. (Peking), M.A. (Western Ontario), Ph.D. (Queen's)

Assistant Professors

Reuven Dukas/B.Sc. (Jerusalem), Ph.D. (North Carolina State)
Paul Faure/B.Sc., M.Sc. (Calgary), Ph.D. (Cornell)
Deda C. Gillespie/B.Sc. (Yale), Ph.D. (California-San Francisco)
Karin Humphreys/B.A. (Queensland), A.M., Ph.D. (Illinois)
Anneke Olthoff/B.A., M.A. (Queen's), Ph.D. (Western Ontario)
Mel D. Rutherford/B.A. (Yale), Ph.D. (California-Santa Barbara)
Tracy Vaillancourt/B.A., M.A., Ph.D. (British Columbia)
Scott Watter/B.Med.Sc., M.B.B.S. (Queensland), A.M., Ph.D. (Illinois)

Associate Members

Ian C. Bruce/(Electrical and Computer Engineering), B.Eng., Ph.D. (Melbourne)
Charles E. Cunningham/(Psychiatry and Behavioural Neurosciences) B.A. (California State), M.A. (San Diego State), Ph.D. (The American University)
Kevin W. Ewal/(Clinical Epidemiology and Biostatistics), B.Sc., Ph.D. (McMaster)
Eleni Hapidoul/(Psychiatry and Behavioural Neurosciences) B.A. (The American College of Greece), M.A. (New Brunswick), Ph.D. (McMaster)
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Harriet L. MacMillan/(Psychiatry and Behavioural Neurosciences) M.D. (Queen's), M.Sc. (McMaster), F.R.C.P.S.
William Mahoney/(Pediatrics) M.D. (McMaster)
Catherine L. Mancini/(Psychiatry and Behavioural Neurosciences) B.Sc., M.Sc., M.D. (Western Ontario)
Alison G. Niccols/(Psychiatry and Behavioural Neurosciences) B.A., M.A., Ph.D. (York)
Geoff R. Norman/(Clinical Epidemiology and Biostatistics) B.Sc. (Manitoba), M.A. (Michigan State), Ph.D. (McMaster)
Christopher David Rollo/(Biology) B.Sc., M.Sc. (Guelph), Ph.D. (British Columbia)
Patricia I. Rosebush/(Psychiatry) B.Sc.N., M.Sc.N. (Toronto), M.D. (McMaster), F.R.C.P.S.
Alexandre Sévigny/(Communication Studies and Multimedia; French) B.A. (York), M.A., Ph.D. (Toronto)
William Sulis/(Psychiatry and Behavioural Neurosciences) B.Sc. (Carleton), M.D., M.A., Ph.D. (Western Ontario), F.R.C.P.C.
Henry Szechtman/(Biomedical Sciences) B.Sc., Ph.D. (Pittsburgh)
Larry Tuff/(Psychiatry and Behavioural Neurosciences) B.Sc., Ph.D. (McMaster)
Michael A. Van Ameringen/(Psychiatry and Behavioural Neurosciences) B.Sc., M.D. (McMaster)

Department Notes:

1. The University reserves the right to limit enrolment in any course. Where priorities have to be established, first consideration will be given to Honours B.Sc. and Honours B.A. Psychology students.
2. The Psychology, Neuroscience and Behaviour Department pre-registration ballot will be done in two phases. The first phase will include the thesis courses (PSYCH 4D06, 4D09), and the Individual Study courses (PSYCH 2QQ3, 3Q03, 3QQ3, 4Q03, 4QQ3). Students wishing to take these courses must complete and submit a ballot by mid February. Students will be informed of the outcome of the first phase by mid March. The second phase will include lab courses (PSYCH 3EE3, 3L03, 3LL3, 3MM3, 3S03, 3V03) and limited enrolment courses (PSYCH 3BN3, 4B03, 4BN3, 4C03, 4F03, 4J03, 4R03). Students wishing to take these courses must complete and submit a ballot by mid April. Specific dates will be announced during the fall term. Ballots can be obtained from the Psychology, Neuroscience and Behaviour Department web site at <http://www.mcmaster.ca/psychology>. Priority will be given to students registered in Honours Psychology and Combined Honours Psychology programs.

Courses *If no prerequisite is listed, the course is open.***PSYCH 1A03 INTRODUCTION TO EXPERIMENTAL PSYCHOLOGY**

This course introduces experimental psychology, and includes basic research methods in psychology, the relationship between the brain and behaviour, sensation and perception, conditioning and learning, and memory and reasoning.

Three hours (lectures and tutorials); one term

Antirequisite: PSYCH 1A06

Not open to students registered in the Bachelor of Health Sciences (Honours) program or the B.Sc.N. (D) Stream (Mohawk College and Conestoga College site).

PSYCH 1AA3 THE PSYCHOLOGY OF INTERPERSONAL BEHAVIOUR

A discussion of phenomena and theory in areas of psychology related to interpersonal behaviour. Topics include child development, personality, abnormal psychology, social psychology, and sociobiology.

Three hours (lectures and tutorials); one term

Prerequisite: PSYCH 1A03; or registration in the Bachelor of Health Sciences (Honours) program or Level II of a Medical Radiation Sciences Specialization

Antirequisite: PSYCH 1A06

Not open to students registered in the B.Sc.N. (D) Stream (Mohawk College and Conestoga College site).

PSYCH 2AA3 SURVEY OF DEVELOPMENTAL PSYCHOLOGY

A general survey of theories and mechanisms of development, illustrated through examples from neural, perceptual, cognitive, social and emotional development. This is a general survey course and is an anti-requisite for the advanced developmental courses. Students wishing to do further work in developmental psychology are referred to PSYCH 3GG3.

Three lectures; one term

Prerequisite: PSYCH 1A03, 1AA3; or registration in Honours Biology and Psychology or the Bachelor of Health Sciences (Honours) program

Antirequisite: PSYCH 2A03, 3G03, 3GG3

PSYCH 2B03 PERSONALITY

An introduction to the scientific study of personality which will consider theory, assessment and research in five approaches to personality: psychodynamic, biological, trait, behavioural and humanistic.

Three lectures; one term

Prerequisite: PSYCH 1A03, 1AA3; or registration in Honours Biology and Psychology or the Bachelor of Health Sciences (Honours) program

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 1A03, 1AA3; or registration in Honours Biology and Psychology or the Bachelor of Health Sciences (Honours) program

PSYCH 2D03 NEUROPSYCHOLOGY

Neural organization and the relation between human brain function and behaviour.

Three lectures; one term

Prerequisite: PSYCH 1A03, 1AA3; or registration in Honours Biology and Psychology or the Bachelor of Health Sciences (Honours) program or the Honours Linguistic Cognitive Science program

Prerequisite (Beginning 2008-2009): PSYCH 1A03, 1AA3 with a grade of at least C+ in each, and one of BIOLOGY 1A03, 1AA3 or 1K03 and registration in a program in Arts & Science, Psychology or the Faculty of Science; or registration in the Bachelor of Health Sciences (Honours) program; or credit or registration in one of BIOLOGY 1A03, 1AA3 or 1K03 and registration in the Honours Linguistic Cognitive Science program

Antirequisite: PSYCH 2O03

PSYCH 2E03 SENSORY PROCESSES

General processes mediating sensation and perception. Topics include neural principles of sensory pathways, the measurement of perception and the role of sensory processes in behaviour.

Three lectures; one term

Prerequisite: PSYCH 1A03, 1AA3; or registration in Honours Biology and Psychology, the Bachelor of Health Sciences (Honours) program, or the Honours Linguistic Cognitive Science program

Prerequisite (Beginning 2008-2009): PSYCH 1A03, 1AA3 with a grade of at least C+ in each, and one of BIOLOGY 1A03, 1AA3 or 1K03 and registration in a program in Arts & Science, Psychology or the Faculty of Science; or registration in the Bachelor of Health Sciences (Honours) program; or credit or registration in one of BIOLOGY 1A03, 1AA3 or 1K03 and registration in the Honours Linguistic Cognitive Science program

PSYCH 2F03 FUNDAMENTALS OF NEUROSCIENCE

Fundamentals of nervous system and endocrine function in humans and animals, including neurophysiology, neural transmission and neuroanatomy. Prerequisite: PSYCH 1A03, 1AA3, and credit or concurrent registration in BIOLOGY 1A03 or 1K03; or registration in Honours Biology and Psychology or the Bachelor of Health Sciences (Honours) program; or credit or registration in BIOLOGY 1A03 or 1K03 and registration in the Honours Linguistic Cognitive Science program

Prerequisite (Beginning 2008-2009): PSYCH 1A03, 1AA3 with a grade of at least C+ in each, and BIOLOGY 1A03, and registration in a program in Arts & Science, Psychology or the Faculty of Science; or registration in the Bachelor of Health Sciences (Honours) program; or credit or registration in BIOLOGY 1A03, and registration in the Honours Linguistic Cognitive Science program

PSYCH 2H03 HUMAN LEARNING AND COGNITION

The psychological study of knowledge and how people use it. Topics include pattern recognition, remembering and reasoning.

Three lectures, one tutorial; one term

Prerequisite: PSYCH 1A03, 1AA3; or registration in Honours Biology and Psychology or the Bachelor of Health Sciences (Honours) program or the Honours Linguistic Cognitive Science program

Prerequisite (Beginning 2008-2009): PSYCH 1A03, 1AA3 with a grade of at least C+ in each, and one of BIOLOGY 1A03, 1AA3 or 1K03 and registration in a program in Arts & Science, Psychology or the Faculty of Science; or registration in the Bachelor of Health Sciences (Honours) program; or credit or registration in one of BIOLOGY 1A03, 1AA3 or 1K03 and registration in the Honours Linguistic Cognitive Science program

PSYCH 2I03 COGNITION AND EDUCATION

Applications of research in cognition to problems in education.

Three lectures; one term

Prerequisite: PSYCH 1A03, 1AA3

PSYCH 2QQ3 RESEARCH PRACTICUM

Independent research practicum that provides students the opportunity to participate in experimental psychology projects in a research laboratory under the supervision of a faculty member.

One lab; one or two terms

Prerequisite: A grade of at least B in PSYCH 1A03; and registration in Level II of an Honours Psychology program; and permission of the course coordinator. *Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)*

PSYCH 2RA3 RESEARCH DESIGN AND STATISTICS FOR BEHAVIOURAL SCIENCES I

Research methods, experimental design, and statistics: Topics include parametric and nonparametric techniques; probability; hypothesis testing; central limit theorem; effect size; power; t-tests; linear regression.

Three lectures, one tutorial; one term

Prerequisite: Registration in Honours Biology (Biodiversity Specialization), Honours Biology and Pharmacology, the Bachelor of Health Sciences (Honours), Honours Linguistic Cognitive Science or any Honours Psychology program

Antirequisite: PSYCH 2RR3, STATS 2D03, 2R06

PSYCH 2RB3 RESEARCH DESIGN AND STATISTICS FOR BEHAVIOURAL SCIENCES II

Advanced research methods, experimental design, and statistics: Advanced topics include the general linear model; multiple regression; analysis of variance; repeated measures; data transformations; factor analysis.

Three lectures, one tutorial; one term

Prerequisite: PSYCH 2RA3

Antirequisite: PSYCH 2RR3, STATS 2MB3, 2R06

PSYCH 2S03 PSYCHOLOGY AND AGING

A survey of changes in behaviour and cognitive functioning in the elderly.

Three lectures; one term

Prerequisite: PSYCH 1A03, 1AA3

Antirequisite: GERONTOL 3D03, PSYCH 3GG3

PSYCH 2TT3 ANIMAL BEHAVIOUR

A discussion of the major classes of behaviour shared by most animals including humans. The course will integrate evolutionary analyses with an in-depth discussion of the genetic and cognitive mechanisms that generate behaviour.

Three lectures; one term

Prerequisite: PSYCH 1A03, 1AA3 and one of BIOLOGY 1AA3, 1K03; or registration in Honours Biology and Psychology or the Bachelor of Health Sciences (Honours) program

Prerequisite (Beginning 2008-2009): PSYCH 1A03, 1AA3 with a grade of at least C+ in each, and BIOLOGY 1AA3 or 1K03 and registration in a program in Arts & Science, Psychology or the Faculty of Science; or registration in the Bachelor of Health Sciences (Honours) program

Antirequisite: PSYCH 2T03, 3R03

PSYCH 3A03 AUDITION

An introduction to the biology of hearing with an emphasis on fundamental auditory principles and underlying physiological mechanisms. Topics include physical acoustics, sound analysis, anatomy and physiology of mammalian auditory system, and perception and psychoacoustics.

Three lectures; one term

Prerequisite: One of BIOLOGY 2A03, PSYCH 2E03 or 2F03

PSYCH 3AA3 PERCEPTION AND COGNITION OF MUSIC

The perception and neural basis of melody, harmony, rhythm and expectancy will be considered in relation to innate and experiential factors.

Three lectures; one term

Prerequisite: Registration in an Honours program and either PSYCH 2E03 or both PSYCH 1A03 and SCIENCE 2J03; or permission of the instructor

PSYCH 3B03 SPECIAL POPULATIONS

Discusses selected topics related to normal and abnormal development in children, including behavioral affective, perceptual, and cognitive disorders and developmental disability.

Three lectures; one term

Prerequisite: PSYCH 3GG3 or 3N03; and six units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3; and one of HTH SCI 1F03, 2A03, PSYCH 2RA3, SOC SCI 2J03, STATS 1A03, 1CC3, 2D03

PSYCH 3BB3 PSYCHOLINGUISTICS

The course discusses biological foundations of language and the way language is represented and processed in the brain (in norm and pathology). Special attention is paid to methods of psycho- and neurolinguistic research and to their connection with theoretical linguistics.

Three lectures (lectures and discussion); one term

Prerequisite: LINGUIST 3I03 or 3M03; or one of LINGUIST 1A03, 1AA3 or PSYCH 2H03; or permission of the Department

Cross-list: LINGUIST 3B03

Offered in alternate years.

Offered in 2007-2008.

This course is administered by the Department of Linguistics and Languages.

PSYCH 3BN3 COGNITIVE NEUROSCIENCE I

An introduction to the behavioural neurosciences, which are aimed at the study of psychological, computational, and neuroscientific bases of perception and cognition. The course will focus on behavioural neuroscience methods and their application to contemporary research issues.

Three lectures; one term

Prerequisite: Six units from PSYCH 2D03, 2E03, 2F03, 2H03; and one of PSYCH 2RB3, 2RR3 or STATS 2MB3

Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 3C03 CHILD LANGUAGE ACQUISITION

Language behaviour and development in children, from birth to school age. The course examines how data from children's language acquisition can inform linguistic theory.

Three lectures; one term

Prerequisite: LINGUIST 1A03; and LINGUIST 1AA3 or PSYCH 2H03

Cross-list: LINGUIST 3C03

This course is administered by the Department of Linguistics and Languages

PSYCH 3CC3 FORENSIC PSYCHOLOGY

Provides students with advanced knowledge of Forensic Psychology. Includes topics such as criminal responsibility, fitness to stand trial, duty to warn, homicide and psychopathy.

Three lectures; second term

Prerequisite: Registration in Level III or IV of a Psychology program

PSYCH 3EE3 PERCEPTION LABORATORY

Students will conduct experiments in visual and auditory perception with an emphasis on research methods, data analysis and writing skills.

One tutorial (one hour), one lab (three hours); one term

Prerequisite: One of PSYCH 2RB3, 2RR3 or STATS 2MB3; and PSYCH 2E03; and registration in Level III or IV of an Honours Psychology program, or registration in Level III of the Honours Linguistic Cognitive Science program. Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 3F03 EVOLUTION AND HUMAN BEHAVIOUR

The study of human social psychology and behaviour in light of evolutionary theories. Topics include family relations, sex differences, mate choice, cooperation and conflict, and universality and diversity across cultures.

Three lectures; one term

Prerequisite: One of ANTHROP 2D03, PSYCH 2TT3 or six units of Level I Biology

PSYCH 3FA3 THE NEUROBIOLOGY OF LEARNING AND MEMORY

Learning and memory mechanisms will be discussed from several perspectives ranging from cognitive neuroscience to synaptic physiology.

Three lectures; one term

Prerequisite: PSYCH 2D03 or 2F03

PSYCH 3GG3 ESSENTIALS OF DEVELOPMENTAL PSYCHOLOGY

This course concentrates on theories and mechanisms of development. The evidence for biological and environmental influences on development are examined and the principles and mechanisms of development are illustrated through examples from neural, perceptual, cognitive, social and emotional development.

Three lectures; one term

Prerequisite: Six units from PSYCH 2D03, 2E03, 2F03, 2H03, 2T03, 2TT3; and one of HTH SCI 1F03, 2A03, PSYCH 2RA3, STATS 1CC3, 2D03

Prerequisite (Beginning 2008-2009): Six units from PSYCH 2D03, 2E03, 2F03, 2H03, 2T03, 2TT3; and one of HTH SCI 1F03, 2A03, PSYCH 2RA3, STATS 1CC3, 2D03; and registration in an Honours program

Antirequisite: PSYCH 2A03, 2AA3, 2S03, 3G03

PSYCH 3HH3 DEVELOPMENT DURING INFANCY

An intensive examination of development during the first year of life, with an emphasis on perceptual development.

Three lectures; one term

Prerequisite: PSYCH 2E03, 3GG3

PSYCH 3I06 PRACTICA IN PSYCHOLOGY

Supervised laboratory and field placements will be arranged for a maximum of 16 students each year. The placements may vary from year to year, but will include cognitive, language, perceptual, memory, neuropsychological and behavioural disorders. A 20 page final report must be submitted to the coordinator by April 1. Applications must be submitted to the coordinator by February 1 of the preceding academic year, with selection for placements announced by March 15.

Prerequisite: One of PSYCH 2RB3, 2RR3 or STATS 2MB3; and registration in Level III or IV of an Honours Psychology or Combined Honours Psychology program; and permission of the coordinator. This course cannot be combined with any independent study course (PSYCH 3Q03, 3Q03, 4Q03, 4QQ3, 4D06, 4D09) with the same supervisor.

Enrolment is limited. See the heading *Limited Enrolment Courses* in the Faculty of Science section of the Calendar.

PSYCH 3I13 COGNITIVE DEVELOPMENT

The development of attention, concepts, memory, reasoning and language.

Three lectures; one term

Prerequisite: PSYCH 2H03, 3GG3

PSYCH 3J03 VISUAL NEUROSCIENCE

Examination of the organization and function of the visual system aimed at understanding the neural basis of visual perception.

Three lectures; one term

Prerequisite: PSYCH 2E03; and one of PSYCH 2D03, 2F03 or 2H03

Prerequisite (Beginning 2008-2009): PSYCH 2E03; and BIOLOGY 3P03 or PSYCH 2F03; and registration in Level III or IV of an Honours program. Not offered in 2007-2008.

PSYCH 3JJ3 SOCIO-EMOTIONAL DEVELOPMENT

Discusses historical and contemporary topics related to socio-emotional development from infancy to middle childhood, with an emphasis on the development of maladaptive social behaviours.

Three lectures; one term

Prerequisite: PSYCH 2C03, 3GG3

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, 2A03, PSYCH 2RA3, STATS 1CC3, 2D03; or registration in Honours Biology and Psychology; or registration in the Bachelor of Health Sciences (Honours) program

PSYCH 3KK3 INTRODUCTION TO BAYESIAN INFERENCE

This course introduces a sophisticated method for data analysis and guide to scientific reasoning, derived remarkably from a single, intuitive equation. Requires only basic mathematical background.

Three lectures; one term

Prerequisite: One of ECON 2B03, PSYCH 2RB3, 2RR3 or STATS 2MB3

PSYCH 3L03 NEUROSCIENCE LABORATORY

Seminars and laboratory experience in current problems in neurobiology. One lab (three hours); one term

Prerequisite: One of PSYCH 2E03, 2F03, BIOLOGY 3P03; and registration in Level III or IV of an Honours program

Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 3LL3 GENERAL EXPERIMENTAL PSYCHOLOGY LABORATORY

Working in research teams, students select a topic area, design an experiment based on background readings, obtain ethical approval, collect and analyze data, make oral presentations, and prepare written reports. One lecture, one lab (two hours); one term

Prerequisite: One of PSYCH 2RB3, 2RR3 or STATS 2MB3 and registration in an Honours Psychology program; or registration in Level III of the Honours Linguistic Cognitive Science program

Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 3M03 MOTIVATION AND EMOTION

Theory and data concerning human and nonhuman motivation and emotion, drawing on perspectives from evolution, physiology, learning, and culture. Three lectures; one term

Prerequisite: One of PSYCH 2F03, 2T03, 2TT3

Prerequisite (Beginning 2008-2009): PSYCH 2T03 or 2TT3; and PSYCH 2D03 or 2F03

Not open to students with credit or registration in PSYCH 3Y03 or 4Y03.

PSYCH 3MM3 COGNITIVE NEUROSCIENCE LABORATORY

Working in groups, students will learn to conduct experiments in the field of cognitive neuroscience. Issues related to research design and scientific communication will be emphasized.

One lab (three hours); one term

Prerequisite: One of PSYCH 2RB3, 2RR3, STATS 2MB3; and one of PSYCH 2E03, 2F03, 2H03; and registration in Level III or IV of an Honours program

Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 3N03 ABNORMAL PSYCHOLOGY: FUNDAMENTALS AND MAJOR DISORDERS

Provides students with a current and comprehensive survey of psychopathology and the fundamentals of clinical psychology, including viewpoints on the nature of behavioural disorders and diagnostic systems.

Three lectures; one term

Prerequisite: Six units from PSYCH 2D03, 2E03, 2F03, 2H03, 2T03, 2TT3; or nine units of Psychology

Antirequisite: PSYCH 3NN3

PSYCH 3PP3 PROBLEM SOLVING AND DECISION MAKING

Applications of psychology to understanding how humans solve problems and make decisions.

Three lectures; one term

Prerequisite: PSYCH 2I03

First offered in 2008-2009.

PSYCH 3Q03 INDIVIDUAL LIBRARY STUDY

A library project under the supervision of a faculty member that may extend over both terms.

Prerequisite: Registration in Level III or IV. If PSYCH 3Q03 is taken concurrently with PSYCH 4D06 or 4DD6, a different faculty member must supervise each course. PSYCH 3Q03 may not be taken concurrently with PSYCH 4D09.

Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 3QQ3 INDIVIDUAL LAB STUDY

A laboratory project under the supervision of a faculty member that may extend over both terms.

Prerequisite: Registration in Level III or IV. If PSYCH 3QQ3 is taken concurrently with PSYCH 4D06 or 4DD6, a different faculty member must supervise each course. PSYCH 3QQ3 may not be taken concurrently with PSYCH 4D09.

Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 3S03 ANIMAL BEHAVIOUR LABORATORY

Laboratory and field studies involving a wide variety of species.

One lab (three hours); one term

Prerequisite: One of PSYCH 2RB3, 2RR3, STATS 2MA3, 2MB3; and registration in Level III or IV of an Honours program in Biology or Psychology; and one of PSYCH 2TT3, 3F03; or six units of Level I Biology

Prerequisite (Beginning 2008-2009): PSYCH 2TT3; and one of PSYCH 2RB3, 2RR3, STATS 2MA3, 2MB3; and registration in Level III or IV of an Honours program in Biology or Psychology

Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 3SS3 TOPICS IN SOCIAL BEHAVIOUR

Special topics in social behaviour and social evolution.

Three lectures; one term

Prerequisite: PSYCH 2C03

First offered in 2008-2009.

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, 3FF3, PSYCH 2TT3

Prerequisite (Beginning 2008-2009): BIOLOGY 3FF3 or PSYCH 2TT3

PSYCH 3U03 PSYCHOLOGY OF READING

Cognitive processes involved in encoding, storing and retrieving written language will be discussed in terms of information processing models.

Three lectures; one term

Prerequisite: PSYCH 2H03 and registration in Level III or IV of a Psychology program or the Honours Linguistic Cognitive Science program; or permission of the instructor

PSYCH 3UU3 PSYCHOLOGY OF LANGUAGE

This course discusses the cognitive and neurological basis of language comprehension and production, from an experimental perspective. The emphasis is on the processing of spoken language.

Three lectures; one term

Prerequisite: PSYCH 2H03; or LINGUIST 1A03, 1AA3; or permission of the instructor

PSYCH 3V03 LABORATORY IN HUMAN MEMORY AND COGNITION

Experiments illustrating important issues in human memory and cognition. Problems in the design, analysis, and reporting of experiments will be emphasized. Individual projects required.

One lab (three hours); one term

Prerequisite: PSYCH 2H03 and one of PSYCH 2RB3, 2RR3 or STATS 2MB3 and registration in Level III or IV of an Honours Psychology program; or PSYCH 2H03 and registration in Level III of the Honours Linguistic Cognitive Science program. PSYCH 3VV3 is strongly recommended.

Prerequisite (Beginning 2008-2009): PSYCH 2H03, 3VV3 and one of PSYCH 2RB3, 2RR3 or STATS 2MB3 and registration in Level III or IV of an Honours Psychology program; or PSYCH 2H03, 3VV3 and registration in Level III or IV of the Honours Linguistic Cognitive Science program

Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 3VV3 HUMAN MEMORY

Cognitive processes involved in encoding, storage and retrieval will be discussed in terms of current theories of memory and information processing.

Three lectures; one term

Prerequisite: PSYCH 2H03; and registration in Level III or IV of a Psychology, B.Sc. Life Science, Honours Life Science or Honours Linguistic Cognitive Science program

PSYCH 4B03 HISTORY OF PSYCHOLOGY

An account of the various schools of thought leading up to contemporary psychology including a history of how philosophers and physiologists influenced the earliest roots of Psychology as a science.

Three lectures; one term

Prerequisite: Registration in Level IV of an Honours Psychology program

Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 4BN3 COGNITIVE NEUROSCIENCE II

Seminar course on one or more selected topics in cognitive neuroscience, including biological and computational models of learning and memory, sensory science, neuropsychology, and functional brain imaging.

Three lectures; one term

Prerequisite: PSYCH 3BN3

Prerequisite (Beginning 2008-2009): PSYCH 3BN3 and registration in Level IV of an Honours program

Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 4C03 LANGUAGE DISORDERS IN CHILDHOOD

Seminar with student presentations on selected language disorders.

Three hours (seminar); one term

Prerequisite: PSYCH 3U03 or 3UU3; and registration in Level IV of an Honours Psychology program

Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 4D06 SENIOR THESIS

Students conduct an individual research project under the supervision of a faculty member. A maximum of three units of PSYCH 3Q03, 3QQ3, 4Q03, or 4QQ3 may be taken concurrently with PSYCH 4D06, and a different faculty member must supervise each course. For information and guidelines regarding this course, refer to the Psychology web site at <http://www.science.mcmaster.ca/psychology/courses.html> and click on PSYCH 4D06, or contact the Course Administrator.

Prerequisite: Registration in Level IV of an Honours or Combined Honours program in Psychology

Prerequisite (Beginning 2008-2009): Registration in Level IV of an Honours or Combined Honours program in Psychology; and credit in one of PSYCH 3BL3, 3EE3, 3L03, 3LL3, 3MM3, 3S03, 3V03; and permission of the department

Antirequisite: PSYCH 4D09, 4DD6, 4J03

Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 4D09 SENIOR HONOURS THESIS

Students conduct an individual research project under the supervision or co-supervision of a Department of Psychology faculty member. For information and guidelines regarding this course, refer to the Psychology web site at <http://www.science.mcmaster.ca/psychology/courses.html> and click on PSYCH 4D09, or contact the Course Administrator.

Prerequisite: Registration in Level IV of an Honours Psychology program; and permission of the department. Students are expected to have a Cumulative Average of at least 8.5.

Prerequisite (Beginning 2008-2009): Registration in Level IV of an Honours Psychology program with a Cumulative Average of at least 8.5; and one of PSYCH 3BL3, 3EE3, 3L03, 3LL3, 3MM3, 3S03, 3V03; and permission of the department. PSYCH 3I06, 3Q03, 3QQ3, 4Q03, 4QQ3 may not be taken concurrently with PSYCH 4D09.

Antirequisite: PSYCH 4D06, 4DD6, 4J03

Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 4DD6 SENIOR THESIS

Students conduct an individual research project under the supervision of a faculty member. A maximum of three units of PSYCH 3Q03, 3QQ3, 4Q03 or 4QQ3 may be taken concurrently with PSYCH 4DD6, and a different faculty member must supervise each course. For information and guidelines regarding this course, refer to the Psychology web site at <http://www.science.mcmaster.ca/psychology/courses.html> and click on PSYCH 4DD6, or contact the Course Administrator.

Prerequisite: Registration in Level IV of the Honours Biology and Psychology program with a minimum Cumulative Average of at least 8.5

Prerequisite (Beginning 2008-2009): Registration in Level IV of the Honours Biology and Psychology program with a minimum Cumulative Average of at least 8.5; and credit in one of PSYCH 3BL3, 3EE3, 3L03, 3LL3, 3MM3, 3QQ3, 3S03, 3V03, 4QQ3; and permission of the department.

Antirequisite: PSYCH 4D06, 4D09, 4J03

Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 4F03 SPECIAL TOPICS IN NEUROSCIENCE

An advanced seminar focusing on selected topics in neurobiology. Topics for discussion selected in consultation with students and instructor, with focus on animal models of neurobiological processes.

Seminar and discussions (three hours); one term

Prerequisite: PSYCH 2F03 and registration in an Honours Biology or Psychology program. Completion of BIOLOGY 2B03 and/or 3P03 are recommended.

Prerequisite (Beginning 2008-2009): A grade of at least B in PSYCH 2F03 and registration in Level IV of an Honours Biology or Psychology program. Completion of BIOLOGY 2B03 and/or 3P03 are recommended.

Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 4J03 INQUIRY IN PSYCHOLOGY

This course will provide students with an opportunity to develop skills required to launch investigations of selected psychological themes.

Prerequisite: Registration in Level IV of an Honours Psychology program

Antirequisite: PSYCH 4D06, 4D09, 4DD6

Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 4Q03 ADVANCED INDIVIDUAL LIBRARY STUDY

A library project under the supervision of a faculty member that may extend over both terms.

Prerequisite: Registration in Level IV of an Honours Psychology program. If PSYCH 4Q03 is taken concurrently with PSYCH 4D06 or 4DD6, a different faculty member must supervise each course. PSYCH 4Q03 may not be taken concurrently with PSYCH 4D09.

Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 4QQ3 ADVANCED INDIVIDUAL LAB STUDY

A laboratory project under the supervision of a faculty member that may extend over both terms.

Prerequisite: Registration in Level IV of an Honours Psychology program. If PSYCH 4QQ3 is taken concurrently with PSYCH 4D06 or 4DD6, a different faculty member must supervise each course. PSYCH 4QQ3 may not be taken concurrently with PSYCH 4D09.

PSYCH 4QQ3 may be repeated once with permission of the course coordinator. Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 4R03 SPECIAL TOPICS IN ANIMAL BEHAVIOUR

An advanced seminar focusing on selected topics in animal behaviour.

Seminar and discussions (three hours); one term

Prerequisite: PSYCH 2TT3; and one of PSYCH 3F03, 3S03, 3T03; and registration in an Honours Biology or Psychology program

Prerequisite (Beginning 2008-2009): PSYCH 2TT3; and PSYCH 3F03 or 3T03; and registration in Level IV of an Honours Biology or Psychology program

Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 4Y03 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.

Seminar and discussions (three hours); one term

Prerequisite: Six units from PSYCH 2F03, 2TT3, 3M03; and six units of Biochemistry and/or Biology; and registration in Level III or above of an Honours program

Prerequisite (Beginning 2008-2009): PSYCH 3M03; and six units of Biochemistry and/or Biology; and registration in Level IV of an Honours program

Antirequisite: PSYCH 3Y03

Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

Not offered in 2007-2008.

PSYCH 4Z03 TOPICS IN PSYCHOLINGUISTICS

Consult the Department of Linguistics and Languages for topics to be offered.

Prerequisite: LINGUIST 3B03 or PSYCH 3BB3 or PSYCH 3UU3

Cross-list: LINGUIST 4Z03

PSYCH 4Z03 may be repeated if on a different topic to a total of six units.

Offered in alternate years.

This course is administered by the Department of Linguistics and Languages.

RELIGIOUS STUDIES

WEB ADDRESS: <http://www.socsci.mcmaster.ca/relstud/>

University Hall, Room 104

Ext. 23109

Faculty as of January 15, 2007

Chair

P. Travis Kroeker

Professors

P. Travis Kroeker/B.A. (Winnipeg), M.A. (Manitoba), Ph.D. (Chicago)
 Eileen Schuller/B.A. (Alberta), M.A. (Toronto), Ph.D. (Harvard)
 Stephen R. Westerholm/B.A., M.A. (Toronto), D.Th. (Lund)

Associate Professors

Ellen Badone/B.A., M.A. (Toronto), Ph.D. (California-Berkeley)
 Graeme MacQueen/B.A., M.A. (McMaster), Ph.D. (Harvard)
 Zdravko Planinc/B.A., M.A. (York), A.M., Ph.D. (Harvard)
 Peter Widdicombe/B.A. (Manitoba), M.Phil. (Oxford), M.Div. (Toronto),
 D.Phil. (Oxford)

Assistant Professors

James Benn/B.A., M.A. (Cambridge), M.A. (London), Ph.D. (California-Los Angeles)
 Philippa Carter/B.A. (Toronto), M.A., Ph.D. (McMaster)
 Shayne Clarke/B.A., M.A. (Canterbury), Ph.D. (California-Los Angeles)
 Dana Hollander/B.A. (Quebec College), M.A., Ph.D. (Johns Hopkins)
 Anne Pearson/B.A. (Toronto), M.A., Ph.D. (McMaster)
 Annette Reed/B.A. (McGill University), M.T.S. (Harvard), M.A., Ph.D. (Princeton)
 Celia Rothenberg/B.A. (Wellesley College), M.S. (Oxford), Ph.D. (Toronto)
 Mark Rowe/B.A. (McGill University), M.A., Ph.D. (Princeton)
 Anders Runesson/B.A., M.Div., M.A., Lic.Theol., Ph.D. (Lund)

Associate Members

Virginia Aksan/History B.A. (Allegheny College), M.L.S. (California-Berkeley), M.A., Ph.D. (Toronto)
 Jeremy Stolow/Sociology; Communication Studies and Multimedia B.A. (Toronto), M.A., Ph.D. (York)

Department Note:

Students are advised to consult both the Department (University Hall, Room 104) and the Undergraduate Timetable for a list of the courses offered in the current year.

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, 2K03, 2L03, 2P06, 2TT3, 3AA3, 3E03, 3L03, 3P03, 3RR3, 3S03, 3U03, 3UJ3, 3V03, 4H03
 SANSKRIT 3A06, 4B06

II. BIBLICAL STUDIES

RELIG ST 2B03, 2DD3, 2EE3, 2GG3, 2HH3, 2VV3, 2YY3, 2Z03, 3DD3, 3GG3, 3J03, 3K03, 3M03, 3N03, 3R03, 3T03, 4I03
 HEBREW 2A03, 2B03, 3A03, 3B03

III. WESTERN RELIGIOUS THOUGHT

RELIG ST 2C03, 2EA3, 2EB3, 2FF3, 2I13, 2JJ3, 2KK3, 2MM3, 2Q03, 2U03, 2V03, 2ZZ3, 3A03, 3B03, 3CC3, 3D03, 3GG3, 3KK3, 3LL3, 3MM3, 3NN3, 3W03, 3X03, 3Z03, 3ZZ3, 4N03

IV. CONTEMPORARY AND COMPARATIVE RELIGIONS

RELIG ST 2BB3, 2H03, 2M03, 2N03, 2QQ3, 2SS3, 2TT3, 2W03, 2WW3, 3EE3, 4P03

Students wishing to specialize in Asian Religions should consider beginning language training in Sanskrit or Japanese or both early in their program (see offerings listed under these headings). Students wishing to specialize in Biblical Studies should consider work in Greek (see offerings under *Classics, Greek*) or Hebrew or both. For further study of the Hebrew Bible, RELIG ST 2DD3, 2EE3, 3M03 are recommended.

Courses If no prerequisite is listed, the course is open.

RELIG ST 1B06 WORLD RELIGIONS

A comparative study of religions such as Hinduism, Buddhism, Islam, Christianity, and Judaism with special reference to selected texts, traditions and thought.

Two lectures, one tutorial; two terms

RELIG ST 1D06 MODERN STUDY OF THE BIBLE

An introduction to the discipline of modern biblical criticism focusing on the development of selected central themes.

Two lectures, one tutorial; two terms

RELIG ST 1E03 LOVE IN WESTERN CIVILIZATION

A discussion of the variety of accounts of love in Western civilization from the time of the ancient Greeks and the rise of Christianity to modernity.

Two lectures, one tutorial; one term

Antirequisite: RELIG ST 1E06

RELIG ST 1I03 RELIGIOUS THEMES IN MODERN LITERATURE

An introduction to religious themes, imagery and issues through a study of selected modern literature.

Two lectures, one tutorial; one term

Antirequisite: RELIG ST 1I06

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 2BB3 IMAGES OF THE DIVINE FEMINE

An examination of goddesses and female religious symbols in a variety of cultures: tribal, eastern and western.

Two lectures, one tutorial; one term

RELIG ST 2C03 MORAL ISSUES

An introduction to moral philosophy accenting biomedical ethics. Issues such as abortion, human experimentation, euthanasia, and genetic screening will be investigated in cooperation with members of the Faculty of Health Sciences.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level II or above

Cross-list: PHILOS 2D03

This course is administered by the Department of Philosophy.

RELIG ST 2DD3 THE FIVE BOOKS OF MOSES

An examination of selected texts from the Pentateuch and their significance for Ancient Israelite religion and modern thought.

Two lectures, one tutorial; one term

RELIG ST 2EE3 PROPHETS OF THE BIBLE

The role and teaching of biblical prophets in their ancient setting and their impact on modern religious life and thought.

Two lectures, one tutorial; one term

RELIG ST 2F03 STORYTELLING IN EAST ASIAN RELIGIONS

An in-depth study of selected examples of story literature in China and Japan with attention to the way religion is represented.

Two lectures, one tutorial; one term

Cross-list: JAPAN ST 3H03

Antirequisite: RELIG ST 3H03

RELIG ST 2FF3 MEDITERRANEAN ENCOUNTERS 1500-1800

This course examines the Mediterranean region as a zone of intense cultural interaction. Particular emphasis will be given to the interaction between Christian, Jewish and Islamic societies.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

Cross-list: HISTORY 2HH3

This course is administered by the Department of History.

RELIG ST 2GG3 EARLIEST PORTRAITS OF JESUS

A study of the Gospels of Matthew, Mark, and Luke. Special attention will be given to the possible literary relationships among them as well as to the distinctive features of their Jesus stories.

Two lectures, one tutorial; one term

RELIG ST 2H03 THEORY AND PRACTICE OF NON-VIOLENCE

An introduction to the history, theory and practice of non-violence, with attention to the relations between religious representatives of the tradition such as Tolstoy, Gandhi and King and secular or political figures such as Gene Sharp and James Scott.

Two lectures, one tutorial; one term

RELIG ST 2HH3 PAUL AND CHRISTIAN ORIGINS

A study of the controversial role played by Paul in the definition and expansion of early Christianity, based on the Acts of the Apostles and Paul's own extant correspondence.

Two lectures, one tutorial; one term

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 2I13 CHRISTIANITY IN THE PATRISTIC PERIOD (100-800)

The development of Christianity in the first centuries C.E. in relation to competing alternatives such as Judaism, Graeco-Roman cults and philosophies.

Two lectures, one tutorial; one term

RELIG ST 2JJ3 CHRISTIANITY IN THE MEDIEVAL PERIOD (800-1500)

The development of Christianity in the Middle Ages and its relation to the political and intellectual context. Primary texts will illustrate typical aspects of medieval religion, learned and popular.

Two lectures, one tutorial; one term

RELIG ST 2K03 INTRODUCTION TO BUDDHISM

A survey of the developments of the essential concepts, practices, and institutions of the Buddhist religion, emphasizing its role in the history and culture of Asian societies.

Two lectures, one tutorial; one term

RELIG ST 2KK3 CHRISTIANITY IN THE REFORMATION PERIOD

The place of the Reformation in the development of Christian thought and practice -its background, context and sequels. Attention is given to such figures and movements as Martin Luther, John Calvin, the Anabaptists, the reformation in England, the Catholic Reformation.

Two lectures, one tutorial; one term

RELIG ST 2L03 LIFE, WORK AND TEACHINGS OF MAHATMA GANDHI

A study of the central religious and ethical ideas of Gandhi in the context of his life; in particular: his doctrines of Non-violent Struggle and Truth-act; his place in contemporary consciousness, particularly in the struggle for human harmony and preservation of the earth and its living species; and his revolutionary view of Truth itself as God.

Two lectures, one tutorial; one term

RELIG ST 2M03 DEATH AND DYING: COMPARATIVE VIEWS

A comparative survey of the diversity of social and ritual practices, religious beliefs, and emotional responses surrounding death in a variety of non-Western cultural contexts.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level II or above

RELIG ST 2MM3 WAR AND PEACE IN THE CHRISTIAN TRADITION

Christian thinking and practice on militarism, the restraint of war and paths to peace, including just war, nonviolence, pacifism and revolution.

Two lectures, one tutorial; one term

RELIG ST 2N03 DEATH AND DYING: THE WESTERN EXPERIENCE

Drawing on theoretical perspectives and evidence from anthropology and sociology, this course examines death and dying in Western contexts, focusing on biomedical, social and cultural themes.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level II or above

RELIG ST 2P06 JAPANESE CIVILIZATION

Introduction to Japanese history, society, and culture through a study of the religious traditions, literature, and art of Japan.

Two lectures, one tutorial; two terms

Cross-list: JAPAN ST 2P06

RELIG ST 2Q03 INTRODUCTION TO ISLAM

The origins and early history of Islam with an emphasis on the Koran and the early Muslim community.

Two lectures, one tutorial; one term

RELIG ST 2QQ3 CULTS IN NORTH AMERICA

An examination of recent religious trends in North America. The Hare Krishna Movement, the Church of Scientology, the "Family" Branch Davidians and Satanism will be covered.

Two lectures, one tutorial; one term

RELIG ST 2SS3 WOMEN AND RELIGION

A study of the status and roles of women in several religions, such as Hinduism, Buddhism, Confucianism, Christianity, Judaism, and Islam. Important women religious figures and feminist theology will also be studied.

Two lectures, one tutorial; one term

RELIG ST 2TT3 RELIGION AND POPULAR CULTURE IN CONTEMPORARY JAPAN

An introduction to the study of Japanese popular culture in the contemporary period and the religious traditions and world-views that inform it through textual, visual and other multi-media sources, including *manga* and *anime*.

Two lectures, one tutorial; one term

RELIG ST 2U03 RELIGION AND THE MORAL IMAGINATION

An exploration of religious and ethical themes/symbols/practices in selected ancient and modern literature (including plays, stories, poetry) and art in the western traditions.

Two lectures, one tutorial; one term

Antirequisite: RELIG ST 2UU3

RELIG ST 2V03 ISLAM AND THE MODERN WORLD

The spread of Islam, Islam as a minority community, the role of women in Islam and fundamentalism.

Two lectures, one tutorial; one term

RELIG ST 2VV3 THE BIBLE AS LITERATURE

An examination of narratives from the Hebrew Bible, Intertestamental literature, and New Testament, from a literary perspective. Attention is paid to narrative features such as character, plot, irony and symbolism, as well as to the dynamics of the reading experience.

Two lectures, one tutorial; one term

Cross-list: COMP LIT 2G03

RELIG ST 2W03 RELIGION AND ECOLOGY

Attitudes toward nature or the environment in Native, Asian and Western religious traditions; the underlying assumptions of our contemporary view of the natural world.

Two lectures, one tutorial; one term

RELIG ST 2WW3 HEALTH, HEALING AND RELIGION

An examination of the different ways in which religion and health are related. Ideas of sickness and techniques of healing will be studied in a variety of traditional and modern religious contexts.

Two lectures, one tutorial; one term

RELIG ST 2YY3 THE BIBLE AND FILM

An examination of the use of the Bible in film. A variety of film genres will be studied including the Disney cartoon, biblical epic, horror film, contemporary comedy and drama and the rock music video. Issues to be discussed include the transformation of biblical images in popular media and film as a vehicle for conveying religious values.

Two lectures, one tutorial; one term

RELIG ST 2ZZ3 SHAKESPEARE: RELIGIOUS AND POLITICAL THEMES

An examination of ethical, political and religious themes in several of Shakespeare's plays, including *The Merchant of Venice*.

Two lectures, one tutorial; one term

RELIG ST 3A03 MODERN JEWISH THOUGHT

Introduction to different conceptions of the connection between Jewish traditions and philosophical questioning. Authors may include: Maimonides, Spinoza, Mendelssohn, Cohen, Buber, Rosenzweig, Strauss, Levinas, Soloveitchik.

Three hours (lectures and discussion); one term

Cross-list: PHILOS 3J03

RELIG ST 3AA3 POPULAR RELIGION IN THE INDIAN TRADITION

The music, dance and festivals associated with temples in India and its diaspora will be analyzed in terms of their social, psychological and political implications.

Two lectures, one tutorial; one term

RELIG ST 3B03 CHRIST THROUGH THE CENTURIES

A study of the varied theological and artistic conceptions of Jesus Christ in the principal periods of Christian thought: the Biblical, Patristic, Medieval, Reformation, and Modern.

Two lectures, one tutorial; one term

RELIG ST 3CC3 SOVEREIGNTY AND SECULARIZATION

Exploration of key modern Western texts concerning the nature of leadership and authority in both religious and secular contexts. Readings by Hobbes, Weber, Schmitt, Buber, plus case studies of important modern or contemporary dilemmas regarding the place of religion in public life.

Three hours (lectures and discussion); one term

RELIG ST 3D03 GOD, REASON AND EVIL

An examination of 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 political history, the development of sects and parties, the role of the temple, apocalypticism, and the Dead Sea Scrolls.
Two lectures, one tutorial; one term

Cross-list: HISTORY 3DD3

Antirequisite: RELIG ST 2NN3

RELIG ST 3E03 JAPANESE RELIGION

A study of Japanese religion and how it functions in Japanese society. Topics will include Shinto, Shamanism, Ancestor Worship, Japanese Buddhism and the New Religions of Japan.
Two lectures, one tutorial; one term

Cross-list: JAPAN ST 3E03

RELIG ST 3EE3 SACRED JOURNEYS

A study of the significance of travel in various religious traditions, focusing on shrines, pilgrimages, and the inter-relationships between secular and sacred travel.
Two lectures, one tutorial; one term

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 3GG3 TOPICS IN JEWISH STUDIES

An exploration of selected themes in Jewish thought, history, and/or culture.
Three hours (lectures and discussion); one term

RELIG ST 3GG3 may be repeated, to a total of six units, if on a different topic.

RELIG ST 3J03 JEWS, CHRISTIANS, AND OTHERS IN ANTIQUITY

An examination of the contacts, conflicts, and competition among Jews, Christians, and their non-Jewish, non-Christian neighbours (Greeks, Romans, Egyptians) in the ancient world.
Two lectures, one tutorial; one term

RELIG ST 3KK3 CHRISTIANITY IN THE MODERN PERIOD

Topics in Christianity (Catholic and Protestant) from the 17th to the 20th centuries. Attention is given to the interaction between secular and religious thought.
Two lectures, one tutorial; one term

RELIG ST 3K03 THE BIBLE THROUGH THE AGES

A study of the different ways in which the Bible has been read, from antiquity to the modern world, both inside and outside the communities for which it serves as sacred scripture. The course will focus on selected key figures in the history of biblical interpretation.
Two lectures, one tutorial; one term

RELIG ST 3L03 THE INDIAN RELIGIOUS TRADITION

Readings of Indian religious texts in translation will concentrate on themes such as the nature of human nature; free will and determinism; personal identity and the quest for perfection; renunciation and social action; violence and non-violence; altruism and selfishness.
Two lectures, one tutorial; one term

Prerequisite: Registration in Level III and above
Cross-list: ARTS&SCI 3L03

RELIG ST 3LL3 RELIGION AND HUMAN NATURE

What is the nature of human nature and its fulfilment? A study of recent philosophical, scientific and religious anthropology.
Two lectures, one tutorial; one term

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 3MM3 SCEPTICISM, ATHEISM AND RELIGIOUS FAITH

A study of conceptions of religious belief, knowledge and God in the history of modern thought up to the 20th century, with special attention to major challenges to the role of religious faith in human existence. Authors may include: Descartes, Hume, Kant, Schleiermacher, Nietzsche, Dostoevsky, Kierkegaard, Camus, Buber, Levinas.
Two lectures, one tutorial; one term

RELIG ST 3N03 JOHN'S PORTRAIT OF JESUS

An examination of the Gospel of John, with emphasis on its historical background, its literary character and its distinctive theology. The history of the Johannine community will also be considered.
Two lectures, one tutorial; one term

Antirequisite: RELIG ST 2O03

RELIG ST 3NN3 THE ENCOUNTER OF SCIENCE AND RELIGION

A study of contemporary discussions of: (a) methods of inquiry in science and religion, (b) the human being's relation to nature and (c) God's relation to nature.
Two lectures, one tutorial; one term

RELIG ST 3R03 DEATH AND THE AFTERLIFE IN EARLY JUDAISM AND CHRISTIANITY

An examination of the variety of ways in which physical death and the afterlife were understood in biblical and post-biblical Judaism as well as in the New Testament and early Christianity. Among the topics to be considered are the netherworld, immortality and resurrection, as well as the relationship of these concepts to issues of faith and morality.
Two lectures, one tutorial; one term

RELIG ST 3RR3 TAOISM

An introduction to the history, doctrines, and practices of Taoism from the mid-second century C.E. up to the present, with a focus on reading Taoist texts in translation.
Two lectures, one tutorial; one term

RELIG ST 3S03 THE EAST ASIAN RELIGIOUS TRADITION

Readings in East Asian religious texts in translation will concentrate on themes such as culture vs. nature, virtue vs. power, social responsibility vs. personal cultivation, bookish learning vs. meditation.
Two lectures, one tutorial; one term

Prerequisite: Registration in Level III and above
Cross-list: ARTS&SCI 3S03, JAPAN ST 3S03

RELIG ST 3T03 THE QUEST FOR THE HISTORICAL JESUS

A look at the continuing scholarly effort to reconstruct the career and teaching of the historical Jesus.
Two lectures, one tutorial; one term

RELIG ST 3U03 THE BUDDHIST TRADITION IN INDIA

A study of the origins and early development of Indian Buddhism, largely through readings in Buddhist scripture (pre-Mahayana and Mahayana) in translation.
Two lectures, one tutorial; one term

RELIG ST 3UU3 BUDDHISM IN EAST ASIA

An examination of myth, history, doctrine, monastic culture, and ritual practices in East Asian Buddhism.
Two lectures, one tutorial; one term

Cross-list: JAPAN ST 3UU3

RELIG ST 3Z03 JUDAISM, THE JEWISH PEOPLE AND THE BIRTH OF THE MODERN WORLD

On the lures and threats of the modern world from the early eighteenth to the early twentieth century. Topics include: Jewish philosophy in the Age of Reason, new Jewish denominations, assimilation, early Zionism, Yiddish socialism, the beginnings of modern anti-semitism, movements of cultural renewal.
Two lectures, one tutorial; one term

Cross-list: HISTORY 3Z03
Antirequisite: RELIG ST 2X03

RELIG ST 3ZZ3 JUDAISM AND THE JEWISH PEOPLE IN THE TWENTIETH CENTURY

Jews and Judaism in a century of catastrophe and renewal. The progress of Emancipation: Jews in Canada and the U.S.; the Jewish catastrophe in Europe; the Jewish state; Jewish identities in literature and the arts.
Two lectures, one tutorial; one term

Cross-list: HISTORY 3ZZ3
Antirequisite: RELIG ST 2XX3

RELIG ST 4H03 TOPICS IN ASIAN RELIGIONS

Advanced seminar in Asian religions.

One term

Prerequisite: Registration in Level III or above of an Honours Religious Studies program or permission of the instructor

Offered in alternate years.

RELIG ST 4I03 TOPICS IN BIBLICAL STUDIES

Advanced seminar in Early Judaism and Early Christianity.

One term

Prerequisite: Registration in Level III or above of an Honours Religious Studies program or permission of the instructor

Offered in alternate years.

RELIG ST 4N03 TOPICS IN WESTERN RELIGIOUS THOUGHT

Advanced seminar in philosophy, theology and political thought dealing with contemporary and historical materials.

One term

Prerequisite: Registration in Level III or above of an Honours Religious Studies program or permission of the instructor

Offered in alternate years.

RELIG ST 4P03 TOPICS IN CONTEMPORARY AND COMPARATIVE RELIGION

Advanced seminar in contemporary and comparative religion, from the perspectives of the anthropology and sociology of religion.

One term

Prerequisite: Registration in Level III or above of an Honours Religious Studies program or permission of the instructor

Offered in alternate years.

RELIG ST 4Q03 ADVANCED READINGS IN RELIGIOUS STUDIES

Independent study of special topics in Religious Studies.

One term

Prerequisite: Registration in Level III or above of an Honours Religious Studies program and permission of the instructor

RELIG ST 4Q03 may be repeated, to a total of six units, if on a different topic.

RELIG ST 4R06 HONOURS THESIS

Students in this course will work closely with faculty members who specialize in the fields of study in which they plan to write their honours essay.

Two terms

Prerequisite: Registration in Level IV of an Honours Religious Studies program with a minimum C.A. of 9.5; or permission of the instructor

Antirequisite: RELIG ST 4J06

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

Antirequisite: 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, the Mishnah, ancient inscriptions and the Dead Sea Scrolls.

Four hours (two lectures); one term

Prerequisite: HEBREW 2B03 or permission of the instructor

Antirequisite: HEBREW 3A06

SANSKRIT ...**SANSKRIT 3A06 INTRODUCTION TO SANSKRIT GRAMMAR**

Basic course in the elements of Sanskrit grammar. No previous knowledge of Sanskrit is required.

Three lectures; two terms

SANSKRIT 4B06 READINGS IN SANSKRIT TEXTS

Intermediate course with readings in selected texts.

Three lectures; two terms

Prerequisite: SANSKRIT 3A06

RUSSIAN

(SEE LINGUISTICS AND LANGUAGES, 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, 2007**Acting Director**

Keith W. Kinder

Professors

Hayden B.J. Maginnis/B.A. (Western Ontario), M.F.A., Ph.D. (Princeton) (Art History)

William Renwick/B.Mus. (British Columbia), Ph.D. (CUNY), A.A.G.O., F.R.C.C.O. (Music)

Associate Professors

Susan Fast/B.M. (Western Washington), M.A., Ph.D. (Iowa) (Music)

Catherine Graham/B.A., M.A., Ph.D. (McGill) (Theatre & Film Studies)

Frederick A. Hall/Assoc. Dipl., B.Mus. (McGill), M.A., Ph.D. (Toronto) (Music)

Hugh K. Hartwell/Assoc. Dipl., B. Mus. (McGill), A.M., Ph.D. (Pennsylvania) (Music)

Janice Hladki/B.A. (York), M.A., Ph.D. (Toronto) (Theatre & Film Studies)

Keith W. Kinder/Dip.F.A. (Calgary), B.Mus. (Western Ontario), M.Mus. (Northwestern), Ph.D. (Colorado) (Music)

Judy N. Major-Girardin/B.F.A. (Windsor), M.F.A. (Alabama) (Art)

Alison McQueen/B.A. (McGill), M.A., Ph.D. (Pittsburgh)

Joseph Sokalski/B.E. (Alberta), M.A., Ph.D. (Toronto) (Theatre & Film Studies)

Graham Todd/L.D.A.D. Dip. (Chelsea School of Art) M.F.A. (Guanajuato) (Art)

Assistant Professor

Angela Sheng/B.A., M.A. (Toronto), Ph.D. (Pennsylvania)

Associate Members

Michele G. George/(Classics) B.A. (Toronto), M.A., Ph.D. (McMaster)

David C. Wilson/(Kinesiology) Cert. Ed. (St. Paul's College), B.Ed. (Bristol), M.A. (York)

Music Studio Instructors

Elise Bédard/B.Mus., L.Mus., M.Mus. (McGill)/voice

John Brownell/B.F.A., M.A., Ph.D. (York) (Music)/percussion

Lita Classen/B.Mus. (Ottawa), M.Mus. (Vincent d'Indy Montréal) Dipl. Perf. (Vienna)/voice

Richard Cunningham/B.Mus. (Toronto)/voice

Kevin Dempsey/percussion

Cecile Desrosiers/B.Mus. (McGill), M.Mus. (Western Ontario)/piano

Lance Elbeck/B.Mus. (Curtis Inst. of Music, Philadelphia)/violin

Paula Elliott/B.Mus. (Oberlin), M.M. (New England Conservatory)/flute

Don Englert/jazz saxophone

Robert Fekete/Dipl. (Mohawk College), B.Mus., B. Ed. (Toronto)/jazz piano

Tom Forsyth/B.F.A., M.F.A. (York), B.Ed. (Toronto) /jazz band

David Gerry/A.R.C.T., B.Mus. (Toronto), Dipl. Ped. (Japan)/flute

Paul Grimwood/B.Mus. (Western Ontario)/harpichord and organ

David Holler/McMaster University Choir Director

Judy Hunter/A.R.C.T. (Toronto), A.Mus., Mus.G. Paed., B.A. (Western Ontario), L.T.C.L., F.T.C.L., A.T.C.L. (Trinity College, London)/piano
 Willy Jarvis/electric bass
 Zoltan Kalman/Dipl. (Franz Liszt Academy of Music, Budapest)/clarinet
 Leokadia Kanovich/B.Mus. (Vilnius), M.A. (Moscow)/piano
 Leon Karan/B. Mus. (Music College, USSR), M.F.A. (Uralskaya Univ. of Music, USSR)/piano
 Maria Lorcini/harp
 Jeffrey McFadden/B.Mus. (Western Ontario), M. Mus. (Toronto)/classical guitar
 Troy Milleker/M.M. Perf. (Indiana Univ.)/double bass
 Willem Moolenbeek/A.R.C.T., B.Sc., M.Sc. (Guelph)/saxophone
 Rebecca Morton/cello
 Nancy Nelson/B.Mus. (McMaster) /oboe
 Stephen Pierre/jazz clarinet
 Mike Polci/B.Mus. (Western Ontario) /trombone
 Philip Sarabura/A.R.C.T., B.Mus. (Western Ontario)/choir
 Bob Shields/Dipl. (Mohawk), B.Mus. (Toronto)/jazz guitar
 Suzanne Shulman/A.R.C.T., Dipl. Perf. (Toronto)/flute
 Valerie Tryon/L.R.A.M., F.R.A.M., A.R.C.M., D.Litt/piano
 Pamela Vanweelden/A.R.C.T. (Toronto), A.Mus. (Western Ontario), L.T.C.L., F.T.C.L. (Trinity, London), B.Ed. (Althouse), B.Mus. (Western Ontario), M.M. (Toronto)/piano
 Sonia Vizante/B.A. (Univ. of Bucharest), B.Ed. (Brock)/violin
 Timothy White/B.Ed. (Toronto), B.Mus., M.Mus. (Michigan)/trumpet
 Alla Zacarelli/Dipl. Perf. (Odessa, St. Petersburg)/piano

School Note:

Art, Art History, Music and Theatre & Film Studies courses can be found listed alphabetically within the *Course Listings* section of this Calendar.

In order to foster 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 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 2G03

This course is administered by the Department of Communication Studies and Multimedia.

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, 1B00, 2B03, 2C00 and 2L03, the Science courses are designed primarily for students in the Humanities and Social Sciences to give an appreciation of important areas of modern science and do not assume any specific background in science. Other science courses that may be of interest to students in the Humanities and Social Sciences are listed by Department. They are:

BIOLOGY 1K03
 COMP SCI 1SA3
 COMP SCI 1TA3
 GEO 2GG3
 GEO 2WW3
 GEO 3CC3
 GEO 3DD3
 KINESIOL 1Y03
 KINESIOL 1YY3
 STATS 1A03
 STATS 1L03

Biology for the Humanities and Social Sciences
 Computing Fundamentals
 Elementary Computing and Computer Use
 Natural Disasters
 Water and the Environment
 Earth's Changing Climate
 Geoarchaeology of the Underwater Realm
 Human Anatomy and Physiology I
 Human Anatomy and Physiology II
 Statistical Reasoning
 Probability and Linear Algebra

Courses

If no prerequisite is listed, the course is open.

SCIENCE 1A00

WHMIS, HEALTH AND SAFETY

Introduction to safety guidelines at McMaster University, acceptable safety conduct and positive safety attitudes and practices in laboratories and Workplace Hazardous Materials Information System (WHMIS). Evaluation: one multiple choice examination graded Pass or Fail; students who fail will be required to attend the course again during the same academic year. One session (one hour)

Antirequisite: ENGINEER 1A00, ENG TECH 1A00, NURSING 1A00

SCIENCE 1B00

UNIVERSITY SURVIVAL

Web-based (through WebCT) introduction to university life and expectations. University services and resources available to students will be covered. Modules, consisting of quizzes and assignments, will include such topics as basic orientation, library usage, time management, academic dishonesty and career options. Online surveys (for students to give their views on the course) are to be completed in both December and April (follow-up). One term

Prerequisite: Registration in Science I, Mathematics and Statistics I or Medical Radiation Sciences I

SCIENCE 1D03

ASTRONOMY

A survey of modern and historical concepts in astronomy. Light and the telescope; distance measurement in space; the structure and evolution of stars, galaxies, cosmology.

Three lectures; one term

Prerequisite: Open to students registered in any faculty other than Science or Engineering. OSS Grade 11 or OSIS Grade 12 Mathematics required.

Antirequisite: ASTRON 1F03, PHYSICS 1F03, SCIENCE 2D03

SCIENCE 2B03

THE BIG QUESTIONS

An introductory survey concerning ultimate questions in modern science, with an emphasis on physical sciences: origin of space-time, elements, structure in the cosmos, conditions for life and the search for life on other planets.

Three lectures, one tutorial; first term

Prerequisite: Registration in Level II or above

Cross-list: ORIGINS 2B03

Note: Students who intend to combine the Origins Research Specialization with their degree program should register in ORIGINS 2B03.

This course is administered by the Origins Institute.

SCIENCE 2C00

SKILLS FOR CAREER SUCCESS IN SCIENCE

Develop career skills (resumé, cover letter, interview, job search) necessary to create a career path.

Seven, one hour lectures/workshops; one term

Prerequisite: Full-time registration in Level II or above of any program in the Faculty of Science

Registration priority will be given to students in a co-op program.

SCIENCE 2J03

PHYSICS OF MUSICAL SOUND

Sound waves, production of sound by musical instruments; properties of the ear, musical scales and intervals; auditorium acoustics.

Three lectures with demonstrations; one term

Prerequisite: Registration in Level II or above of a non-science program

Antirequisite: PHYSICS 2J03

Knowledge of OSS Grade 11 Mathematics or OSIS Grade 12 Mathematics would be helpful.

SCIENCE 2K03

HEREDITY, EVOLUTION AND THE ENVIRONMENT

Introduction to the principles of human genetics and evolutionary biology, the adaptation of organisms to their environment, biological diversity and integrated ecosystems.

Three lectures or two lectures and one tutorial; one term

Prerequisite: Registration in Level II or above

Antirequisite: BIOLOGY 1A03, 1A06, 1AA3

Offered in alternate years.

SCIENCE 2L03 TEACHING AND LEARNING FOR TUTORS

The course provides an opportunity to explore teaching and learning using a variety of methods from the traditional lecture to more experiential methods (e.g., simulation). Self-directed learning will include experience in the classroom, reading and reflection and discussion.

Prerequisite: Registration in Level II or above of an Honours program in the Faculty of Science

Cross-list: SOC SCI 2L03

Antirequisite: HTH SCI 4X03, INQUIRY 3S03, 4S03, SCIENCE 3S03

Enrolment is limited See the heading *Limited Enrolment Courses* in the Faculty of Science section of the Calendar.

SCIENCE 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.

Peer tutoring responsibilities, weekly seminars; two terms

Prerequisite: Three units of Inquiry and permission of the instructor

Antirequisite: HTH SCI 4X03, INQUIRY 3S03, 4S03, SCIENCE 2L03, SOC SCI 2L03

SCIENCE 4A03 INDEPENDENT STUDY

An independent study under the supervision of a faculty member.

One term

Prerequisite: Registration in Level IV of an Honours program in the Faculty of Science and permission of the supervising faculty member

Antirequisite: INQUIRY 4SJ3, 4SK6, SCIENCE 4B06, 4C09

SCIENCE 4B06 INDEPENDENT STUDY

An independent study under the supervision of a faculty member.

Two terms

Prerequisite: Registration in Level IV of an Honours program in the Faculty of Science and permission of the supervising faculty member

Antirequisite: INQUIRY 4SJ3, 4SK6, SCIENCE 4A03, 4C09

SCIENCE 4C09 INDEPENDENT STUDY

An independent study under the supervision of a faculty member.

Two terms

Prerequisite: Registration in Level IV of an Honours program in the Faculty of Science and permission of the supervising faculty member

Antirequisite: INQUIRY 4SJ3, 4SK6, SCIENCE 4A03, 4B06

SCIENCE 4SZ3 PHOENIX: OUT OF THE ASHES AND INTO THE ATOMIC AGE

This course will study the short and long term impact of nuclear weapons testing and use, upon humans and the environment. Students will visit critical sites where nuclear weapons were developed and detonated. The travel portion of the course will run for 10-12 days (dependent on available travel schedules) and will involve group discussions and field experiences. Students will be required to pay incidental fees over and above the normal tuition fees set by the Unit to cover travel costs.

Prerequisite: Registration in Level IV of any Honours program in the Faculty of Science

Cross-list: MED PHYS 4SZ3

Antirequisite: INQUIRY 4SZ3

Enrolment is limited See the heading *Limited Enrolment Courses* in the Faculty of Science section of the Calendar.

This course is administered by the Department of Medical Physics and Applied Radiation Sciences.

SOCIAL SCIENCES**Notes:**

1. All students are strongly recommended to complete SOC SCI 2EL0. Completion of SOC SCI 2EL0 is required to participate in an internship.
2. Students who previously completed SOC SCI 2E03 and 2F03 may substitute these units as Level II Sociology.
3. SOC SCI 2O03, 2P03, 2Q03 and 2R03 may be substituted as units of Level II Sociology.

Courses *If no prerequisite is listed, the course is open.***SOC SCI 2EL0 INTRODUCTION TO CAREER PLANNING THROUGH EXPERIENTIAL LEARNING**

Provides an opportunity to engage in a variety of hands-on exploration activities to provide a strong foundation for career and education planning. Students will better understand the skills acquired in academic studies, extracurricular activities, work experience and how this relates to making occupational choices and job searching.

Six, two hour lectures/workshop; one term

Prerequisite: Registration in a Kinesiology or Social Sciences program

Antirequisite: SOC SCI 3EL0

(See Note 1 above.)

SOC SCI 2J03 INTRODUCTION TO STATISTICS

An introduction to basic statistical concepts and their application to the analysis of data from the social sciences. The use of spreadsheets is emphasized.

Three hours; one term

Prerequisite: Registration in Level II or above of a Kinesiology or Social Sciences program

Antirequisite: COMMERCE 2QA3

Not open to students with credit or registration in: ECON 2B03, 3O06, 3U03, GEO 2S03, GEOG 2LL3, 2N03, HTH SCI 1F03, 2A03, KINESIOL 1B03, 1B06, 3C03, POL SCI 2F06, 3N06, PSYCH 2G03, 2RA3, 2RB3, 2R03, 2RR3, SOCIOL 2Y03, 3H06, STATS 1A03, 1CC3 or any Level II, III or IV statistics course.

SOC SCI 2L03 TEACHING AND LEARNING FOR TUTORS

Provides an opportunity to explore teaching and learning using a variety of methods from the traditional lecture to more experiential methods (e.g., simulation). Self-directed learning will include experience in the classroom, reading and reflection, and discussion.

Three hours; one term

Prerequisite: Registration in Level II or above of an Honours Social Sciences, Kinesiology or a B.A./B.S.W. program

Cross-list: SCIENCE 2L03

Antirequisite: HTH SCI 4X03, INQUIRY 3S03, 4S03, SCIENCE 3S03

SOC SCI 2O03 CANADIAN CHILDREN

This course deals with a spectrum of issues related to Canadian children such as family, socialization, identity formation, moral development, abuse and strategies for a better future.

Three hours (lectures and discussion); one term

Not open to students with credit in SOC SCI 2E03 SELECTED TOPICS IN INTERDISCIPLINARY STUDIES I if the topic was Canadian Children. (See Note 3 above.)

SOC SCI 2P03 CANADIAN ADOLESCENTS

This course deals with a spectrum of issues related to Canadian adolescents such as identity formation, sexuality, peer groups and power and the social politics of career formation.

Three hours (lectures and discussion); one term

Not open to students with credit in SOC SCI 2F03 SELECTED TOPICS IN INTERDISCIPLINARY STUDIES II if the topic was Canadian Adolescents. (See Note 3 above.)

SOC SCI 2Q03 WOMEN AND FAMILY IN CANADA

A discussion of contrasting approaches to the study of the family from a Symbolic Interactionist perspective. Topics include mother-daughter, father-daughter, mother-son relationships and motherless daughters.

Three hours (lectures and discussion); one term

Not open to students with credit in SOC SCI 2E03 SELECTED TOPICS IN INTERDISCIPLINARY STUDIES I if the topic was The Structure of the Family and the Role of Women in Historical and Contemporary Society. (See Note 3 above.)

SOC SCI 2R03 WOMEN AND WORK IN CANADA

The life cycle of contemporary women, the increased integration into the labour force and the impact this has had upon their traditional roles as wife and mother will be discussed. The experiences of women will be interfaced with those of men.

Three hours (lectures and discussion); one term

Not open to students with credit in SOC SCI 2F03 SELECTED TOPICS IN INTERDISCIPLINARY STUDIES II if the topic was Women and Work in Canada. (See Note 3 above.)

SOC SCI 3IF0 FULL-TIME INTERNSHIP

Full-time, non-credit, paid work opportunities of four, eight, or 12 month duration allowing students to explore careers, develop employability skills and make important contacts for job searches.

Normally 30 to 35 hours per week

Prerequisite: Registration in a program in the Faculty of Social Sciences; and credit or registration in SOC SCI 2EL0; and permission of the Career Development Coordinator

SOC SCI 3IF0 may be repeated.

SOC SCI 3IP0 PART-TIME INTERNSHIP

Part-time, non-credit, paid work opportunities of four, eight, or 12 month duration allowing students to explore careers, develop employability skills and make important contacts for job searches.

Normally 5 to 10 hours per week

Prerequisite: Registration in a program in the Faculty of Social Sciences; and credit or registration in SOC SCI 2EL0; and permission of the Career Development Coordinator

SOC SCI 3IP0 may be repeated.

SOC SCI 3IS0 SUMMER INTERNSHIP

Full-time, non-credit, paid work opportunities normally lasting four months during the Spring/Summer Session allowing students to explore careers, develop employability skills and make important contacts for job searches. Students selected to complete a McMaster Summer or NSERC USRA may use this experience toward a Summer Internship.

Normally 30 to 35 hours per week

Prerequisite: Registration in a program in the Faculty of Social Sciences; and credit or registration in SOC SCI 2EL0; and permission of the Career Development Coordinator

SOC SCI 3IS0 may be repeated.

SOC SCI 3MP3 COMMUNITY LEADERSHIP IN SPORT AND PHYSICAL ACTIVITY

This placement course provides the essential links between classroom knowledge and professional practice. Working with special needs populations, children, adolescents, adults and the elderly, students will experience the challenges faced by community agencies that deliver sport and physical activity programs.

Placement experience equivalent to one day per week (60 hrs.), seminars, one term

Prerequisite: Credit or registration in KINESIOL 3M03 and registration in Level III or above

Antirequisite: KINESIOL 3MP0, 3MP3

Not open to students with credit or registration in KINESIOL 4EE3 if the placement is in the area of coaching or leadership.

This course is administered by the Department of Kinesiology.

SOCIAL WORK

WEB ADDRESS: <http://www.socsci.mcmaster.ca/socwork/>

Kenneth Taylor Hall, Room 319

Ext. 23795

Faculty as of January 15, 2007**Director**

Jane Aronson

Professors

Jane Aronson/B.Sc. (New University of Ulster), B.S.W., M.S.W. (McGill), Ph.D. (Toronto)

Roy Cain/B.S.W., M.S.W., Ph.D. (McGill)

James W. Gladstone/B.A. (McGill), M.S.W. (British Columbia), Ph.D. (Toronto)

M. Susan Watt/B.A., M.S.W., Adv. Dip. S.W. (Toronto), D.S.W. (UCLA)

Adjunct Professor

Christine Walsh/(Calgary) B.Sc., M.Sc. (Guelph), M.S.W. (McMaster), Ph.D. (Toronto)

Associate Professors

Donna Baines/(Labour Studies) B.S.W. (Calgary), M.S.W. (Ottawa), Ph.D. (Toronto)

Patricia M. Daenzer/B.A., B.S.W. (York), M.S.W., Ph.D. (Toronto)

L. William Lee/B.A. (St. Thomas, Texas), M.S.W., Adv. Dip. S.W., Ed.D. (Toronto)

Sheila Sammon/B.A. (Nazareth College, New York), M.S.W. (Toronto)

Assistant Professors

Gary C. Dumbrell/B.Sc. (South Bank, London), M.S.W. (York), Ph.D. (Toronto)

Christina Sinding/(Health, Aging and Society) B.A. (Western Ontario), M.A. (McMaster), Ph.D. (Toronto)

Y. Rachel Zhou/B.A. (Institute on Globalization and the Human Condition),

LLM (Wuhan, China), M.A., Ph.D. (Toronto)

Lecturers

Mirna E. Carranza/B.S.W. (University of El Salvador), M.T.S (Wilfrid Laurier)

Rick Sin/B.S.W. (Hong Kong Baptist), M.S.W. (McGill)

Associate Members

Karen A. Balcom/(History), B.A. (Carleton), M.A. (Dalhousie), Ph.D. (Rutgers)

Robert D. Wilton/(Geography and Earth Sciences) B.A. (Hull), M.A., Ph.D. (Southern California)

Practice Instructors

Janice Chaplin/B.A. (Mount Allison), B.S.W., M.S.W. (McMaster)

Mark Fraser/B.A. (Acadia), B.S.W. (McMaster), M.S.W. (Toronto)

Niki Gomez-Perales/B.A. (Winnipeg), B.S.W. (McMaster), M.S.W. (Toronto)

Patricia Grunauer-Spinner/B.S.W. (Santiago), M.S.W. (McMaster)

Gordon Greenway/B.A., M.S.W. (Carleton)

Liz Lamb/B.A., B.S.W. (McMaster), M.S.W. (Carleton)

Maxine Lane/B.A., B.S.W. (McMaster), M.Ed. (Brock)

Kelly Lazure-Valconi/B.A., B.S.W. (McMaster), M.S.W. (York)

John Medeiros/B.A. (Ottawa), M.S.W. (Toronto)

Jennifer Penton/B.S.W. (Memorial), M.S.W. (Carleton)

Anna Marie Pietrantonio/B.A. (McMaster), M.S.W. (Toronto)

Malcolm Powell/B.A., B.S.W., M.S.W. (McMaster)

Sandy Rowan/B.A. (Concordia), B.S.W., M.S.W. (McGill)

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)

School Notes:

1. SOC WORK 1A06 is available to all students.
2. With the exception of SOC WORK 4Q03, the following courses are available for elective credit for students enrolled in Level III or above of a non-Social Work program. SOC WORK 1A06 is a prerequisite. Space 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 3O03	Human Sexuality in Social Context
SOC WORK 4B03	Adult Family Violence
SOC WORK 4C03	Racism and Social Marginalization in Canadian Society
SOC WORK 4G03	Selected Topics
SOC WORK 4I03	Social Work and Indigenous Peoples
SOC WORK 4J03	Social Change: Social Movements and Advocacy
SOC WORK 4L03	Social Work with an Aging Population
SOC WORK 4Q03	Inquiry into Anti-Oppression: Facilitating the Dialogue
SOC WORK 4R03	Social Work with Women
SOC WORK 4U03	Immigration, Settlement and Social Work
SOC WORK 4W03	Child Welfare
SOC WORK 4Y03	Critical Issues in Mental Health and Addiction

Courses

All courses are open only to Social Work students unless otherwise specified. (See Notes 1 and 2 above.)

SOC WORK 1A06 INTRODUCTION TO SOCIAL WORK

General introduction to the values, perspectives, ideologies, settings and methods of social work within the broad field of social welfare. This course combines a practical and theoretical orientation to the field.

Lectures and discussions; two terms

(See Note 1 above.)

SOC WORK 2A06 THEORY, PROCESS AND COMMUNICATION SKILLS FOR SOCIAL WORK

Knowledge, value base and intervention methods of social work practice; basic skill development in interpersonal communication and interviewing.

Lectures, discussions, exercises; two terms

Antirequisite: SOC WORK 2C03, 2C06, 2D03

SOC WORK 2B03 SOCIAL WELFARE: GENERAL INTRODUCTION

Purpose, values underlying development of social welfare programs; Canada's social security system in historical perspective.

Lectures, discussion; one term

Cross-list: LABR ST 2B03

Antirequisite: SOC WORK 2B06

Students in a Social Work program must register for this course as SOC WORK 2B03.

SOC WORK 2BB3 SOCIAL WELFARE: ANTI-OPPRESSIVE POLICIES AND PRACTICES IN SOCIAL WORK

Exploration and analysis of systematic patterns of oppression, their relationships to social policies and practices and the implications for social work through a variety of instruction including experiential exercises. Topics could include: race, gender, disability, sexual orientation. Exercises, lectures, discussion; one term

Cross-list: LABR ST 2BB3

Antirequisite: SOC WORK 2B06

Students in a Social Work program must register for this course as SOC WORK 2BB3.

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, 3R03, 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. Lectures, discussion and selective use of community resources; one term

Prerequisite: Registration in a Social Work program; or SOC WORK 1A06 and registration in Level III or above of any program

This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work program who have completed SOC WORK 1A06.

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 3DD6 (summer). Priority for summer block given to B.S.W. students.

Prerequisite: SOC WORK 2B06 or both SOC WORK 2B03 and 2BB3; and SOC WORK 2A06 or both SOC WORK 2C03 and 2D03; and PSYCH 2A03 or SOC WORK 2E03

Corequisite: SOC WORK 3DD6

Antirequisite: SOC WORK 3D09

Credit in this course is dependent on achieving a minimum grade of C+ and a Pass in SOC WORK 3DD6.

SOC WORK 3DD6 FIELD PRACTICUM I

Field practicum to develop basic intervention and interviewing skills, particularly in the formation of relationships with individuals, families, groups and communities. Students participate in defining learning goals and experiences. *This course is evaluated on a Pass/Fail basis.*

Field experience equivalent to 15 hours per week; two terms

Option of equivalent summer block placement in combination with SOC WORK 3D06 taken in the summer. Priority for summer block given to B.S.W. students.

Prerequisite: SOC WORK 2B06 or both SOC WORK 2B03 and 2BB3; and SOC WORK 2A06 or both SOC WORK 2C03 and 2D03; and PSYCH 2A03 or SOC WORK 2E03

Corequisite: SOC WORK 3D06

Credit in this course is dependent on receiving a Pass and a minimum grade of C+ in SOC WORK 3D06.

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 program; or SOC WORK 1A06 and registration in Level III or above of any program

This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work program who have completed SOC WORK 1A06.

SOC WORK 3O03 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 program; or SOC WORK 1A06 and registration in Level III or above of any program

This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work program who have completed SOC WORK 1A06.

SOC WORK 4B03 ADULT FAMILY VIOLENCE

To assist students in acquiring knowledge and perspectives concerning social policy issues pertaining to adult violence with emphasis on violence against women.

Seminars; one term

Prerequisite: Registration in a Social Work program; or SOC WORK 1A06 and registration in Level III or above of any program

Not open to students with credit or registration in SOC WORK 4Z03 SELECTED ISSUES IN SOCIAL WELFARE POLICY, if the issue was Family Violence.

This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work program who have completed SOC WORK 1A06.

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 ascription and adaptation process.

Seminars; one term

Prerequisite: Registration in a Social Work program; or SOC WORK 1A06 and registration in Level III or above of any program

Not open to students with credit or registration in SOC WORK 4Z03 SELECTED ISSUES IN SOCIAL WELFARE POLICY, if the issue was Racial and Cultural Issues in Canadian Welfare.

This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work program who have completed SOC WORK 1A06.

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 4DD6

Prerequisite: SOC WORK 3D06, 3DD6

Corequisite: SOC WORK 4DD6

Antirequisite: SOC WORK 4D12

Credit in this course is dependent on achieving a minimum grade of C+ and a Pass in SOC WORK 4DD6.

SOC WORK 4DD6 FIELD PRACTICUM II

Field experience to refine practice skills. Students spend the equivalent of two days per week in social agencies, or with other organizations, in supervised practice.

This course is evaluated on a Pass/Fail basis.

Option of equivalent block placement in conjunction with SOC WORK 4D06.

Prerequisite: SOC WORK 3D06, 3DD6

Corequisite: SOC WORK 4D06

Credit in this course is dependent on receiving a Pass and a minimum grade of C+ in SOC WORK 4D06.

SOC WORK 4G03 SELECTED TOPICS

Critical examination of social work practice in respect to selected social issues. Topics will vary from year to year and the School should be consulted for details for any particular year.

Seminars; one term

Prerequisite: Registration in a Social Work program; or SOC WORK 1A06 and registration in Level III or above of any program

SOC WORK 4G03 may be repeated, if on a different topic.

This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work program who have completed SOC WORK 1A06.

SOC WORK 4I03 SOCIAL WORK AND INDIGENOUS PEOPLES

Examination of structural and cultural variables underlying the complex relationships between Indigenous communities and mainstream society, with particular attention to how they are played out in social work practice. Seminars; one term

Prerequisite: Registration in a Social Work program; or SOC WORK 1A06 and registration in Level III or above of any program

Not open to students with credit in SOC WORK 4G03 if the topic was Social Work and Indigenous Peoples.

This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work program who have completed SOC WORK 1A06.

SOC WORK 4J03 SOCIAL CHANGE: SOCIAL MOVEMENTS AND ADVOCACY

Critical examination of the meaning of social change as a concept and event. Review of strategies of social change and of attempts to effect social change.

Seminars; one term

Prerequisite: Registration in a Social Work program; or SOC WORK 1A06 and registration in Level III or above of any program

This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work program who have completed SOC WORK 1A06.

SOC WORK 4L03 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 program; or SOC WORK 1A06 and registration in Level III or above of any program

Antirequisite: GERONTOL 4S03, POL SCI 4A03, SOC WORK 4A03, 4V03

This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work program who have completed SOC WORK 1A06.

SOC WORK 4O03 SOCIAL WORK WITH COMMUNITIES

Analysis of major community work strategies, historical antecedents, current developments and future potential in Canada. Student participation in the analysis of a community project is expected.

Seminars; one term

Prerequisite: Credit or registration in SOC WORK 3D06 and 3DD6; or permission of the instructor

SOC WORK 4Q03 INQUIRY INTO ANTI-OPPRESSION: FACILITATING THE DIALOGUE

The study of anti-oppression policies and practice combined with practical application in the form of facilitating small group discussions that focus on issues of social justice.

Seminars, discussion, exercises; one term

Prerequisite: SOC WORK 3D06, 3DD6 and permission of the instructor

SOC WORK 4R03 SOCIAL WORK WITH WOMEN

Critical examination of the potential of social policies and programs, community organizations and service practices to challenge women's systemic disadvantage and enhance women's welfare.

Seminars; one term

Prerequisite: Registration in a Social Work program; or SOC WORK 1A06 and registration in Level III or above of any program

Antirequisite: SOC WORK 4E03, 4T03

This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work program who have completed SOC WORK 1A06.

SOC WORK 4U03 IMMIGRATION, SETTLEMENT AND SOCIAL WORK

Examination of social and political factors impacting the lives of immigrants and refugees as they settle in Canada; critical assessment of social work responses.

Seminars; one term

Prerequisite: Registration in a Social Work program; or SOC WORK 1A06 and registration in Level III or above of any program

Not open to students with credit in SOC WORK 4G03 if the topic was Immigration and Settlement.

This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work program who have completed SOC WORK 1A06.

SOC WORK 4W03 CHILD WELFARE

This course analyzes the Canadian child welfare system, its policies and programs and teaches skills for working with children, families and substitute caregivers.

Lectures, discussions, skills development; one term

Prerequisite: Registration in a Social Work program; or SOC WORK 1A06 and registration in Level III or above of any program

This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work program who have completed SOC WORK 1A06.

SOC WORK 4X03 SOCIAL WORK WITH FAMILIES

Examination of relevant aspects of family theory for social work practice; models of family intervention.

Seminars; one term

Prerequisite: Credit or registration in SOC WORK 3D06 and 3DD6; or permission of the instructor

Antirequisite: SOC WORK 3M03

SOC WORK 4Y03 CRITICAL ISSUES IN MENTAL HEALTH AND ADDICTION

A critical review of selected theoretical perspectives and contemporary issues in mental health and addiction; examination of implications for social work research and practice.

Seminars; one term

Prerequisite: Registration in a Social Work program; or SOC WORK 1A06 and registration in Level III or above of any program

Not open to students with credit in SOC WORK 4G03 if the topic was Mental Health and Addiction.

This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work program who have completed SOC WORK 1A06.

SOCIOLOGY

WEB ADDRESS: <http://socsoci.mcmaster.ca/sociology/>

Kenneth Taylor Hall, Room 627

Ext. 24481

Faculty as of January 15, 2007**Chair**

Carl Cuneo

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)

Scott Davies/B.A. (Toronto), M.A. (McMaster), Ph.D. (Toronto)

Margaret Denton/(Gerontological Studies) B.A., M.A., Ph.D. (McMaster)

John Fox/B.A., M.A., Ph.D. (Michigan)

Cyril H. Levitt/B.A., M.A. (Waterloo), Ph.D. (Freie Universitat, Berlin)

Charlene Miall/B.A. (Ottawa), M.A. (Calgary), Ph.D. (York)

Victor Satzewich/B.A., M.A. (Saskatchewan), Ph.D. (Glasgow)

William B. Shaffir/B.A., M.A., Ph.D. (McGill)

Philip G. White/(Kinesiology) B.Sc. (London), M.Sc., Ph.D. (Waterloo)

Associate Professors

Robert Andersen/B.A., M.A. (Western Ontario), Ph.D. (McMaster)

Art Budros/B.A. (San Jose State), M.A., Ph.D. (California-Los Angeles)

Ivy Bourgeault/(Health, Aging and Society) B.Sc. (Alberta) M.Sc., Ph.D. (Toronto)

Neil McLaughlin/B.A., M.A. (Cleveland State), Ph.D. (City University of New York)

Dorothy Pawluch/B.A. (Laurentian), M.A., Ph.D. (McGill)

Robert H. Storey/(Labour Studies) B.A. (Toronto), M.A. (Dalhousie), Ph.D. (Toronto)

Assistant Professors

Deanna Behnke-Cook/B.A., M.A., Ph.D. (McMaster)

Lori Campbell/(Health, Aging and Society) B.A., M.A. (Western Ontario), Ph.D. (Guelph)

Catherine Chiappetta-Swanson/B.A. (York), M.A., Ph.D. (McMaster)

Tina Fetner/B.A. (California, Santa Cruz), M.A., Ph.D. (New York)

James Gillett/(Health, Aging and Society) B.A. (Calgary), M.A., Ph.D. (McMaster)

Andrew Hathaway/B.A., M.A. (Calgary), Ph.D. (McMaster)

Leanne Joannis/B.A. (McGill), M.A. (Concordia), Ph.D. (McMaster)
 Jeremy Stelow (Communication Studies and Multimedia) B.A. (Toronto),
 M.A., Ph.D. (York)
 David Young/B.A., M.A. (Queen's), Ph.D. (McMaster)

Adjunct Assistant Professor

Michael Atkinson/(Western Ontario) B.A. (Waterloo), M.A. (McMaster),
 Ph.D. (Calgary)

Associate Members

Jane Aronson/(Social Work) B.Sc. (New University of Ulster), B.S.W.,
 M.S.W. (McGill), Ph.D. (Toronto)
 Roy Cain/(Social Work) B.S.W., M.S.W., Ph.D. (McGill)
 Graham K. Knight/(Communication Studies and Multimedia) B.A. (Kent),
 M.A., Ph.D. (Carleton)

Department Notes:

1. Prior to registration, students should consult the Department of Sociology's website or individual course outlines, for fuller course descriptions and any changes in the list of courses offered in 2007-2008.
2. SOCIOL 1A06 and several other courses are divided into independent sections.
3. Prerequisite: Academically exceptional students wishing to take a course for which they do not have the prerequisite may seek permission of the instructor to register. However, priority is given in all Level III courses to Sociology students, and in all Level IV courses to Honours Sociology students.
4. All Level IV courses are normally only open to students registered in a Level IV Honours Sociology program on a first come basis. SOCIOL 4M03, 4MM6 and 4N03 require permission of the instructor.

Courses *If no prerequisite is listed, the course is open.*

SOCIOL 1A06 AN INTRODUCTION TO SOCIOLOGY
 A survey of the areas of research which interest the sociologist. Interpretation of human action from the standpoint of the group.
 Two lectures, one tutorial, two terms

SOCIOL 2C06 DEVIANT BEHAVIOUR
 An analysis of deviant behaviour and conformity in relation to social structure and processes, and a discussion of problems of control within the social system.
 Three hours (lectures and discussion); two terms
 Prerequisite: SOCIOL 1A06
Priority will be given to students registered in a Sociology program.

SOCIOL 2D06 THE HUMAN GROUP
 An examination of the individual in social interaction, with emphasis upon the relationships among individuals, social interaction and social structure.
 Three hours (lectures and discussion); two terms
 Prerequisite: SOCIOL 1A06

SOCIOL 2E06 RACIAL AND ETHNIC GROUP RELATIONS
 The course deals with the study of racial and ethnic group relations in Canada and the United States.
 Three hours (lectures and discussion); two terms
 Prerequisite: SOCIOL 1A06

SOCIOL 2I03 SOCIOLOGY OF ORGANIZATIONS
 A theoretical and empirical analysis of formal and informal organizational structures and processes in the major sectors of modern industrial society.
 Three hours (lectures and discussion); two terms
 Prerequisite: SOCIOL 1A06
 Antirequisite: LABR ST 2I03, 2I06, 3I03, SOCIOL 2I06

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 program production and the relationship between media production and management.
 Three hours (lectures); one term
 Prerequisite: CMST 1A03 and 1B03; or SOCIOL 1A06
 Antirequisite: 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
Priority will be given to students registered in a Sociology program.

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
Priority will be given to students registered in a Sociology program.

SOCIOL 2R03 PERSPECTIVES ON SOCIAL INEQUALITY
 This course will introduce the student to major theories of social inequality, such as the Marxian, Weberian and structural-functionalist perspectives.
 Three hours (lectures and discussion); one term
 Prerequisite: SOCIOL 1A06
 Antirequisite: SOCIOL 2O06

SOCIOL 2RR3 CASE STUDIES OF SOCIAL INEQUALITY
 This course will introduce the student to the empirical literature on social inequality. Depending on the year, the focus will be on class, status, power and elites, income, education, region, age, gender and race/ethnicity.
 Three hours (lectures and discussion); one term
 Prerequisite: SOCIOL 1A06
 Antirequisite: SOCIOL 2O06

SOCIOL 2S06 INTRODUCTION TO SOCIOLOGICAL THEORY
 An introduction to the foundations, rise and development of sociological theory.
 Three hours (lectures and discussion); two terms
 Prerequisite: SOCIOL 1A06 and registration in a Sociology program
 Antirequisite: SOCIOL 2S03, 3A06

SOCIOL 2T03 SOCIOLOGY OF SPORT
 This course provides a detailed theoretical and empirical examination of how sport is culturally organized, experienced and mediated.
 Three hours (lectures and discussion); one term
 Prerequisite: SOCIOL 1A06
 Antirequisite: KINESIOL 1H03, 3P03

Not open to students with credit or registration in SOCIOL 3J03 if the topic was Sociology of Sport.
Priority will be given to students registered in a Sociology program.

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
Priority will be given to students registered in a Sociology program.

SOCIOL 2V06 OCCUPATIONS AND PROFESSIONS
 An examination of the occupational structure of industrial society, the changing nature of work, and problems associated with such change.
 Three hours (lectures and discussion); two terms
 Prerequisite: SOCIOL 1A06

SOCIOL 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 a Sociology or Social Work program
 Antirequisite: ANTHROP 2Z03, CMST 2A03, GEO 2HR3, GERONTOL 2C03, HEALTHST 2B03

SOCIOL 3A03 EUROPEAN SOCIOLOGICAL THEORY
 An advanced examination of classical and contemporary European sociological theory.
 Three hours (lectures and discussion); one term
 Prerequisite: SOCIOL 2S06 and registration in Level III or IV of an Honours Sociology program
The Department of Sociology guarantees that all Level III and IV Honours Sociology students will have access to either this course, SOCIOL 3P03 or 3PP3.

SOCIOL 3B03 SELECTED TOPICS IN THE SOCIOLOGY OF EDUCATION
 An examination of selected topics in the sociology of education.
 Three hours (lectures and discussion); one term
 Prerequisite: At least 18 units of Sociology. SOCIOL 2P06 is strongly recommended.
 Prerequisite (Beginning 2007-2008): SOCIOL 2P06
SOCIOL 3B03 may be repeated, if on a different topic, to a total of six units.

SOCIOL 3C03 MEDIA AND SOCIAL ISSUES

An analysis of the relationships between mass media and modern society. Topics may include ideology and agenda-setting in the media, representations of social problems (e.g., homelessness, violence), moral panics, media scandals, or public ceremonies.

Three hours (lectures); one term

Prerequisite: Registration in Level III or above of a Communication Studies program; or SOCIOL 2L03 and registration in a Sociology program

Cross-list: CMST 3C03

SOCIOL 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 (lectures and discussion); one term

Prerequisite: SOCIOL 2U06 or registration in a Combined Honours in Sociology and Gerontology program

Antirequisite: GERONTOL 3M03

SOCIOL 3D03 SPECIAL TOPICS IN THE SOCIOLOGY OF THE FAMILY

An advanced course allowing detailed study of selected topics in the sociology of the family.

Three hours (lectures and discussion); one term

Prerequisite: SOCIOL 2U06

SOCIOL 3D03 may be repeated, if on a different topic, to a total of six units.

Priority will be given to students registered in a Sociology program

SOCIOL 3G03 SOCIOLOGY OF HEALTH CARE

Selected issues concerning forms of providing health care.

Three hours (lectures and discussion); one term

Prerequisite: SOCIOL 1A06

Priority will be given to students registered in a Sociology program.

SOCIOL 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

SOCIOL 3GG3 may be repeated, if on a different topic, to a total of six units.

Priority will be given to students registered in a Sociology program.

SOCIOL 3H06 RESEARCH TECHNIQUES AND DATA ANALYSIS

A comprehensive introduction to statistical principles of research design and data analysis in the social sciences.

Three hours (lectures and labs); two terms

Prerequisite: Registration in any program in Sociology. Students in Honours Anthropology, Gerontology and Labour Studies will have second priority.

Not open to students with credit or registration in any six units of Research Methods as prescribed by all other Social Sciences programs; SOCIOL 2Y03; all Statistics courses except STATS 1A03, 1L03, 2D03, 3S03, 3U03, 4H03.

SOCIOL 3HH3 SOCIOLOGY OF HEALTH

Sociological approaches to the study of health and illness.

Three hours (lectures and discussion); one term

Prerequisite: SOCIOL 1A06

Priority will be given to students registered in a Sociology program.

SOCIOL 3J03 SPECIAL TOPICS IN SOCIOLOGICAL ANALYSIS I

An examination of selected topics of contemporary interest to sociologists. Students should consult the Department concerning the topics to be examined.

Three hours (lectures and discussion); one term

Prerequisite: SOCIOL 1A06

SOCIOL 3J03 may be repeated, if on a different topic, to a total of six units.

SOCIOL 3K03 SPECIAL TOPICS IN SOCIOLOGICAL ANALYSIS II

Same as SOCIOL 3J03.

Three hours (lectures and discussion); one term

Prerequisite: SOCIOL 1A06

SOCIOL 3K03 may be repeated, if on a different topic, to a total of six units.

SOCIOL 3KK3 GENOCIDE: SOCIOLOGICAL AND POLITICAL PERSPECTIVES

An examination of genocide and other extreme crimes against humanity.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level III or above

Cross-list: POL SCI 3KK3

Antirequisite: SOC SCI 2C03

Priority will be given to students registered in a Political Science or Sociology program.

This course is administered by the Department of Political Science.

SOCIOL 3LL3 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

SOCIOL 3O03 QUALITATIVE RESEARCH METHODS

This course will provide a detailed study of selected qualitative methods in Sociology.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Honours Sociology

Antirequisite: GERONTOL 3R03

The Department of Sociology guarantees that all Level III and Level IV Honours Sociology students will have access to either this course, or 3W03.

SOCIOL 3P03 AMERICAN SOCIOLOGICAL THEORY

An advanced examination of classical and contemporary American sociological theory.

Three hours (lectures and discussion); one term

Prerequisite: SOCIOL 2S06 and registration in Level III or IV of an Honours Sociology program

Antirequisite: SOCIOL 3A06

Alternates with SOCIOL 3PP3.

The Department of Sociology guarantees that all Level III and IV 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 2S06 and registration in Level III or IV of an Honours Sociology program

Alternates with SOCIOL 3P03.

The Department of Sociology guarantees that all Level III and IV Honours Sociology students will have access to either this course, SOCIOL 3A03 or 3P03.

SOCIOL 3U03 SOCIOLOGY OF SEXUALITIES

An exploration of the social aspects of sexuality and consideration of how sexual experiences are shaped by, and interpreted through, historically specific social contexts.

Three hours (lectures and discussion); one term

Prerequisite: SOCIOL 1A06. SOCIOL 2Q06 is strongly recommended.

Priority will be given to students registered in a Sociology program.

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

The Department of Sociology guarantees that all Level III and IV Honours Sociology students will have access to either this course, or 3O03.

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 program as of September 1998.

Priority will be given to students registered in a Sociology program.

SOCIOL 3Z03 ETHNIC RELATIONS

An analysis of political, social and economic change in selected locales.

Three hours (lectures and discussion); one term

Prerequisite: SOCIOL 1A06

Priority will be given to students registered in a Sociology program.

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

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

Not open to students with credit in SOCIOL 4GG3 if on a similar topic.

SOCIOL 4AA3 may be repeated, on a different topic, to a total of six units.

SOCIOL 4BB3 SELECTED TOPICS IN THE SOCIOLOGY OF EDUCATION

This advanced course offers an intensive examination of selected problems involving the relationship between schooling and society.

Three hours (seminar); one term

Prerequisite: Registration in Level IV Honours Sociology

Not open to students with credit in SOCIOL 4J03 or 4K03 if on a similar topic.

SOCIOL 4D03 PERSPECTIVES ON SOCIOLOGICAL THEORY

A discussion of various sociological and non-sociological critiques of sociological theory.

Three hours (seminar); one term

Prerequisite: SOCIOL 2S06 and registration in Level IV Honours Sociology

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

SOCIOL 4EE3 SELECTED TOPICS IN THE SOCIOLOGY OF CULTURE

A sociological examination of topics related to the production, dissemination, consumption and/or interpretation of culture. Community service learning may be a component of this course.

Three hours (seminar); one term

Prerequisite: Registration in Level IV Honours Sociology

SOCIOL 4EE3 may be repeated, if on a different topic, to a total of six units.

SOCIOL 4G03 ADVANCED TOPICS IN THE SOCIOLOGY OF HEALTH AND ILLNESS

An examination of the social bases of illness. In different years consideration may be given to topics such as gender, social class and occupational and environmental health issues.

Three hours (seminar); one term

Prerequisite: Registration in Level IV Honours Sociology

SOCIOL 4G03 may be repeated, if on a different topic, to a total of six units.

SOCIOL 4GG3 SPECIAL TOPICS IN THE SOCIOLOGY OF DEVIANCE

An advanced course allowing detailed study of selected topics in the Sociology of Deviance. Topics will vary from year to year.

Three hours (seminar); one term

Prerequisite: SOCIOL 2C06 and registration in Level IV Honours Sociology

SOCIOL 4GG3 may be repeated, if on a different topic, to a total of six units.

SOCIOL 4J03 SELECTED TOPICS IN SOCIOLOGY I

Topics of contemporary interest to sociologists, with emphasis upon current theory and research. Students should consult the Department concerning the topics to be examined.

Three hours (seminar); one term

Prerequisite: Registration in Level IV Honours Sociology

SOCIOL 4J03 may be repeated, if on a different topic, to a total of six units.

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

Note: Students entering this course should be well-versed in basic Internet navigation skills, such as the use of email, usenet, listservs, and the World Wide Web. Such skills are required to complete the research paper using internet electronic sources of information.

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

SOCIOL 4K03 may be repeated, if on a different topic, to a total of six units.

SOCIOL 4M03 DIRECTED RESEARCH I FOR HONOURS STUDENTS

Directed study of a research problem through published materials and/or field inquiry and/or data analysis. Students will be required to write up the results of their inquiry in scholarly form.

One term

Prerequisite: Registration in Level IV Honours Sociology and permission of the instructor

SOCIOL 4MM6 DIRECTED RESEARCH FOR HONOURS STUDENTS

Directed study of a research problem through published material and/or field inquiry and/or data analysis. Students will be required to write up the results of their inquiry in scholarly form.

Two terms

Prerequisite: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department.

SOCIOL 4N03 DIRECTED RESEARCH II FOR HONOURS STUDENTS

Same as SOCIOL 4M03.

One term

Prerequisite: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the instructor.

SOCIOL 4PP3 ISSUES IN THE SOCIOLOGY OF AGING

A study of selected issues in the sociology of aging such as sociodemographic changes, changes in the family, social and health services, retirement, political economy, and theoretical approaches in aging.

Three hours (seminar); one term

Prerequisite: GERONTOL 1A03 or SOCIOL 3X03; and registration in Level IV Honours Sociology.

Antirequisite: GERONTOL 4K03, SOCIOL 4P03

SOCIOL 4R03 INDIVIDUAL AND SOCIETY

An intensive examination of selected problems involving the relationship of individuals to social structures.

Three hours (seminar); one term

Prerequisite: Registration in Level IV Honours Sociology

SOCIOL 4U03 SPECIAL TOPICS IN THE SOCIOLOGY OF WOMEN

An intensive examination of selected problems concerning women. Depending upon the instructor, topics may include: stratification, inequality, political participation, sexuality, health and work.

Three hours (seminar); one term

Prerequisite: Registration in Level IV Honours Sociology

SOCIOL 4U03 may be repeated, if on a different topic, to a total of six units.

SOCIOL 4V03 ISSUES IN THE SOCIOLOGY OF OCCUPATIONS AND THE PROFESSIONS

An advanced course allowing detailed study of one or more topics of special interest.

Three hours (seminar); one term

Prerequisite: Registration in Level IV Honours Sociology

SOCIOL 4W03 SOCIAL PROBLEMS

The focus of the course will be theories concerning social problems or an empirical examination of specific issues that have become the object of public debate and discussion.

Three hours (seminar); one term

Prerequisite: Registration in Level IV Honours Sociology

SOFTWARE ENGINEERING

(SEE COMPUTING AND SOFTWARE)

SPANISH

(SEE LINGUISTICS AND LANGUAGES, HISPANIC STUDIES)

STATISTICS

(SEE MATHEMATICS AND STATISTICS)

TECHNOLOGY

WEB ADDRESS: <http://www.btech.mcmastermohawk.ca>

Communications Research Laboratory (CRL), Room 112B

Ext. 27056

Executive Director

Arthur C. Heidebrecht

Associate Director (Four-Year B.Tech. Programs)

Ishwar Singh

Chair, Automotive and Vehicle Technology

Appointment Pending

Chair, Biotechnology

Appointment Pending

Chair, Civil Engineering Infrastructure Technology

Cameron Churchill

Chair, Computing and Information Technology

Fred Laidman

Chair, Manufacturing Engineering Technology

Eu-Gen Ng

Chair, Process Automation Technology

Ishwar Singh

Notes:

1. All Level I, II, III and IV B.Tech (Four Year programs) courses are available only to students registered in the B.Tech programs.
2. All Automotive and Vehicle Technology as well as all Biotechnology courses will not be offered in 2007-2008.
3. All Level II and Level III Process Automation Technology courses will be offered in 2007-2008.
4. All Four-Year program courses will be offered at Mohawk College.

AUTOMOTIVE AND VEHICLE TECHNOLOGY ...

Automotive and Vehicle Technology courses will not be offered in 2007-2008.

Courses

AUTOTECH 2AC3 ADVANCED CAD

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 lab (four hours); one term

Prerequisite: AUTOTECH 2AE3, 2CD3

AUTOTECH 2AE3 AUTOMOTIVE ENGINEERING TECHNOLOGY I

Stress and strain; deformation; failure prediction; lubrication, friction and wear; columns; cylinders; shafts, hydrodynamic, hydrostatic and rolling bearings; gears; fasteners; springs; brakes and clutches; disassemble and reassemble vehicle systems.

Three lectures, one lab (three hours); one term

Prerequisite: ENG TECH 1CH3, 1EL3, 1ME3, 1PH3

AUTOTECH 2CD3 CAD FOR DESIGN

Two dimensional drafting (AutoCAD): drawing commands, drafting settings, drawing editing, plotting output, drawing environment, dimensions, tolerances, shape description, orthographic projections, sectional and auxiliary views. Parametric 3D-modelling and assemblies.

One lab (four hours); one term

Prerequisite: ENG TECH 1ME3, 1PR3

AUTOTECH 2MT3 MATERIALS TECHNOLOGY

Physical properties including tensile and impact of materials, ductile and brittle fracture, testing, applications and selection of ceramics, metals and alloys, polymers and advanced materials used in automobiles and vehicles. Metal casting for automotive applications. Case studies.

Three lectures, one lab (three hours); one term

Prerequisite: ENG TECH 1CH3, 1PH3

AUTOTECH 2TS3 THERMAL SYSTEMS

Thermodynamic principles; heat engines; gas turbine cycles; air conditioning; conductive, convective and radiative heat transfer, heat transfer coefficients, heat exchangers, vehicle thermal management components and systems.

Three lectures, one lab (three hours); one term

Prerequisite: AUTOTECH 2AE3, ENG TECH 1CH3, 1PH3, 2MA3

AUTOTECH 3AE3 AUTOMOTIVE ENGINEERING TECHNOLOGY II

Spark ignition engines; diesel engines, transmissions and driveline; steering systems and dynamics; suspensions; brakes; tires; vehicle aerodynamics; transmission matching and vehicle performance; alternative vehicles; case studies.

Three lectures, one lab (two hours); one term

Prerequisite: AUTOTECH 2AE3, 2TS3

AUTOTECH 3AV3 ALTERNATE VEHICULAR POWER SYSTEMS

Alternate vehicular power systems: hybrid and fuel cell technology. Current and future vehicular power train design changes and their implications and commercial viability.

Three lectures, one lab every other week (three hours); one term

Prerequisite: AUTOTECH 3AE3, 3CT3

AUTOTECH 3CT3 CONTROL THEORY

Analysis and design of closed loop control systems course to include: control system characteristics and performance, stability analysis, system types and performance improvement, digital control systems, compensation, filtering and motion control system analysis and tuning.

Three lectures, one lab (three hours); one term

Prerequisite: AUTOTECH 2AE3, ENG TECH 1CP3, 1EL3, 2MT3

AUTOTECH 3MP3 MANUFACTURING PROCESSES AND SYSTEMS

Metal-casting processes and equipment; forming and shaping processes and equipment for metals, ceramics and plastics; material-removal processes and machines; joining processes and equipment; surface technology; engineering metrology and instrumentation.

Three lectures, one lab (two hours); one term

Prerequisite: AUTOTECH 2AE3, 2MT3

AUTOTECH 3MV3 MECHATRONICS FOR VEHICLE TECHNOLOGY

Sensors, actuators, programmable controllers, and modelling of dynamic systems. System identification; simulation and control: Analog to digital and digital to analog conversion. Communication interfaces; automotive examples and case studies.

Three lectures, one lab (three hours); one term

Prerequisite: AUTOTECH 3AE3, 3CT3

AUTOTECH 3TS3 FLUID MECHANICS

Fluid statics; forces on submerged and floating bodies; kinematics of flow and Bernoulli's equations; dimensional analysis and similarity; flow in closed conduits. Automotive turbomachines, fluid flow around bodies, lift and drag minimization by proper vehicle design.

Three lectures, one lab (two hours every other week); one term

Prerequisite: AUTOTECH 2TS3

AUTOTECH 3VD3 VEHICLE DYNAMICS I

Single degree of freedom systems; free vibration; harmonically excited vibration; vibration under general forcing conditions; two degree of freedom systems; multi-degree of freedom systems; natural frequencies and mode shapes; vibration control; vehicle oscillations.

Three lectures, one lab (two hours every other week); one term

Prerequisite: AUTOTECH 3AE3, ENG TECH 3FE3

AUTOTECH 4AE3 AUTOMOTIVE ENGINEERING TECHNOLOGY III

Internal combustion engine maps; engine development process; engine configuration and balance; materials, design, manufacturing and assembling main engine components; bearings; lubrication; cooling; gaskets and seals; powertrain design, manufacture and assembly.

Three lectures, one lab (two hours every other week); one term

Prerequisite: AUTOTECH 3AE3, 3AV3

AUTOTECH 4AT3 AUTOMOTIVE ENGINEERING TECHNOLOGY IV

Automotive manufacture and assembly; automotive testing; research methods and design of experiments, diagnostics; ergonomics; vehicle acoustics; vehicle safety and accident analysis; standards for safety and emissions; environmental assessment.

Three lectures; one term

Prerequisite: AUTOTECH 4AE3, 4EC3, 4MS3

AUTOTECH 4C13 COMPUTER INTEGRATED MANUFACTURING
Computer systems and CIM; NC programming; robotics; material handling, storage and identification; manufacturing planning and systems; flexible manufacturing systems; CAD/CAM, CIM and quality; emerging CIM technologies. Three lectures, one lab (three hours); one term
Prerequisite: AUTOTECH 3AE3, 4EC3, ENG TECH 1CP3

AUTOTECH 4DV3 VEHICLE DYNAMICS II
Acceleration performance; braking performance; aerodynamics and rolling resistance; ride; tires; steady-state cornering; suspensions; steering systems; rollover. Three lectures, one lab (two hours every other week); one term
Prerequisite: AUTOTECH 3VD3, 4AE3

AUTOTECH 4EC3 ELECTRICAL AND ELECTRONICS CONTROL SYSTEMS
Intelligent vehicles; vehicle controllers, protocols buses and applications areas such as chassis, steering, braking, traction and stability control etc; and safety critical systems. Three lectures, one lab (three hours); one term
Prerequisite: AUTOTECH 3CT3, 3MV3

AUTOTECH 4MS3 MODELLING AND SIMULATION
Multi-body dynamic modelling and simulation of automotive vibrations (ADAMS software); car body modelling; complex multi-body dynamic models and parametric solid models; engine modelling. Three lectures, one lab; one term
Prerequisite: AUTOTECH 2AC3, 3AV3, 3VD3, ENG TECH 3FE3, 3MN3

AUTOTECH 4TP3 TECHNICAL PROJECT
This course requires students to research, design, develop and implement an independent project. The project will be documented as a technical report and presented in a seminar. One lab (three hours); two terms
Prerequisite: AUTOTECH 3AV3, 3MV3, 3VD3, GEN TECH 3PM3

BIOTECHNOLOGY ...

Biotechnology courses will not be offered in 2007-2008.

Courses

BIOTECH 2BC3 BIOCHEMISTRY
Biochemistry and biotechnology; amino acids, nucleotides, nucleic acids, proteins, peptides, enzymes, carbohydrates, lipids, membranes and their functions, metabolism, gene expression and DNA. Three lectures, one term
Prerequisite: BIOTECH 2OC3

BIOTECH 2BE3 BIOTECHNOLOGY I
Basic elements of biotechnology and career opportunities in biotechnology industries. Proteins, enzymes, nucleic acids, gene expression and manipulation, DNA cloning and recombinant technology, with applications in genetics, medicine and industry. Three lectures, one lab (three hours); one term
Prerequisite: ENG TECH 1BI3, 1CH3

BIOTECH 2BT3 BIOTECHNOLOGY II
A continuation of Biotechnology I, which includes a more in depth examination of select topics from the first level course. Topics include biotechnology applications in immunology, medical biotechnology, plant biotechnology and animal biotechnology. Three lectures, one lab (three hours); one term
Prerequisite: BIOTECH 2BE3, 2CB3

BIOTECH 2CB3 CELL BIOLOGY
An introduction to basic living cell structure, functions, genetics and the fundamentals of metabolism. Three lectures, one lab (three hours every other week); one term
Prerequisite: ENG TECH 1BI3, 1CH3

BIOTECH 2GT3 GENETICS
This course covers the fundamentals of genetic studies including genes and genetic code, DNA, RNA and protein synthesis, cellular reproduction and human genetics. Three lectures, one term
Prerequisite: BIOTECH 2BE3, 2CB3

BIOTECH 2MB3 MICROBIOLOGY
An introduction to microbiological analysis with emphasis on use of microscopic techniques, staining, cultivation and control of microbial growth, enumeration, identification, potable water analysis, with environmental and industrial applications. Three lectures, one lab (three hours); one term
Prerequisite: BIOTECH 2BE3, 2CB3

BIOTECH 2OC3 ORGANIC CHEMISTRY
This course covers a working knowledge of the major classes of organic compounds, including their physical and chemical properties. The laboratory introduces the techniques of organic synthesis and identification. Three lectures, one lab (three hours); one term
Prerequisite: ENG TECH 1CH3

BIOTECH 3BP3 BIOREACTOR PROCESSES
An overview of fermentation technology and bioprocessing, including the kinetics and thermodynamics of microbial processes and fermentation. Batch and continuous fermentation, bioreactor design, operation and control, scale up, as well as bioprocess development. Four lectures, one lab (three hours); one term
Prerequisite: BIOTECH 2BT3, 3EC3, ENG TECH 1EL3

BIOTECH 3EC3 CHEMICAL ENGINEERING CONCEPTS
This course provides an introductory survey of chemical engineering concepts. The topics covered are: material and energy balances; survey of momentum, heat and mass transfer; basics of chemical process design. Three lectures, one lab (two hours every other week); one term
Prerequisite: ENG TECH 1CH3, 1MT3, 1PH3

BIOTECH 3FM3 FOOD MICROBIOLOGY
An introduction to the microbiology of raw materials used in the manufacturing of food products. The course will review microbial growth and examine the types of microorganisms found in foods, the fermentation process in foods and food borne illness. Three lectures, one term
Prerequisite: BIOTECH 2BT3, 2CB3

BIOTECH 3FR3 FORENSICS
An introduction to the field of forensic biology, with applications to criminal forensics, paternity testing and forensic microbiology. Three lectures, one lab (three hours every other week); one term
Prerequisite: BIOTECH 2BT3, 3MB3

BIOTECH 3IV3 IMMUNOLOGY AND VIROLOGY
Structure and function of antibodies, antibody diversity and interactions, immune system and immunity, immunological responses to disease, antibodies production and applications, structure of viruses, methods to study viruses, virus transcriptions and interactions. Three lectures, one lab (three hours); one term
Prerequisite: BIOTECH 2GT3, 2MB3

BIOTECH 3MB3 MOLECULAR BIOLOGY
Principles of molecular biology with emphasis on nucleic acid based methodologies; gene manipulation, expression systems for proteins; protein interactions; DNA repair, recombination and transcription; RNA processing, translation and gene expression. Three lectures, one lab (three hours); one term
Prerequisite: BIOTECH 2GT3, 2MB3

BIOTECH 3PM3 PHARMACOLOGY
Pharmacology topics include the nature of drugs, drug receptors, drug action, pharmacokinetics and pharmacodynamics. Topics on drug discovery include pre-clinical testing, clinical trials, manufacturing and patents. Four lectures, one term
Prerequisite: BIOTECH 2BC3, ENG TECH 1BI3

BIOTECH 4BI3 BIOINFORMATICS
The course will familiarize students with the tools and principles of bioinformatics. A toolbox will be used to study access to genomic and proteomic data and data formats and analysis techniques. Three lectures, one lab (three hours); one term
Prerequisite: BIOTECH 4GP3, ENG TECH 1CP3, 3ST3

BIOTECH 4BL3 BIOMATERIALS
Natural and synthetic biopolymers, and other materials for industrial and biomedical engineering applications: biocompatibility; industrial products to include biofilms, lubricants and adhesives; bioplastics, composites and applications. Three lectures, one term
Prerequisite: BIOTECH 2BC3, 2BT3

BIOTECH 4BM3 BIOPHARMACEUTICALS
An introduction to biopharmaceutical drug development and manufacture. Emphasis will include basic genetic engineering principles used in the development and large-scale manufacture of biopharmaceutical products. Three lectures, one term
Prerequisite: BIOTECH 3BP3, 3PM3

BIOTECH 4BS3 BIOETHICS, SAFETY AND REGULATIONS

This course will familiarize students with current methods of laboratory safety and good lab and manufacturing practices in biotechnology; bioethics issues, benefits and risks of biotechnology applications; provincial, federal and international guidelines/regulations.

Three lectures; one term

Prerequisite: BIOTECH 3BP3, 3MB3

BIOTECH 4GP3 GENOMICS AND PROTEOMICS

This course examines genomics, functional genomics and proteomics. Topics covered are the organization of model system genomes, gene expression profiling at the mRNA and protein levels, microarrays, analyses of interactions, genomic and proteomic databases.

Three lectures; one lab (three hours); one term

Prerequisite: BIOTECH 2BT3, 3MB3

BIOTECH 4TB3 BIOTECHNOLOGY III

This advanced course examines select topics of interest that reflect current methods utilized to produce new products and processes in the field of biotechnology. The course invites subject experts from various sectors of the biotech industry as guest lecturers.

Three lectures; one term

Prerequisite: BIOTECH 2BT3, 4GP3

BIOTECH 4TR3 TECHNICAL PROJECT

This course requires students to research, design, develop and implement an independent project. The project will be documented as a technical report and presented in a seminar.

One tutorial, one lab (two hours); two terms

Prerequisite: BIOTECH 3BP3, 3FM3, 3FR3, 3PM3

CIVIL ENGINEERING INFRASTRUCTURE TECHNOLOGY ...

Courses**CIV TECH 3BD3 BRIDGE DESIGN, MAINTENANCE AND REPAIR**

Bridge elements, structural forms, design loads and required concrete and steel properties. Causes and mechanisms of damage in bridges and of methods of damage detection and assessment. Effective repair materials and techniques and maintenance strategies.

Three lectures; one term

Prerequisite: CIV TECH 3SA3, 4SD3

CIV TECH 3CS3 CONTAMINATED SITE MANAGEMENT

Theoretical and practical aspects of contaminated site management; regulatory compliance; basic hydrogeology and geochemical principles; site assessment procedures; risk assessment and risk management; remediation technologies.

Three lectures; one term

Prerequisite: CIV TECH 3GE3

CIV TECH 3FM3 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.

Two lectures, one lab; one term

Prerequisite: ENG TECH 3MA3

CIV TECH 3FR3 INSPECTION AND FOUNDATION REPAIR

Investigation and evaluation of damaged foundations, analysis of causes and failure mechanisms; repair techniques and remedial measures; preventative measures; optimization of repair effectiveness.

Three lectures; one term

Prerequisite: CIV TECH 3GT3

CIV TECH 3GE3 GEOTECHNICAL ENGINEERING I

Composition of soils, soil identification and classification; compaction; seepage theory; effective stress concept; stresses and displacements using elastic solutions; consolidation theory and settlement.

Two lectures, one lab; one term

Prerequisite: Registration in Civil Engineering Infrastructure Technology

CIV TECH 3GT3 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; borehole testing and interpretation.

Two lectures, one lab; one term

Prerequisite: CIV TECH 3GE3

CIV TECH 3LU3 ADVANCED LAND USE PLANNING

Management of land use; land development and redevelopment processes; infrastructure requirements; land redevelopment; principles and practices of land use planning, legislation and regulations; public consultation; GIS applications.

Two lectures, one lab; one term

Prerequisite: Registration in Civil Engineering Infrastructure Technology

CIV TECH 3ND3 NON-DESTRUCTIVE TESTING METHODS

Theoretical and practical applications of NDT methods; application of NDT to specific problems of civil infrastructure, including monitoring of construction quality (QA/QC), in-service inspection, critical defect assessment, "fitness for purpose" assessments.

Two lectures, one lab; one term

Prerequisite: Registration in Civil Engineering Infrastructure Technology

CIV TECH 3PM3 PAVEMENT MATERIALS AND REHABILITATION

Properties of aggregates and soils, asphalt and Portland cement concrete; characterization and design of bituminous mixtures; pavement rehabilitation; distress mechanisms; rehabilitation alternatives; construction techniques; preventative measures.

Two lectures, one lab; one term

Prerequisite: CIV TECH 3GE3, ENG TECH 3ML3

CIV TECH 3RM3 INSPECTION, REPAIR AND MAINTENANCE OF CONCRETE STRUCTURES

Causes, mechanisms, detection and assessment of damage in concrete structures; repair materials and techniques for damaged structures; long term protection and maintenance strategies; repair effectiveness and cost comparisons; life-cycle cost analysis.

Three lectures; one term

Prerequisite: ENG TECH 3ML3

CIV TECH 3SA3 STRUCTURAL ANALYSIS

Structural analysis and modelling of linear elastic truss, beam and frame structures; analysis of determinate and indeterminate structures; matrix stiffness method of analysis; connections; introduction to finite element analysis.

Two lectures, one lab; one term

Prerequisite: ENG TECH 3ML3

CIV TECH 3TP3 TRANSPORTATION PLANNING AND MODELLING

Fundamental theories and applications of transportation planning and modelling; short and long range transportation planning; traffic impacts of land development; trip generation and gravity models; software applications.

Two lectures, one lab; one term

Prerequisite: Registration in Civil Engineering Infrastructure Technology

CIV TECH 3UM3 UTILITIES MANAGEMENT

Introduction to utilities products and networks. Planning and management tools for utilities infrastructure, including inventory management, needs assessment, demand management and investment decisions.

Three lectures; one term

Prerequisite: Registration in Civil Engineering Infrastructure Technology

CIV TECH 3WT3 POTABLE WATER AND SEWER SYSTEMS REHABILITATION

Diagnostic tools to determine the condition of underground services; "no dig" or "trenchless" rehabilitation technologies; modes and types of failure.

Three lectures; one term

Prerequisite: Registration in Civil Engineering Infrastructure Technology

CIV TECH 4EI3 ENVIRONMENTAL IMPACT AND SUSTAINABILITY

Introduction to ecology; natural and urban ecosystems; environmental impact assessment and legislation; energy and environmental audits; life cycle analysis; solid and hazardous wastes; air quality and control; sustainable infrastructure design; foot printing; sustainability indicators.

Three lectures; one term

Prerequisite: Registration in Civil Engineering Infrastructure Technology

CIV TECH 4ES3 MODELLING OF ENGINEERING SYSTEMS

Mathematical models and systems; economic comparison of projects; linear and non-linear programming; simulation modelling; optimization; computer applications in civil engineering.

Two lectures, one lab; one term

Prerequisite: ENG TECH 3MN3

CIV TECH 4MH3 MUNICIPAL HYDRAULIC SYSTEMS

Analysis and design of water distribution networks; analysis and design of wastewater collection systems; analysis and design of stormwater collection systems.

Two lectures, one lab; one term

Prerequisite: CIV TECH 3FM3

CIV TECH 4SD3 STRUCTURAL DESIGN

Limit states design methods to ensure capacities for bending moment, shear and diagonal tension, axial force; serviceability requirements; failure analysis for common structural materials.

Three lectures; one term

Prerequisite: CIV TECH 3SA3

COMPUTING AND INFORMATION TECHNOLOGY ...

Courses

COMPTech 3DS3 DATA STRUCTURES AND ALGORITHMS

Commonly used abstract data types such as lists, stacks, queues, sets and trees and their applications and efficient implementations. Fast sorting, matching and graph algorithms. Algorithm analysis.

One lecture (three hours); one term

Prerequisite: COMPTech 3PD3

COMPTech 3ET3 ETHICS AND IT LAW

A study of the impact of the technological revolution on our privacy; digitized information and legal and ethical issues surrounding computer technologies in the global marketplace.

One lecture (three hours); one term

Prerequisite: Registration in Computing Information Technology

COMPTech 3IA3 INTERNET APPLICATIONS

A study of the relationship between applications, middleware and networking infrastructure technologies.

One lecture (two hours), one lab; one term

Corequisite: COMPTech 3NT3

COMPTech 3IN3 INQUIRY I (INDIVIDUAL)

Inquiry-based course in which students investigate relevant IT problems, formulate precise problem statements and propose documented and justified solutions.

One lecture (three hours); one term

Prerequisite: Registration in Computing Information Technology

COMPTech 3IT3 NETWORKING I

Network, transport, physical and data link layers in cable-based and wireless LANs.

One lecture (two hours), one lab; one term

Prerequisite: Registration in Computing Information Technology

COMPTech 3NT3 NETWORKING II

Network security, firewalls, penetration testing, risk assessment and security auditing.

One lecture (two hours), one lab; one term

Prerequisite: COMPTech 3IT3

COMPTech 3PD3 PROGRAMMING DESIGN I

Programming in C, with event handling, using a visual programming language.

One lecture (two hours), one lab; one term

Prerequisite: Registration in Computing Information Technology

COMPTech 3PR3 PROGRAMMING DESIGN II

Encapsulation, inheritance, polymorphism, operator overloading, friends, specialized built-in classes using C++ and Java.

One lecture (two hours), one lab; one term

Prerequisite: COMPTech 3PD3

COMPTech 3RQ3 REQUIREMENTS IN SYSTEMS ANALYSIS

Requirements gathering, documentation and validation for computer systems. Estimating costs and resource requirements.

One lecture (three hours); one term

Prerequisite: Registration in Computing Information Technology

COMPTech 4AP3 ASSEMBLER PROGRAMMING

Computer architecture and assembler language. Low-level representation of control and data structures. Hardware interfaces. Interfaces to high-level languages.

One lecture (two hours), one lab; one term

Prerequisite: COMPTech 3PD3

COMPTech 4CC3 CLUSTER COMPUTING

Design and implementation of cluster-based systems with particular emphasis on performance, fault tolerance and flexibility.

One lecture (two hours), one lab; one term

Prerequisite: COMPTech 3NT3

COMPTech 4DM3 DATA MINING

Fundamental concepts of data mining: classification, association, prediction and clustering. Algorithms based on decision trees. Bayes' model. Instance-based learning and numeric classifiers.

One lecture (two hours), one lab; one term

Prerequisite: COMPTech 3PD3

COMPTech 4ES3 EMBEDDED SYSTEMS

Real-time operating systems. Scheduling and concurrency. Sampling, digitization, conditioning and processing of signals. Control. Communications. Reliability and fault tolerance.

One lecture (two hours), one lab; one term

Prerequisite: COMPTech 4AP3

COMPTech 4FD3 FACILITIES DESIGN AND IMPLEMENTATION

Project-based course that incorporates the knowledge that students have gained in the areas of network infrastructure; systems design and security.

One lecture (three hours); one term

Prerequisite: COMPTech 3RQ3

COMPTech 4IN3 INQUIRY II (GROUP PROJECT)

Inquiry-based course in which a large facilities development project is used to put into practice the concepts and techniques developed in the program.

One lecture (three hours); one term

Prerequisite: Registration in Level IV of Computing Information Technology

COMPTech 4SD3 SYSTEM DESIGN

Life-cycle. Quality attributes. Decomposition and interface design. Specification. Design of modules. Design patterns. Design documentation. Implementation. Reviews and inspections. Testing.

One lecture (three hours); one term

Prerequisite: COMPTech 3RQ3

COMPTech 4TM3 SOFTWARE TESTING

Role of testing in systems development: software testing principles. Dataflow and control flow based testing. Coverage. Test planning and execution. Testing tools. Validation testing. System handover.

One lecture (two hours), one lab; one term

Prerequisite: COMPTech 3RQ3

COMPTech 4TR3 TRAINING

Development of training programs in organizations: needs assessment, establishment of training objectives. Planning and delivery of instruction. Learning principles. Evaluation of training. Technological aids to training.

One lecture (three hours); one term

Prerequisite: Registration in Computing Information Technology

ENGINEERING TECHNOLOGY ...

Courses

ENG TECH 1A00 SAFETY TRAINING

Introduction to safety guidelines, acceptable safety conduct and positive safety attitudes and practices in laboratories and Workplace Hazardous Materials Information System (WHMIS).

One hour, first week; first term

Prerequisite: Registration in Technology I

Antirequisite: ENGINEER 1A00, NURSING 1A00, SCIENCE 1A00

This course must be completed before registering in any Level II Technology program.

ENG TECH 1AC3 ANALYTICAL CHEMISTRY

Introduction to laboratory procedures used in chemical analysis for classical wet and instrumental methods; statistical data treatment, gravimetric analysis, volumetric analysis, pH measurements and optical methods.

Three lectures, one lab; one term

Prerequisite: ENG TECH 1CH3

ENG TECH 1BI3 BIOLOGY

This course provides basic introduction to the following topics: chemistry of life, cells, genetics, evolution and diversity and plant and animal form and function.

Three lectures, one tutorial; one term

Prerequisite: Registration in Technology I

ENG TECH 1CH3 CHEMISTRY

Basic chemical concepts, calculations and laboratory procedures. Chemical formulae and equations, chemical stoichiometry, nomenclature, acids and bases, gases, chemical equilibrium, thermochemistry and thermodynamics, redox reactions and electrochemistry.

Three lectures, one tutorial, one lab (three hours every other week); one term

Prerequisite: Registration in Technology I

ENG TECH 1CP3 C++ PROGRAMMING

Introduction to C++ programming. C++ syntax, functions, decision-making, looping, operators, arrays and data structures.

Two lectures, one lab (two hours); one term

Prerequisite: Registration in ENG TECH 1PR3 or Automotive and Vehicle Technology, Biotechnology, Manufacturing Engineering Technology or Process Automation Technology

Antirequisite: ENG TECH 1PG3

ENG TECH 1EE0 INTRODUCTION TO THE TECHNOLOGY CO-OP PROGRAM

Orientation to Technology Co-op programs and the workplace; self-assessment and goal setting; application procedures and materials; occupational health and safety.

Five sessions; first or second term

Prerequisite: Registration in a Four-Year Technology Co-op program

ENG TECH 1EL3 ELECTRICITY AND ELECTRONICS I

Introductory course in electricity and electronic science. Voltage and current sources, circuit elements, electronic components, circuit analysis techniques.

Four lectures, one lab (three hours); one term

Prerequisite: Registration in Technology I

ENG TECH 1ET0 INTRODUCTION TO THE TECHNOLOGY CO-OP PROGRAM

Orientation to Technology Co-op programs and the workplace; self-assessment and goal setting; application procedures and materials; occupational health and safety.

Five sessions; first or second term

Prerequisite: Registration in a Degree Completion Technology Co-op program

ENG TECH 1MC3 MATHEMATICS I

Introductory mathematics course covering pre-calculus concepts, including algebra, trigonometry, complex numbers, exponential and logarithmic functions, systems of equations and matrices.

Four lectures; one term

Prerequisite: Registration in Technology I

ENG TECH 1ME3 MECHANICS

Statics and kinematics of particles and rigid bodies: force vectors; equilibrium; trusses, frames and machines; internal forces; centroids; friction; axial load, torsion, bending and shear; stress and strain. Newton's Second Law; moments of inertia; plane motion.

Four lectures; one term

Prerequisite: Registration in Technology I

ENG TECH 1MT3 MATHEMATICS II

Introductory calculus; limits, derivatives, integrals and applications. Computer algebra software will be used throughout the course.

Four lectures; one term

Prerequisite: ENG TECH 1MC3

ENG TECH 1PH3 PHYSICS

Sound, light, kinematics, forces, work, energy, fluid and thermal physics.

Four lectures, one lab (two hours every other week); one term

Prerequisite: Registration in Technology I

ENG TECH 1PR3 PROGRAMMING PRINCIPLES

Project-based course covering computer programming using Visual Basic. Object-oriented, event-driven programs involving decisions, looping, arithmetic calculations, string handling and data file handling.

Two lectures, one lab (two hours); one term

Prerequisite: Registration in Technology I

ENG TECH 2EE0 FOUR MONTH CO-OP EXPERIENCE I

Minimum of 15 weeks of full-time employment in a professional environment.

Prerequisite: ENG TECH 1EE0 and registration in a Four-Year Technology Co-op program

ENG TECH 2ET0 FOUR MONTH CO-OP EXPERIENCE I

Minimum of 15 weeks of full-time employment in a professional environment.

Prerequisite: ENG TECH 1ET0 and registration in a Degree Completion Technology Co-op program

ENG TECH 2MA3 MATHEMATICS III

Advanced integration and applications; vector calculus; series and sequences; differential equations.

Three lectures, one tutorial; one term

Prerequisite: ENG TECH 1MT3

ENG TECH 2MT3 MATHEMATICS IV

Infinite complex series; Taylor and Laurent series; calculus of residues; conformal mapping; calculus of complex variables; Laplace and Fourier transforms.

Four lectures; one term

Prerequisite: ENG TECH 2MA3

ENG TECH 3CT3 SYSTEM ANALYSIS AND CONTROLS

Mathematical foundation: differential equations, Laplace transforms, transform by partial-fraction expansion; transfer functions; modelling of physical systems; stability, Routh criteria; time and frequency domain; Root-locus technique; design of control systems.

One lecture (three hours); one term

Prerequisite: Registration in Manufacturing Engineering Technology

Antirequisite: ENG TECH 2CT3

ENG TECH 3DM3 DISCRETE MATHEMATICS

Fundamental discrete mathematics concepts relevant to IT: sets, relations, functions, graphs, propositional logic. State machines. Input/output specifications. Invariants.

One lecture (three hours); one term

Prerequisite: Registration in Computing Information Technology

ENG TECH 3EE0 FOUR MONTH CO-OP EXPERIENCE II

Minimum of 15 weeks of full-time employment in a professional environment.

Prerequisite: ENG TECH 2EE0 and registration in a Four-Year Technology Co-op program

ENG TECH 3ET0 FOUR MONTH CO-OP EXPERIENCE II

Minimum of 15 weeks of full-time employment in a professional environment.

Prerequisite: ENG TECH 2ET0 and registration in a Degree Completion Technology Co-op program

ENG TECH 3FE3 FINITE ELEMENT ANALYSIS

Matrix techniques; eigenvalue problems; equations of elasticity: plane stress, plane strain, 3D problems; variational methods; element types, element stiffness, mass matrices and load vector; assemblage of elements, boundary conditions.

Two lectures, one lab; one term

Prerequisite: AUTOTECH 2AC3, 2TS3, ENG TECH 3MN3 and registration in Automotive and Vehicle Technology; or ENG TECH 3MA3, 3ML3 and registration in Manufacturing Engineering Technology

Antirequisite: ENG TECH 2FE3

ENG TECH 3MA3 MATHEMATICS V

Ordinary and partial differential equations; Laplace transforms; Fourier series; vector calculus; integral theorems, with engineering applications.

Three lectures; one term

Prerequisite: Registration in Civil Engineering Infrastructure Technology or Manufacturing Engineering Technology

Antirequisite: ENG TECH 1MA3

ENG TECH 3ML3 STRENGTH OF MATERIALS

Stresses under combined loads, generalized Hooke's Law; two and three dimensional stresses, stress transformation, principal stresses, Mohr's circle; deflections by integration; energy methods, Castagliano's theorem; columns; yield criteria.

Three lectures; one term

Prerequisite: Registration in Civil Engineering Infrastructure Technology or Manufacturing Engineering Technology

Antirequisite: ENG TECH 1ML3

ENG TECH 3MN3 MODELLING AND NUMERICAL SOLUTIONS

Number systems and errors; solutions to nonlinear equations; interpolation by polynomials; matrices and systems of linear equations; differentiation and integration; differential equations; applications to mechanical systems.

Three lectures; one term

Prerequisite: ENG TECH 1CP3; and ENG TECH 2MA3 or 3MA3

Antirequisite: ENG TECH 2MN3

ENG TECH 3ST3 ENGINEERING STATISTICS

An introductory statistics course covering the following topics with engineering applications: organization and description of data, probability and distributions, confidence intervals and hypothesis testing and bivariate data analysis using regression.

Three lectures; one term

Prerequisite: ENG TECH 1MT3 or registration in Computing and Information Technology

ENG TECH 4EE0 FOUR MONTH CO-OP EXPERIENCE III

Minimum of 15 weeks of full-time employment in a professional environment.

Prerequisite: ENG TECH 3EE0 and registration in a Four-Year Technology Co-op program

ENG TECH 4IT3 INTERNET TECHNOLOGIES AND DATABASES

Internet technologies and standards, database concepts; structured query language elements; web database processing; client and server side scripts.

Two lectures, one lab; one term

Prerequisite: ENG TECH 1CP3

GENERAL TECHNOLOGY ...**Notes:**

- With the approval of the Associate Director the following courses may be substituted for GEN TECH 2TC3:

ARTS&SCI 3B03	Technology and Society I
CMST 2BB3	Introduction to Culture and Communication
CMST 4M03	Communication, Culture and Technology, 1844-1927
ENGSOCTY 3Y03	The Culture of Technology

2. With the approval of the Associate Director the following courses may be substituted for GEN TECH 2TE3:
 COMMERCE 2SB3 Business Ethics
 ENGINEER 4A03 Engineering and Social Responsibility
 PHILOS 2N03 Business Ethics
3. With the approval of the Associate Director the following course may be substituted for GEN TECH 2TL3:
 LABR ST 2G03 Labour and Globalization
4. With the approval of the Associate Director the following courses may be substituted for GEN TECH 2TP3:
 ARTS&SCI 3BB3 Technology and Society II
 ENGSOCTY 4Z03 The Social Control of Technology

Courses

GEN TECH 1CS3 COMMUNICATION SKILLS

The purpose of this course is to provide students with the foundations of sound technical communication skills. The emphasis is on applying principles of style, structure and strategy to a variety of documents, including reports for multiple audiences and oral presentations.

Three lectures; one term

Prerequisite: Registration in Technology I

GEN TECH 1DM3 PROBLEM SOLVING AND DECISION MAKING

Techniques for structuring organizational situations to improve the functioning of processes and operations.

Three lectures; one term

Prerequisite: Registration in Technology I or above of a Technology program

GEN TECH 1EE3 ENGINEERING ECONOMICS

Costing methods for engineering designs and processes; minimum attractive rate of return, return sensitivities, time value of money, internal rates of return, payback period, amortization of equipment and capital cost allowance structures.

Three lectures; one term

Prerequisite: Registration in Technology I or above of a Technology program

GEN TECH 1FS3 FINANCIAL SYSTEMS FOR TECHNOLOGY ORGANIZATIONS

Introduction to the use of accounting data in the management of technical units and projects.

Three lectures; one term

Prerequisite: Registration in Technology I or above of a Technology program

GEN TECH 1HR3 HUMAN RESOURCES IN A TECHNOLOGY SETTING

Best practices in managing technical human resources and others who work in technical organizations.

Three lectures; one term

Prerequisite: Registration in Technology I or above of a Technology program

GEN TECH 1OB3 HUMAN BEHAVIOUR IN TECHNOLOGY SETTINGS

The basic principles of human behaviour and organization for application in technical organizations and their sub-units.

Three lectures; one term

Prerequisite: Registration in Level I or above of a Technology program

GEN TECH 1TI3 TECHNOLOGY INQUIRY

Inquiry focuses on problem definition, formulating questions, research underlying issues of public concern, and analyzing opposing arguments. This course involves teaching how to use resources in research, write a research paper and express ideas orally.

Three lectures (lectures, discussion, group work); one term

Prerequisite: Registration in Level I or above of a Technology program

GEN TECH 2EN3 TECHNOLOGICAL ENTREPRENEURSHIP

The processes for bringing new technologies to market through business formulation and entrepreneurship.

Three lectures; one term

Prerequisite: Registration in Level II or above of a Technology program

GEN TECH 2IS3 INFORMATION SYSTEMS IN TECHNOLOGY MANAGEMENT

The use of information systems in the management of the technical aspects of business and in integrating the technical functions in the broader organization.

Three lectures; one term

Prerequisite: Registration in Level II or above of a Technology program

GEN TECH 2TC3 TECHNOLOGY AND CULTURE

This course examines culture contexts and their relationship with the development and implementation of technology. Students will examine the cultural factors that promote/ deter technological growth and anticipate various outcomes of these interactions.

Three lectures; one term

Prerequisite: Registration in Level II or above of a Technology program

GEN TECH 2TE3 TECHNOLOGY AND ETHICS

In this course the students will examine issues and choices of the ethical underpinnings of technological development and implementation and the new ethical dilemmas raised by our abilities to reshape all aspects of our social and physical environment.

Three lectures; one term

Prerequisite: Registration in Level II or above of a Technology program

GEN TECH 2TL3 TECHNOLOGY AND LABOUR

The interplay of labour, management and government is critically examined within the context of technology as a driver of change within organizations. Technology related workplace issues along with appropriate solutions will be examined.

Three lectures; one term

Prerequisite: Registration in Level II or above of a Technology program

GEN TECH 2TM3 TECHNOLOGY AND MANAGEMENT

In this course the students will critically examine the technology diffusion/ adoption process and implementation strategies in different organizations.

Three lectures; one term

Prerequisite: Registration in Level II or above of a Technology program

GEN TECH 2TP3 TECHNOLOGY AND POLITICS

This course examines the politics of technology and its application. Students will examine how political interests fashion technological development applications in various societies and setting of technological priorities and decision making processes.

Three lectures; one term

Prerequisite: Registration in Level II or above of a Technology program

GEN TECH 3PM3 THE MANAGEMENT OF TECHNICAL PROJECTS

Introduction to best practice in the management of technical projects including the use of planning, software and the management of people.

Three lectures; one term

Prerequisite: Registration in Level III or above of a Technology program

GEN TECH 3SF3 FORMULATING TECHNOLOGY STRATEGY

Issues in the development of organizational strategy around technological and market imperatives, emphasizing the competitive mobilization of technical capabilities.

Three lectures; one term

Prerequisite: GEN TECH 1FS3, 1OB3, 2EN3, 3PM3

GEN TECH 3TL3 TECHNOLOGY LEADERSHIP

This course examines the roles, responsibilities and styles for providing leadership in technology driven organizations. A major project integrating ethics/labour/cultural/political and management issues will be undertaken. A "volunteer" component is required.

Three lectures; one term

Prerequisite: Registration in Level III or above of a Technology program

GEN TECH 4LM3 LEAN MANUFACTURING

Application of lean methods in manufacturing settings including: developing overall lean strategies, value stream mapping, rapid change techniques, turnaround and cycle time reduction, visual control systems, concurrent engineering, cellular processing and zero inventories.

Three lectures; one term

Prerequisite: Registration in Level IV of a Technology program

GEN TECH 4SS3 STATISTICAL PROCESS CONTROL

Use of the 6 Sigma scientific paradigm to statistical process control and data-based decision-making methods; continuous improvement process strategies.

Three lectures; one term

Prerequisite: Registration in Level IV of a Technology program

GEN TECH 4ST3 SPECIAL TOPICS

Students are offered a selection of six to eight emerging issues of the day as those issues relate to current technology practices. An experiential project permits a more in-depth exploration of an issue of particular interest to the student.

Three lectures; one term

Prerequisite: Registration in Level IV of a Technology program

MANUFACTURING TECHNOLOGY ...**Courses****MAN TECH 3CD3 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; one term

Prerequisite: Registration in Manufacturing Engineering Technology

Antirequisite: MAN TECH 1CD3

MAN TECH 3MD3 MACHINE DYNAMICS

Transient and steady state vibrations of single degree-of-freedom systems; natural and forced vibrations; lumped mass systems - multi degree of freedom; vibrations of continuous systems; balancing and critical speeds of shafts.

Three lectures; one term

Prerequisite: ENG TECH 3CT3

Antirequisite: MAN TECH 2MD3

MAN TECH 3TF3 THERMO FLUIDS I

Thermodynamic principles; steam plant cycles; heat engines; gas and steam turbine cycles; refrigeration and heat pumps; air conditioning; conduction; transient systems; convection; radiation; heat exchangers.

Three lectures, one tutorial; one term

Prerequisite: Credit or registration in ENG TECH 3MA3

Antirequisite: MAN TECH 1TF3

MAN TECH 4FB3 FABRICATION TECHNOLOGY

Welding: arc welding methods; laser beam welding and electron beam welding. Casting: pattern and mould design, die, centrifugal casting, defects. Heat treatment; steel ingots, continuous casting, wrought structure, furnaces.

Two lectures, one lab; one term

Prerequisite: Registration in Manufacturing Engineering Technology

Antirequisite: MAN TECH 3FB3

MAN TECH 4FM3 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; one term

Prerequisite: MAN TECH 3CD3

Antirequisite: MAN TECH 3FM3

MAN TECH 4FT3 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 term

Prerequisite: ENG TECH 3FE3

Antirequisite: MAN TECH 3FT3

MAN TECH 4ID3 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

Prerequisite: Registration in Manufacturing Engineering Technology

Antirequisite: MAN TECH 1ID3

MAN TECH 4MC3 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 term

Prerequisite: ENG TECH 3CT3

Antirequisite: MAN TECH 3MT3

MAN TECH 4MT3 MACHINING TECHNOLOGY

Metal removal; chip formation; tool life; cutting temperature, fluids and forces, power, optimization, finish, tolerances; CNC machine tools; structures and drives; control; machinability; complex tools; non-traditional processes.

Three lectures, one lab; one term

Prerequisite: MAN TECH 4FB3

Antirequisite: MAN TECH 2MT3

MAN TECH 4TF3 THERMO FLUIDS II

Fluid statics; pressure, manometry, hydrostatic forces, forces on submerged and floating bodies; kinematics of flow, control volume approach, continuity, momentum, energy and Bernoulli's equations; dimensional analysis and similarity; flow in closed conduits.

Three lectures, one lab; one term

Prerequisite: MAN TECH 3TF3

Antirequisite: MAN TECH 2TF3

MAN TECH 4ST3 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 3MA3

Antirequisite: MAN TECH 3ST3

PROCESS AUTOMATION TECHNOLOGY ...**Courses****PROCTECH 2CA3 CAD FOR DESIGN**

This course provides an introduction to computer aided drafting methods for the production and interpretation of electrical and P and ID drawings.

One lab (three hours); one term

Prerequisite: ENG TECH 1EL3, 1PR3

Corequisite: PROCTECH 2IC3

PROCTECH 2CE3 CHEMICAL ENGINEERING I

The first part of this course focuses on physical chemistry (Gas Laws and Phase Rule). The remainder of the course is devoted to chemical engineering. Topics include mass and energy balance, heat transfer and unit operations.

Two lectures, one tutorial, one lab (two and one half hours); one term

Prerequisite: ENG TECH 1CH3, 1MC3, 1PH3

PROCTECH 2EC3 CHEMICAL ENGINEERING II

This course examines both the unit processes and engineering principles applicable to a number of industrial processes. Also, Process Instrumentation Diagrams (P and ID) will be interpreted.

Two lectures, one tutorial, one lab (two and one half hours); one term

Prerequisite: ENG TECH 1MT3, PROCTECH 2CE3

PROCTECH 2EE3 ELECTRICITY AND ELECTRONICS II

This second course in electricity and electronic science will be presented through lectures and labs. The course content covers: sources of electrical energy, AC circuit analyses, transistor circuitry, amplifiers and oscillators.

Three lectures, one tutorial, one lab (three hours); one term

Prerequisite: ENG TECH 1EL3, 1MC3

PROCTECH 2IC3 INSTRUMENTATION AND CONTROL

This course covers common pressure, level, temperature and flow measuring systems that provide the basis to specify, design, construct, test and tune a control loop using a PID controller. A distributed control system is also introduced.

Three lectures, one lab (three hours); one term

Prerequisite: ENG TECH 1MT3

Corequisite: PROCTECH 2EE3

PROCTECH 2IO3 INDUSTRIAL ORGANIC CHEMISTRY

A study of organic chemistry, including structure, nomenclature, major reactions and industrial applications. Emphasis will be placed on industrial manufacturing and uses. Lab sessions will emphasize common organic chemistry techniques.

Three lectures, one lab (three hours); one term

Prerequisite: ENG TECH 1CH3

PROCTECH 2PL3 PLCS AND AUTOMATION I

An introduction to Programmable Logic Controllers (PLCs) and their use in automation applications. AC and DC motors, PLC basics, input/output, memory addressing and program control instructions, and PLC networking, motor control protection and starting.

Three lectures, one lab (three hours); one term

Prerequisite: ENG TECH 1MT3, PROCTECH 2EE3, 2IC3

PROCTECH 3CE3 CHEMICAL ENGINEERING III

This course covers simulation and analysis of integrated process units within a chemical process plant. Key topics covered are: process flow diagrams and simulation models, process analysis using simulation model, rudimentary process optimization and plant simulation.

Three lectures, one lab (two hours); one term

Prerequisite: PROCTECH 2EC3, 3CT3

PROCTECH 3CT3 CONTROL THEORY I

This course covers analysis and design of closed loop control systems. System characteristics and performance, stability analysis, system types, performance improvement, digital control systems, compensation, filtering and motion system tuning.

Three lectures, one lab (three hours); one term

Prerequisite: ENG TECH 2MT3, PROCTECH 2IC3, 2PL3

PROCTECH 3MC3 MOTION CONTROL AND ROBOTICS

The motion control part of this course covers the theory and operation of AC and DC drive systems and digital motion control. The robotics portion of the course covers the following topics: robot anatomy and attributes, end effectors, robot programming and applications.

Three lectures, one lab (three hours); one term

Prerequisite: PROCTECH 3CT3, 3PL3, 3SC3

PROCTECH 3PL3 PLCS AND AUTOMATION II

Advanced PLC programming concepts such as files, subroutines and indexing, industrial networks, PID and PWM, HMI, AC and DC Drives integration and implementation in PLCs and automation project. Lectures are designed to support the lab program.

Three lectures, one lab (three hours); one term

Prerequisite: PROCTECH 2PL3

PROCTECH 3SC3 SYSTEM CONTROL AND DATA ACQUISITION I

This first level SCADA course covers the following topics: introduction to SCADA, digital conversion theory, sensors and detectors, noise and filtering, communication protocols, databases and process control evaluation.

Three lectures, one lab (three hours); one term

Prerequisite: ENG TECH 1PR3, PROCTECH 2EE3, 2IC3

PROCTECH 3SD3 SYSTEM CONTROL AND DATA ACQUISITION II

SCADA architecture, bus standards and protocols, multi-loop PID control, workstation design, system safety, redundancy and maintenance and SCADA project design.

Three lectures, one lab (three hours); one term

Prerequisite: PROCTECH 2CE3, 3CT3, 3SC3

PROCTECH 4AS3 ADVANCED SYSTEM COMPONENTS AND INTEGRATION

This course covers advanced sensor and actuator technology, robotics and vision systems, automated workcell, flexible manufacturing systems, computer integrated manufacturing. Hardware and software integration issues, when and how to automate, OPC and HMI.

Three lectures, one lab (three hours); one term

Prerequisite: PROCTECH 4IC3, 4IT3

PROCTECH 4CT3 CONTROL THEORY II

This course covers process characteristics, methods of analysis, controller design, adaptive control, loop tuning, process control improvement examples with emphasis on plant control and tutorial exercises using MATLAB.

Three lectures, one tutorial; one term

Prerequisite: PROCTECH 3CE3, 3CT3

PROCTECH 4IC3 INDUSTRIAL NETWORKS AND CONTROLLERS

Corporate and industrial networks, OSI model, Ethernet and TCP/IP, Modbus, Foundation Field bus, DeviceNet, PROFIBUS, AS-I, proprietary buses and protocols and interfaces, distributed I/O, drivers and devices and their implementation in PC and PLC based systems.

Three lectures, one lab (three hours); one term

Prerequisite: PROCTECH 3MC3, 3PL3, 3SC3

PROCTECH 4IT3 INTERNET TECHNOLOGIES AND DATABASES

This course covers the following topics: internet technologies and standards, database concepts, structured query language elements, web database processing and client and server side scripts.

Two lectures, one lab (two hours); one term

Prerequisite: ENG TECH 1CP3

PROCTECH 4MS3 MANUFACTURING SYSTEMS

This course examines manufacturing and production systems, material selection and design process, measurement and quality assurance. Plastics, steels, and ceramics manufacturing, environmental and safety management, asset management and reliability.

Three lectures, one lab (two hours every other week); one term

Prerequisite: PROCTECH 2CA3, 2EC3, 4MT3

PROCTECH 4MT3 MATERIALS TECHNOLOGY

This course covers classes of engineering materials, their important properties and applications. Topics include: metals and alloys, stress and strain, plastics and elastomers, ceramic materials and selection of a material for an application.

Two lectures; one term

Prerequisite: ENG TECH 1CH3, 1PH3

PROCTECH 4SS3 SYSTEM SPECIFICATION AND DESIGN

This course focuses on requirement analysis, functional design, detailed design, reliability, maintainability, and system life cycle. Methodologies and tools, requirements and validations, requirements for safety-related systems and mission critical systems.

Three lectures; one term

Prerequisite: PROCTECH 2CA3, 3MC3, 4IC3

PROCTECH 4TR3 TECHNICAL REPORT

This course requires students to research, design, develop and implement an independent project. The project will be documented as a technical report and presented in a seminar.

One tutorial, one lab (two hours); two terms

Prerequisite: ENG TECH 3MN3, PROCTECH 3CE3, 3MC3, 3SC3

THEATRE & FILM

WEB ADDRESS: <http://www.humanities.mcmaster.ca/~sota/index.html>

Togo Salmon Hall, Room 414

Ext. 27671

Courses and programs in Theatre & Film are administered within the School of the Arts of the Faculty of Humanities.

Note:

Students are advised to note carefully the prerequisites for all courses, and take note which courses are offered in alternate years.

Courses *If no prerequisite is listed, the course is open.***THTR&FLM 1A03 INTRODUCTION TO PERFORMANCE ANALYSIS**

An exploration of the ways theatre artists bring different production elements and performance techniques together to get audiences thinking about important social issues.

Two lectures, one tutorial; one term

THTR&FLM 1B03 INTRODUCTION TO FILM ANALYSIS

An introduction to an interrelated set of approaches to film study, all of which are defined by their attention to the filmic text and which provide students with a grasp of the fundamentals of film analysis.

Two lectures, one tutorial, plus one weekly film screening; one term

THTR&FLM 2AA3 THE ACTOR AS CREATOR

Students learn basic techniques for creating short dramatic performances that reveal and question the social and political norms that structure contemporary social relationships.

Two studios; one term

Prerequisite: Registration in a program in Theatre and Film Studies or Communication Studies. Students wishing to register in this course must submit an application form to the School of the Arts by the end of April to guarantee consideration for the following year.

Priority will be given first to students registered in the Theatre and Film studies program, and then to students registered in the Performance Studies Stream of the Communication Studies program. Departmental permission required.

THTR&FLM 2BB3 CREATING PERFORMANCE ENVIRONMENTS

An introduction to different techniques used to create an environment in which a specific performance can become meaningful for a particular audience. Students will participate in directed work with theatre artists on program productions.

One studio; one term. (60 practicum hours including evenings and weekends.)

Prerequisite: Registration in a program in Theatre & Film Studies, Multimedia, Art or Communication Studies. Students wishing to register in this course must submit an application form to the School of the Arts by the end of April to guarantee consideration for the following year.

Antirequisite: THTR & FLM 2B03

Priority will be given first to students registered in the Theatre & Film Studies program, and then to students registered in the Multimedia, Art, and Communication Studies programs. Departmental permission required.

THTR&FLM 2C03 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: THTR&FLM 1A03, 1B03

Cross-list: CMST 2P03, COMP LIT 2D03

THTR&FLM 2E03 NEW MEDIA AND PERFORMANCE

This course will explore critical issues in new media and examine the ways in which new media shape the creation, reception and interpretation of forms of performance.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above of a program in Theatre and Film Studies or Communication Studies

Cross-list: CMST 2S03

THTR&FLM 2F03 FILM HISTORY TO THE SECOND WORLD WAR

An introduction to the history of narrative film from its beginnings to the Second World War. It focuses on narrative cinema's development from aesthetic, social, technological and economic perspectives while also touching on a selected number of issues in film theory.

Two lectures, plus one weekly film screening; one term

Prerequisite: Registration in Level II or above

Cross-list: ART HIST 2G03

Antirequisite: CMST 2X03

THTR&FLM 2G03 THE ANCIENT WORLD IN FILM

The emphasis is on myth (Amazons, Hercules) and history (slave revolts, banquets, decadent emperors), studied via Greek and Latin accounts (in translation) and cinematic versions (e.g., Electra, Medea, Mighty Aphrodite, Apocalypse Now, Spartacus, I Claudius)

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: CLASSICS 2E03

Antirequisite: 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 Sudo, 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 Linguistics and Languages.

THTR&FLM 2I03 ITALY THROUGH THE CAMERA LENS

This course takes the student on a journey through fifty years of Italian cinematic history using nine movies (in Italian, with subtitles) that represent some of the most critical moments related to Italian culture in post WWII period. Taught in English.

Three hours; one term

Prerequisite: Registration in Level II or above

Cross-list: ITALIAN 2B03

This course is administered by the Department of Linguistics and Languages.

THTR&FLM 2T03 MUSIC FOR FILM AND TELEVISION

An examination of how music functions to help create meanings in film and television programs. Examples will be drawn from throughout the history of film and television.

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: CMST 2T03, MUSIC 2F03

This course is administered by Music.

THTR&FLM 3CC3 MANAGING PERFORMANCE ENVIRONMENTS

A survey of the skills and practices involved in managing performance environments with special attention to issues in production management and stage/studio management. Students will undertake management of different aspects of Theatre & Film Studies productions as part of their course of study.

Term one: two hours; Term two: one hour (Workshop and practical exercises. 60 practicum hours including evenings and weekends)

Prerequisite: Registration in a program in Theatre & Film Studies and a grade of at least B- in THTR & FLM 2B03 or 2BB3. Students wishing to register in this course must submit an application form to the School of the Arts by the end of April to guarantee consideration for the following year.

Antirequisite: THTR & FLM 3C03

Departmental permission required.

THTR&FLM 3E03 TWENTIETH-CENTURY THEATRE

An exploration of important formal and social experiments that marked twentieth-century theatre and paved the way for contemporary theatre forms.

Three hour lecture and discussion; one term

Prerequisite: Six units of Level II Theatre & Film; or registration in Level III or IV of a Comparative Literature program and three units of Theatre & Film

Cross-list: COMPLIT 3C03

Offered in alternate years.

THTR&FLM 3F03 DEVELOPMENT OF CANADIAN THEATRE

A study of the development of theatrical performance in English Canadian, Québécois, First Nations and culturally diverse communities, with an emphasis on the period since 1967.

Three hours (lecture and discussion); one term

Prerequisite: Six units of Level II Theatre & Film

Offered in alternate years.

THTR&FLM 3G03 THEATRE AND COMMUNITY DEVELOPMENT

Students will explore the different approaches to community-based theatre generated in a range of social and cultural 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

Antirequisite: CMST 3M03

Offered in alternate years.

THTR&FLM 3I03 THEORIZING CULTURE THROUGH PERFORMANCE

Students will explore artists' practises in making performances and will analyse how artists work with theories, texts, spaces, bodies, audiences and produce challenges to artistic, social and political norms.

Three hours; one term

Prerequisite: One of ART HIST 2D03, 3AA3, CMST 2G03, 2P03, 2S03,

THTR&FLM 2C03, 2D03, 2E03

Cross-list: ART HIST 3L03, CMST 3L03

Not open to students with credit in 2E03 if taken in 2002-2003.

Offered in alternate years.

THTR&FLM 3K03 TOPICS IN DRAMATIC PERFORMANCE I

An exploration of contemporary dramatic performance trends since 1960.

Topics will cover dramatic performance in theatre and film.

Three hours lecture and discussion; one term

Prerequisite: One of THTR&FLM 2C03, 2D03, 2E03 or 2F03

Offered on an irregular rotation basis.

THTR&FLM 3KK3 TOPICS IN DRAMATIC PERFORMANCE II

An exploration of contemporary dramatic performance trends since 1960.

Topics will cover dramatic performance in television and other media.

Three hours lecture and discussion; one term

Prerequisite: THTR&FLM 2C03 or 2D03

Offered on an irregular rotation basis.

THTR&FLM 3L03 FILM HISTORY: 1941 TO THE PRESENT

An exploration of narrative film from 1941 to the present day, incorporating a study of a variety of narrative cinema styles. Theoretical issues will include questions of cinema's relationship to other art forms, narrative, genre and authorship.

Two lectures, plus one weekly film screening; one term

Prerequisite: THTR&FLM 2F03

Cross-list: ART HIST 3XX3

Antirequisite: CMST 3XX3

Offered in alternate years.

THTR&FLM 3M03 FILM, VIDEO AND ENTERTAINMENT CULTURE

Critical approaches to forms of entertainment culture which permeate our everyday lives (e.g., popular films, video culture, television). Topics may include the cultural meanings of popular imagery, star-gazing, and commercialization.

Two hour lecture and discussion, plus one weekly film screening; one term

Prerequisite: THTR&FLM 2F03

Cross-list: CMST 3SS3

Offered in alternate years.

THTR&FLM 3N03 INDEPENDENT FILM AND VIDEO

An exploration of artists' film and video produced outside of dominant institutions, including such practices as documentary, autobiography, community projects, experimental film, short film, and video art.

Two hour lecture and discussion, plus one weekly film screening; one term

Prerequisite: THTR&FLM 2E03 or 2F03

Cross-list: CMST 3UU3

Offered in alternate years.

THTR&FLM 3P03 WOMEN AND VISUAL CULTURE

Students will explore ideas about representation, spectatorship and production in relation to issues of social difference, such as gender, race and class. Emphasis is on visual modalities such as film, video, television, advertising, et cetera.

Two hour lecture and discussion, plus one weekly film screening; one term

Prerequisite: Registration in Level III or above and one of ART HIST 2A03, CMST 2F03, 2I03, THTR&FLM 1B03 or WOMEN ST 1A06 (or 1A03 and 1AA3)

Cross-list: CMST 3BB3, WOMEN ST 3BB3

Not open to students with credit or registration in WOMEN ST 3B03 if taken in 2001-2002.

This course is administered by Women's Studies.

THTR&FLM 3Q03 TOPICS IN NATIONAL CINEMAS I

This course examines film in relation to nations and national contexts. Areas of investigation may include filmic production of a particular country, national belonging and transnational identities.

Two hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: One of THTR&FLM 1B03, 2E03, 2F03

Cross-list: COMP LIT 3V03

Antirequisite: CMST 3T03

Offered on an irregular rotation basis.

THTR&FLM 3QQ3 TOPICS IN NATIONAL CINEMAS II

This course examines film in relation to nations and national contexts. Areas of investigation include filmic production of global/local characteristics.

Two hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: One of THTR&FLM 1B03, 2E03, 2F03

Cross-list: COMP LIT 3VV3

Antirequisite: CMST 3TT3

Offered on an irregular rotation basis.

THTR&FLM 3R03 READING FILM

A critical examination of selected films and film genres as cultural texts, using methods drawn from film theory and cultural studies.

Three lectures, plus one weekly film screening; one term

Prerequisite: Registration in Level II or above of a program in Art History, Communication Studies, Comparative Literature, Cultural Studies and Critical Theory, English or Theatre & Film Studies. It is recommended that students should already have taken THTR&FLM 2F03.

Cross-list: CMST 3CC3, COMP LIT 3L03, CSCT 3CC3, ENGLISH 3CC3

Offered in alternate years.

This course is administered by the Department of English and Cultural Studies.

THTR&FLM 3S03 INDEPENDENT STUDY IN PRACTICAL THEATRE

This course is reserved for students with a strong academic record and the demonstrated ability to work independently. Students must submit a written proposal to the Academic Counsellor for Theatre & Film Studies no later than the first day of classes.

Prerequisite: Registration in an Honours program in Theatre & Film Studies with a Cumulative Average of at least 8.0 and permission of the School of the Arts

THTR&FLM 3T03 INDEPENDENT STUDY IN THEATRE & FILM I

This course is reserved for students with a strong academic record and the demonstrated ability to work independently. Students must submit a written proposal to the Academic Counsellor for Theatre & Film Studies no later than the first day of classes.

Prerequisite: Registration in an Honours program in Theatre & Film Studies with a Cumulative Average of at least 9.0 and permission of the School of the Arts

THTR&FLM 3X03 MODERN PERFORMANCE IN ACTION

An exploration in action of modern practices of dramatic representation and the forms of knowledge-building they promote.

Two studios; one term

Prerequisite: Registration in a program in Theatre and Film Studies; and a grade of at least B- in THTR & FLM 2A06 or 2AA3. Students wishing to register in this course must submit an application form to the School of the Arts by the end of April to guarantee consideration for the following year.

Antirequisite: THTR & FLM 3B03

Departmental permission is required.

Offered on an irregular rotation basis with THTR&FLM 3XX3.

THTR&FLM 3XX3 POST-MODERN PERFORMANCE IN ACTION

An exploration in action of post-modern practices of dramatic representation and the forms of knowledge-building they promote.

Two studios; one term

Prerequisite: Registration in a program in Theatre & Film Studies; and a grade of at least B- in THTR & FLM 2A06 or 2AA3. Students wishing to register in this course must submit an application form to the School of the Arts by the end of April to guarantee consideration for the following year.

Antirequisite: THTR & FLM 3BB3

Departmental permission required.

Offered on an irregular rotation basis with THTR&FLM 3X03.

THTR&FLM 3YY3 NON-WESTERN PERFORMANCE IN ACTION

An exploration in action of non-western practices of dramatic representation and the forms of knowledge-building they promote.

Two studios; one term

Prerequisite: Registration in a program in Theatre and Film Studies; and a grade of at least B- in THTR & FLM 2A06 or 2AA3. Students wishing to register in this course must submit an application form to the School of the Arts by the end of April to guarantee consideration for the following year.

Departmental permission required.

Offered on an irregular rotation basis with THTR&FLM 3ZZ3.

THTR&FLM 3ZZ3 WESTERN CLASSICAL PERFORMANCE IN ACTION

An exploration in action of classical practices of dramatic representation and the forms of knowledge building they promote.

Two studio; one term

Prerequisite: Registration in a program in Theatre and Film Studies; and a grade of at least B- in THTR & FLM 2A06 or 2AA3. Students wishing to register in this course must submit an application form to the School of the Arts by the end of April to guarantee consideration for the following year.

Antirequisite: THTR & FLM 3A03

Departmental permission required.

Offered on an irregular rotation basis with THTR&FLM 3YY3.

THTR&FLM 4A06 HONOURS PERFORMANCE PROJECT

Students will work in small groups to create and critique dramatic performances.

Two lectures and practical exercises, plus rehearsals; two terms

Prerequisite: Registration in Level IV of an Honours program in Theatre & Film Studies; and one of THTR & FLM 2A06, 2AA3, 2C03 or 2D03; and one of THTR & FLM 2B03, 2BB3, 3A03 or 3B03, 3CC3, 3YY3, 3X03, 3XX3, 3ZZ3; and permission of the School of the Arts

Admission to THTR&FLM 4A06 will be based primarily on academic standing. In addition, students must complete a written application on a form provided by the School of the Arts, which must be submitted in March of the academic year prior to registration. Final selection will be made by Theatre and Film Studies faculty.

THTR&FLM 4C03 STUDIES IN THE THEORY OF DRAMATIC PERFORMANCE

An examination of theoretical documents, with an emphasis on contemporary theories of the nature of dramatic performance.

Seminar (two hours); one term

Prerequisite: Registration in Level III or IV of an Honours program in Theatre & Film Studies

Offered in alternate years.

Priority will be given to students registered in Level IV of any Theatre & Film Studies program.

THTR&FLM 4D03 STUDIES IN THEATRE AND FILM

This 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: Registration in Level III or IV of an Honours program in Theatre & Film Studies

Priority will be given to students registered in Level IV of any Theatre & Film Studies program.

THTR&FLM 4E03 STUDIES IN FILM

Senior seminar: An examination of selected films.

Seminar (two hours); one term

Prerequisite: Registration in Level III or IV of an Honours program in Theatre & Film Studies; or registration in Level IV of an Honours program in Communication Studies. THTR&FLM 2F03 is recommended.

Cross-list: CMST 4FF3

Priority will be given first to students registered in Level IV of any Theatre & Film Studies program, and then to students registered in Level IV of the Communication Studies program.

THTR&FLM 4F03 INDEPENDENT STUDY IN THEATRE & FILM STUDIES II

This course is reserved for Honours Theatre & Film Studies students with the demonstrated ability to work independently. Students must submit a written proposal to the Academic Counsellor for Theatre & Film Studies no later than the first day of classes.

Prerequisite: Registration in an Honours program in Theatre & Film Studies with a Cumulative Average of at least 9.0 and permission of the School of the Arts

THTR&FLM 4J03 THE SPLIT SCREEN - RECONSTRUCTING NATIONAL IDENTITIES IN WEST AND EAST GERMAN CINEMA

This course examines German film texts of the post-war period and their representation of West and East German identities. Films will be discussed within the context of important political, social and cultural developments at the time of the films' production.

Two hours plus one film screening per week; one term

Prerequisite: Registration in Level III or IV

Cross-list: COMP LIT 4J03, GERMAN 4J03

Offered on an irregular rotation basis.

This course is administered by the Department of Linguistics and Languages.

Note:

The following courses, offered by other departments, directly pertain to Theatre & Film Studies. These are recommended as electives. Up to nine units of courses from this list may be available as substitutes for Theatre & Film courses, and counted toward the fulfillment of a program in Theatre & Film Studies. Students are advised that there may be restrictions on enrolment in these courses.

COMP LIT 3G03	European Drama
ENGLISH 2B06	The Development of English Drama
ENGLISH 2L03	Shakespeare: Selected Plays
ENGLISH 3DD3	Contemporary Canadian Drama
ENGLISH 3K06	Shakespeare
FRENCH 3BB3	Contemporary Quebec Theatre
FRENCH 3Q03	17th-Century French Literature I
GERMAN 4H03	The Holocaust in German Film and Fiction
HISPANIC 4Q03	Spanish and Latin American Culture through Cinema
HISPANIC 4V03	Representative Dramatists of 20th-Century Spain
KINESIOL 3JJ3	History of Modern Dance
KINESIOL 3T03	Dance Performance
MUSIC 2F03	Music for Film and Television
RELIG ST 2YY3	The Bible and Film
WOMEN ST 3B03	Topics on Women and the Arts

WOMEN'S STUDIES

WEB ADDRESS: <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 Program is taught by an Interdisciplinary Committee of Instruction.

Director

Vera Chouinard

Assistant Professors

Diane Enns (*Philosophy and Women's Studies*) B.A. (Ottawa), M.A. (Carleton), Ph.D. (SUNY-Binghamton)

Melinda Gough (*English and Cultural Studies and Women's Studies*) B.A. (McGill), M.A., Ph.D. (Yale)

Committee of Instruction as of January 15, 2007

Chair

Vera Chouinard (*Geography and Earth Sciences*)

Karen Balcom (*History*)

Chandrima Chakraborty (*English and Cultural Studies*)

Elisabeth Gedge (*Philosophy*)

Diane Enns (*Philosophy and Women's Studies*)

Janice Hladki (*School of the Arts*)

Jacques Khalil (*English and Cultural Studies*)

Susan Searls Giroux (*English and Cultural Studies*)

Courses *If no prerequisite is listed, the course is open.***WOMEN ST 1A03 WOMEN, CULTURE, POWER**

An interdisciplinary introduction to Women's Studies focusing on how women and men shape and are shaped by culture (including popular culture), systems of power and institutional ideologies.

Three hours (two lectures, one tutorial); one term

Antirequisite: WOMEN ST 1A06

WOMEN ST 1AA3 WOMEN TRANSFORMING THE WORLD

An interdisciplinary introduction to Women's Studies that explores women's historic and current collective efforts to transform social, economic and political conditions both nationally and globally.

Three hours (two lectures, one tutorial); one term

Antirequisite: WOMEN ST 1A06

WOMEN ST 2A03 HUMAN RIGHTS AND SOCIAL JUSTICE

An introduction to the growing national and international discussion of human rights, exploring the value and limitations of universal rights, equality under the law and social justice.

Three hours; one term

Prerequisite: WOMEN ST 1A03, 1AA3 or permission of the Director of Women's Studies

WOMEN ST 2AA3 FEMINIST THEORY

An introduction to various schools of feminist thought, including global feminism, poststructural feminism, radical feminism, cultural feminism, socialist feminism and the "third wave".

Three hours; one term

Prerequisite: WOMEN ST 1A03, 1AA3 or permission of the Director of Women's Studies

WOMEN ST 2F03 HISTORY OF WOMEN IN EUROPE TO 1650

An exploration of the history of European women and gender during the medieval and early modern periods, focusing on the political, social, spiritual, intellectual and economic realms.

Three hours, one term

Prerequisite: Registration in Level II or above

Cross-list: HISTORY 2F03

Antirequisite: HISTORY 2BB6, WOMEN ST 2B06

This course is administered by the Department of History.

WOMEN ST 2H03 SOCIAL ASPECTS OF REPRODUCTION

An interdisciplinary course exploring birth and reproduction. Topics may include: social determinants of reproductive health, fertility and birthing rituals, reproductive ethics, policy and technologies.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level II or above

Cross-list: HEALTHST 2H03, HTH SCI 2I03

WOMEN ST 2HH3 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 1A03, 1AA3 are recommended.

Antirequisite: SOCIOL 4U03

WOMEN ST 2J03 GENDER AND PERFORMANCE

An examination of gender as identities performed or constructed in complex social, historical and cultural processes and conditions, including how gender gives meaning to different performance texts, as well as to a range of performance practices in daily life.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above of a program in Communication Studies or Women's Studies

Cross-list: CMST 2H03

This course is administered by the Department of Communication Studies and Multimedia.

WOMEN ST 2K06 STUDIES IN WOMEN WRITERS

A closely focused course on women's writing in English. The topic for the course varies, sometimes concentrating on specific issues, sometimes on an historical period or national literature. Relevant feminist theory is a component of the course.

Three hours; two terms

Prerequisite: WOMEN ST 1A03, 1AA3 or permission of the Director of Women's Studies

Cross-list: CSCT 2K06, ENGLISH 2K06

This course is administered by the Department of English and Cultural Studies.

WOMEN ST 2L03 FEMINIST UTOPIAS

An examination of literary texts offering women's visions of social change.

Three hours (seminar and discussion); one term

Prerequisite: Registration in Level II or above. WOMEN ST 1A03, 1AA3 are recommended.

Cross-list: ENGLISH 2N03

WOMEN ST 3A03 DOING FEMINIST RESEARCH

An exploration of feminist research methods, focusing on experience, power and knowledge and on learning methods such as how to do oral history, interviews and participatory action research.

Three hours; one term

Prerequisite: WOMEN ST 2AA3 or permission of the Director of Women's Studies

WOMEN ST 3AA3 ADVANCED FEMINIST THEORY

An advanced course in feminist theory that explores the critical impact of recent work on identity and difference, nationalism, race, queer theory, poststructuralism and postcolonialism.

Three hours; one term

Prerequisite: WOMEN ST 2AA3 or permission of the Director of Women's Studies

WOMEN ST 3B03 TOPICS ON WOMEN AND THE ARTS

This course explores the roles of women in any one of the following fields: music, visual arts, film or theatre, whether as subjects or creators. Approaches may be practical, historical and/or theoretical, and interrelationships between the fields will be examined where appropriate.

Three hours; one term

Prerequisite: Registration in Level II or above. WOMEN ST 1A03, 1AA3 are recommended.

WOMEN ST 3B03 may be repeated, if on a different topic, to a total of six units.

WOMEN ST 3BB3 WOMEN AND VISUAL CULTURE

Students will explore ideas about representation, spectatorship and production in relation to issues of social difference, such as gender, race and class. Emphasis is on visually in forms such as film, video, television, advertising, et cetera.

Two hour lecture and discussion, plus one weekly film screening; one term

Prerequisite: Registration in Level III or above and one of ART HIST 2A03, CMST 2F03, 2I03, THTR&FLM 1B03 or both WOMEN ST 1A03 and 1AA3

Cross-list: CMST 3BB3, 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 3DD3 WOMEN IN A MULTICULTURAL SOCIETY

An interdisciplinary exploration of women's experiences in sub-cultures within a multicultural society, examining social and historical conditions, policies, and personal narratives. Topics may include immigration, voice, mobility, identity, hybridity.

Three hours; one term

Prerequisite: Registration in Level II or above. WOMEN ST 1A03, 1AA3 are recommended.

Antirequisite: CMST 3WW3

WOMEN ST 3G03 HISTORY OF WOMEN IN CANADA AND THE U.S. TO 1920

This course examines key areas of women's history, such as indigenous cultures, slavery, immigration, religion, "witchcraft", the family, sexuality, paid and unpaid labour, and the first wave of the women's movement.

Three hours; one term

Prerequisite: Registration in Level II or above

Cross-list: HISTORY 3W03

Antirequisite: WOMEN ST 3X03

This course is administered by the Department of History.

WOMEN ST 3GG3 HISTORY OF WOMEN IN CANADA AND THE U.S. FROM 1920

This course examines key areas of women's history, such as the impact of the Great Depression and the Second World War, the civil rights movement, the sexual revolution, and the second wave of the women's movement.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

Cross-list: HISTORY 3WW3

Antirequisite: WOMEN ST 3X03

This course is administered by the Department of History.

WOMEN ST 3H03 CRITICAL RACE STUDIES

This course examines contemporary debates in critical race theory in an attempt to critically decode the operations of race in literary and cultural texts.

Three hours; one term

Prerequisite: Registration in a program in Comparative Literature, Cultural Studies and Critical Theory, English, Peace Studies or Women's Studies

Cross-list: COMP LIT 3RR3, CSCT 3A03, ENGLISH 3A03, PEACE ST 3A03

This course is administered by the Department of English and Cultural Studies.

WOMEN ST 3HH3 THEORIES OF GENDER AND SEXUALITY

This course explores a range of theories of gender and sexuality by working through readings from the intersecting fields of feminist, queer and masculinity studies.

Three hours; one term

Prerequisite: Registration in a program in Comparative Literature, Cultural Studies and Critical Theory, English or Women's Studies

Cross-list: COMP LIT 3AA3, CSCT 3AA3, ENGLISH 3AA3

This course is administered by the Department of English and Cultural Studies.

WOMEN ST 3I03 PHILOSOPHY AND FEMINISM

A study of philosophical issues in feminist thought.

Three hours; one term

Prerequisite: Registration in Level III or IV of any program or six units of Philosophy. WOMEN ST 1A03, 1AA3 are recommended.

Cross-list: PHILOS 3I03

Offered in alternate years.

This course is administered by the Department of Philosophy.

WOMEN ST 3NN3 WOMEN IN GERMAN LITERATURE AND CULTURE

This course explores the rich literary and cultural history of women writers, filmmakers and artists from the early Middle Ages to the present in German-speaking Europe.

Three hours; one term

Prerequisite: Registration in Level II or above

Cross-list: COMP LIT 3NN3, GERMAN 3NN3

Offered in alternate years.

This course is administered by the Department of Linguistics and Languages.

WOMEN ST 3WW3 INTERNATIONAL WOMEN WRITERS

A critical analysis of a selection of literary works by women authors from across the globe, with an emphasis on theories of gender and sexuality.

Two hours; one term

Prerequisite: Registration in Level II or above

Cross-list: COMP LIT 3WW3

This course is administered by Comparative Literature.

WOMEN ST 3Z03 WOMEN AND MEN IN WAR AND PEACE

This course focuses on how gender and other differences shape our experiences of war and struggles for a more peaceful world.

Three hours; one term

Prerequisite: Registration in Level III or IV of the Combined Honours in Women's Studies program or Peace Studies program or permission of the Director of either program

Cross-list: PEACE ST 3Z03

This course is administered by Peace Studies.

WOMEN ST 4A06 INDEPENDENT RESEARCH

Students develop their own research projects, in regular consultation with a faculty supervisor. Upon completion, students present their results at a one-day open forum, and submit a written report.

Prerequisite: Registration in Level IV of the Women's Studies Program

WOMEN ST 4B03 TOPICS IN WOMEN AND THE ECONOMY

An analysis of economic policies and realities as they impact on women's lives. Topics may include women's access to capital, the distribution of goods, access to health care, poverty and aging, and employment.

Three hours (seminar and discussion); one term

Prerequisite: Registration in Level III or IV of the Combined Honours in Women's Studies Program or permission of the Director of Women's Studies

WOMEN ST 4C03 TOPICS IN FEMINIST SCHOLARSHIP: WOMEN IN CANADA

An intensive seminar in a field reflecting the instructor's research interests. Students benefit from current scholarship, and learn research methods complementary to those used in WOMEN ST 4A06.

Three hours; one term

Prerequisite: Registration in Level III or IV of the Combined Honours in Women's Studies Program or permission of the Director of Women's Studies

WOMEN ST 4D03 INDEPENDENT STUDY

In consultation with a faculty member, students will research an approved topic, on the basis of materials outside normally available course offerings. A major paper will be required.

Prerequisite: Registration in Level IV of the Combined Honours in Women's Studies program and permission of the Director

WOMEN ST 4J03 CROSSING BORDERS: GLOBAL FEMINISMS

Examines how diverse women's lives are being transformed in a rapidly changing global society and the implication of women's changing places in society and space for feminist theory and practice.

Seminar (two hours); one term

Prerequisite: Registration in Level III or IV of the Combined Honours in Women's Studies program

Cross-list: CSCT 4J03, ENGLISH 4J03

Note:

The following courses, offered by other departments, may be used to help fulfill Women's Studies program requirements, provided that the prerequisite requirements of the home department are fulfilled.

COMP LIT 4E03

Topics in Comparative Literature (when the topic is *Twentieth-Century Women Writers*)

HISTORY 4I06

Women and Social Movements in the Nineteenth- and Twentieth-Century United States

KINESIOL 4T03

Gender, Sport and Leisure

LABR ST 3E03

Women, Work and Unionism

RELIG ST 2SS3

Women and Religion

SOC WORK 4R03

Social Work with Women

SOCIOL 2Q06

Sociology of Gender

ACADEMIC FACILITIES, STUDENT SERVICES AND ORGANIZATIONS

ACADEMIC FACILITIES

THE UNIVERSITY LIBRARY

Web Address

<http://library.mcmaster.ca/>

Email Address

libinfo@mcmaster.ca (Business, Humanities, Social Sciences,
Science and Engineering)

hslib@mcmaster.ca (Health Sciences)

University Librarian

Jeffrey Trzeciak, B.S., M.L.S.

Health Sciences Library

Dorothy Fitzgerald, B.A., M.L.S./Director

Associate University Librarian

(Teaching, Learning and Research)

Vivian Lewis, B.A., M.A., M.L.S.

Associate University Librarian (Collections and Facilities)

Anne Pottier, B.A., M.L.S.

Associate University Librarian

(Library and Learning Technologies)

Paul Otto, B.A., B.Ed., M.L.S.

Thode Library of Science and Engineering

Kathryn Ball, B.A., M.L.S./Librarian

Innis Library

Jeannie An, B.A., M.L.S./Business Librarian

Administrative Services

Mary Ruth Linkert/Administrator

The University Library System consists of Mills Memorial Library (Humanities and Social Sciences), the Innis Library in Kenneth Taylor Hall, containing a collection of business materials, the H.G. Thode Library of Science and Engineering, and the Health Sciences Library in the Health Sciences Centre. An on-line catalogue covering the holdings of all libraries is available and stacks are open to all library users.

The collection in 2006 contained more than 2 million volumes, and over 12,000 linear feet of archival material.

The McMaster University Libraries Gateway (<http://library.mcmaster.ca>) contains information on collections, hours and services in all the campus libraries; and is the access point to thousands of electronic resources provided by the libraries. Service is maintained at key Reference points in the various libraries and in-library instructional sessions are available.

Mills Library has several collections - Reference, Periodicals, Government Publications, Music, Maps, and Reserve, which is used mainly by Undergraduates.

The William Ready Division of Archives and Research Collections in Mills Library contains rare books, manuscripts and special book and archival collections, which afford many opportunities for original research. Of outstanding interest are the Bertrand Russell Archives, a massive collection of correspondence and manuscripts supported by books, journal articles, secondary literature, tapes, films and personal memorabilia.

The Eighteenth-Century Collection of British material numbers over 35,000 volumes and is the major Canadian collection in the field. Library fellowships in Eighteenth-Century Studies are offered annually. Among more modern materials are the papers of Vera Brittain, Anthony Burgess, Marian Engel, Margaret Laurence, Robert Fulford, Farley Mowat, Susan Musgrave, Matt Cohen and many others.

Business interests are reflected in such files as the General Steel Wares Archives, the J.M. Pigott Archives, the Macmillan of Canada Archives, the Clarke Irwin Archives, and the McClelland and Stewart Archives. Canadian social and political interests are documented in papers from the Canadian Union of Students, the Canadian Youth Congress, the SUPA/CUCND papers and other related collections. There are holdings of the records of a number of labour unions, including USWA Local 1005, USWA, District 6, United Glass and Ceramic Workers (Canada), and the Hamilton and District Labour Council.

Publications

➤ McMaster Library News

UNIVERSITY TECHNOLOGY SERVICES (UTS)

Web Address

<http://www.mcmaster.ca/uts>

Email Address

uts@mcmaster.ca

Chief Information Officer (CIO)

Debbie Barrett, B.A.

Director, Service Development and Delivery

Heather Grigg

Director, Project Management

John Alley, B.A., M.E.Des., M.B.A.

Associate Director, Enterprise Networks

Robin Griffin, B.Sc., Ph.D.

Associate Director, Enterprise Systems

Brian McEntegart, B.Sc.

UTS provides computing services in support of both administrative and networking activities. UTS manages a campus-wide network which is linked to the Internet. MUGSI (McMaster Undergraduate Student Information) provides students access to their academic and personal data via the web. Students can register and change courses on the web using SOLAR (Student Online Academic Registration).

Student computing labs for academic use, equipped with a minimum of Pentium IV 2.4, are located in Burke Sciences Building, Rooms 241, 242, 248, 249, John Hodgins Engineering Building, Room 232, 234, Arthur Bourns Building, Room 166, Kenneth Taylor Hall, Rooms B110, B121 and B123. All labs provide access to the Internet, popular wordprocessing and spreadsheet packages as well as various computing languages, statistical applications and specialized course software provided by instructors. Student consultants are available to assist customers in most of these computer labs. Assistance is also available in the Main UTS Office located in T-13, Room 127.

Every undergraduate and graduate student can register for a MAC ID account that includes an email account, web proxy server account, Web CT account, MacConnect and a printing account (\$0.10 per page for laser printing). All of the McMaster residences have network wiring allowing students to access the Internet from the convenience of their room. This service is included in the residence fee.

In addition to the facilities operated by UTS, there is computer equipment located in various departments to support specific academic programs.

CENTRE FOR LEADERSHIP IN LEARNING

➤ T-13, Room 124, ext. 24540

Web Address

<http://www.mcmaster.ca/cll>

Email Address

ccl@mcmaster.ca
horvathe@mcmaster.ca

Executive Director

Dale Roy, B.A., M.A.

Assistant Professor

Anne Milne, Ph.D.

Educational Consultants

Paola Borin, B.A., B.Ed., M.Ed.

Erika Kustra, Ph.D.

Graduate Student Network Coordinator

Michael Potter, M.A.

Administrative Assistant

Elvia Horvath

The primary goal of the Centre for Leadership in Learning is to be a resource centre for people who teach at McMaster. The Centre serves individual instructors, departments and other groups directly affecting teaching and learning at McMaster. Our main goals are:

1. To provide opportunities for faculty and graduate students to build teaching skills and, in particular, to develop skills in self-directed learning, inquiry and other innovative teaching models.
2. To support faculty in investigating and using new technologies to enhance learning for our students.
3. To offer advice on policy and projects that support good teaching (e.g., award programs and the evaluation of teaching).
4. To assist individual faculty members and groups of faculty in conducting educational research to understand how students learn and what makes for effective teaching within a university environment.
5. To support and encourage innovation.
6. To assist and support the testing and evaluation of new learning models that build upon the inquiry approach and other innovative teaching models pioneered by McMaster University.
7. To share our knowledge of best teaching practices in higher education to improve the quality of education locally, nationally and internationally.
8. To enable the circulation of teaching and learning insights.

The Centre's activities include:

The Inquiry Project: The CLL assists and supports the development, evaluation and dissemination of the McMaster Inquiry Project as part of its larger Program for Active Learning. The central goal is to incorporate the concept of *student as active learner* throughout the entire undergraduate experience.

Learning Innovation Grants: These grants assist faculty to apply and evaluate a variety of innovative educational strategies and 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.

- Departmental Grants of \$100,000 over three years are available to assist major new teaching initiatives in departments.

Learning Technologies: Assistance is offered to those using technology to promote learning. The CLL can connect individuals with those who have expertise in technology and its use in education. Course Management Systems (WEB-CT and LearnLink) are also supported.

Activities for Teaching Assistants: The Centre plans and organizes T.A. Day, a campus-wide welcome and orientation program 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 6,000 books, articles and journals on university teaching and learning. It is an excellent way to find ideas for improving and promoting active learning. You can visit the CLL library in the office (T13, Room 124) between the hours of 9:00 a.m. and 5:00 p.m. Alternatively, you can use keywords to search much of our library from our web site.

CLL Home Page: A selection of teaching tips and other information about the CLL are available at the following web site: <http://www.mcmaster.ca/ctl>.

McMASTER MEDIA PRODUCTION SERVICES**Web Address**<http://www.media.mcmaster.ca>**Email Address**moorcr@mcmaster.ca

Media Production Services (MPS) provides complete media service to faculty, staff and students whether the project is for education, research or personal use.

PRINTING SERVICES DIVISION

- DeGroote School of Business, Room B111, ext. 24447
or Health Sciences Centre, Room 1T5, ext. 22348

Printing Services is equipped to provide all printing needs. The state-of-the-art facility allows for submission of both electronic files and traditional hard copy. The services include pre-press and file manipulation services, electronic printing in black and white and full colour plus traditional offset and full bindery services.

CREATIVE DESIGN AND IMAGING DIVISION

- Health Sciences Centre, Room 1G1, ext. 22301

MPS Creative Design team provides a full range of communication pieces from concept to completion. Custom brochures, logos, newsletters, annual reports, poster presentations can be enhanced with digital images and traditional prints photographed by our team of photographers. We also provide lab services in-house for negatives, slides and custom black and white photography. Digital enhancement and photo editing can be achieved from slides, prints, negatives and electronic files. Output can be provided in either high or low resolution to produce large format posters, high quality prints as well as archival and web page content.

VIDEOCONFERENCING

- Health Sciences Centre, Room 1G1, ext. 22301

Videoconferencing is available in our in-house facility. Our completely interactive system is available for departmental, teaching or personal use. We provide archiving and streaming of conferences upon request.

GERONTOLOGICAL STUDIES

There are two Gerontology components at McMaster: the Centre for Gerontological Studies and the Department of Health, Aging and Society. (Further information can be obtained by contacting Gavin Andres in Kenneth Taylor Hall, Room 225, ext. 27961.)

McMASTER CENTRE FOR GERONTOLOGICAL STUDIES

- Kenneth Taylor Hall, Room 204, ext. 24449

Director

Margaret A. Denton, B.A., M.A., Ph.D.

The McMaster Centre for Gerontological Studies is involved in the promotion and development of multidisciplinary research and educational programs within the University and the local community. The Centre also provides a forum for collaboration on education, research, and practice with other community organizations.

The mandate of the Centre is to foster research and education in aging. The Centre's activities are partially supported by University funding. Specific projects are funded by public agencies, private foundations and user fees.

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. The newsletter Aging, Health and Society: News and Views and the Directory of Research on Aging at McMaster University provide information about research and new initiatives in the field of aging;
2. to coordinate and plan multidisciplinary initiatives in gerontology across 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 Fall Symposium and spring workshop;
4. to advance gerontology at McMaster and in Canada by actively participating in provincial and national gerontological organizations and initiatives;
5. to initiate and support the development of new gerontological projects with older adults, community agencies, students, staff and faculty.
6. to actively support research, education, policy and practice for the benefit of older persons.

OFFICE OF INTERNATIONAL AFFAIRS

➤ Alumni Memorial Hall, Room 203, ext. 24700, 24211, 22916

Web Address

<http://www.mcmaster.ca/oia>

International Admissions Inquiries Email Address

inadin@mcmaster.ca

Associate Vice-President, International Affairs

Luke Chan

Senior Project Manager/International Liaison Officer

Ni Jadon

Project Manager

May Zhai

Project Officers

Tania Hakim

Yvonne Maidment

Executive Assistant

Laurine Mollinga

McMaster University has become increasingly involved around the world in exchange agreements, institutional linkages and externally funded international programs concerned with collaborative research, education and human resource development, and with improving the delivery of services in such sectors as business, environmental protection, community health, engineering and technology development and transfer. The Office of International Affairs (OIA) has taken on an expanded international role that seeks to coordinate and facilitate McMaster's expertise in a highly complex and changing global environment. OIA participates in four broad areas including international student recruitment, development of international projects and linkages, international programs and international fund-raising and development. OIA facilitates and coordinates the development of international agreements with other institutions, research and education agencies, including government and non-government organizations.

The Office of International Affairs is situated within the Office of the Vice-President, Research and International Affairs.

McMASTER MUSEUM OF ART

➤ University Avenue, ext. 23081

Director

Carol Podedworny, B.A., M.M.St., M.A.

Email: popedwo@mcmaster.ca

Collections and Operations Manager

G. Loveys, B.A.

Email: loveys@mcmaster.ca

Installations/Preservation Officer

J. Petteplace, B.A.

Email: jpette@mcmaster.ca

Administrative Secretary

Jude Levett

Email: levettje@mcmaster.ca

Education Officer

Gregory Rennick, B.A.

Email: rennick@mcmaster.ca

Communications Officer

R.A. Prevec, B.A.

Email: prevecr@mcmaster.ca

Located across the plaza from the University Student Centre, on the corner of Sterling and University Avenue, the Museum contains five Exhibition Galleries, a Paper Centre and an Educational Access Gallery. The Museum offers a year-round program of exhibitions ranging from the historical past to present-day artistic investigations either organized by the McMaster Museum or loaned by such institutions as the National Gallery of Canada. A regular program of public events including lunchtime talks, Visiting Artist talks, seminars and concerts is offered.

McMaster's permanent art collection contains more than 6,000 art works with a specialized collection of over 250 German Expressionist prints and the Levy Collection of Impressionist and Post Impressionist paintings.

Contact the Museum for exhibition listings. Hours: Tuesday/Wednesday/Friday, 11:00 a.m. - 5:00 p.m.; Thursday, 11:00 a.m. - 7:00 p.m.; and Saturday, 12:00 p.m. - 5:00 p.m. Voluntary admission fee of \$2.00; free for students and seniors. Museum Memberships available. Wheelchair accessible.

STUDENT SERVICES

Student Affairs Web Address

<http://studentaffairs.mcmaster.ca>

ASSOCIATE VICE-PRESIDENT (STUDENT AFFAIRS) AND DEAN OF STUDENTS

➤ Gilmour Hall, Room 207, ext. 27455

Philip E. Wood, B.A.Sc., Ph.D., F.C.I.C., P. Eng.

The Associate Vice-President (Student Affairs) and Dean of Students leads a variety of specialized student services and is available to meet with students and representatives of student organizations with problems, concerns, questions or suggestions on any matter relating to student life and services on campus.

CENTRE FOR STUDENT DEVELOPMENT

➤ McMaster University Student Centre, Room B107, ext. 24711

Web Address

<http://csd.mcmaster.ca/>

Director

Desmond Pouyat

The Centre for Student Development is a resource for all McMaster students. It offers services in five main areas: personal counseling, academic skills (including writing skills), services for students with disabilities (including ATLAS, a program for students with Learning Disabilities), Leadership Training and International Student Services (including English as a Second Language and a Work and Study Abroad program). All contact with CSD is confidential. For a complete staff listing, visit <http://csd.mcmaster.ca/staff.htm>.

Personal Counselling

Students are encouraged to seek assistance from the Centre if they experience any type of personal, emotional, social or mental health concerns. Workshops, groups, and other sessions are also offered periodically throughout the year. For more information visit <http://csd.mcmaster.ca/personal>.

Academic Skills

The Centre offers workshops, small group seminars and individual counselling on a wide range of academic skills matters.

Academic Skills Online is now available, which offers academic skills content and online videos 24 hours a day.

Academic Skills services include:

- Advanced learning strategies (e.g. note taking, lecture and reading)
- Time management, personal organization and study habits
- Motivation, procrastination, stress and energy management
- Exam taking skills (e.g. multiple choice, exam preparation)
- Academic writing skills development

For more information and to see what workshops are currently available, please visit <http://csd.mcmaster.ca/academic>.

Services for Students with Disabilities

The Centre for Student Development can provide advice to current and potential students and applicants with disabilities. Once admitted to the University, students with disabilities are encouraged to contact the Centre at an early date (two or three months prior to registration) to ensure sufficient time to make arrangements regarding their needs. Even if accommodation or assistance is not immediately required, students are encouraged to maintain contact with the Centre in case a need for assistance should arise at a later date.

The Centre assists students with issues concerning the accessibility of campus facilities, the provision of special equipment and alternative media formats and other issues. It provides support for students with chronic medical and mental health disabilities and students who are deaf or hard of hearing, and for students with low vision or blindness, or a mobility/functional disability. For students with a learning disability or ADHD, CSD offers the ATLAS Program. It also offers counselling, advice, support and workshops to help students meet their educational objectives. For more information visit <http://csd.mcmaster.ca/sswd>.

Assistive Technology Learning and Academic Support (ATLAS)

The ATLAS Program which is located in the Commons Building Room B104, offers assistive technology training and support for software packages to help students with learning disabilities or ADHD with their reading, writing and organizational skills. In addition, computer stations with assistive technology software are available in the lab for students to use.

Students can learn various reading, writing, time management, test preparation and study strategies from our Learning Strategist. Support is also offered to assist students to understand the nature of their learning disability. Students can meet with the LD Coordinator to determine eligibility for the service, or to receive information if they are wondering if they have a learning disability. For more information, drop by our lab in Commons Building Room B104, call (905) 525-9140, ext. 24354, or visit <http://csd.mcmaster.ca/atlas>.

English as a Second Language (ESL) Support @ Mac

If their native language is not English, students may wish to use one or more of the following services: daytime courses in listening and speaking, academic reading, academic writing, presentation skills, and English pronunciation; evening conversation classes in English; Speakeasy (one-on-one conversation) and the Conversation Circle (group-based); Opening Doors: Preparation for Employment; or The Writing Clinic. Evening classes are also offered during the academic term.

All classes are non-credit and free to all McMaster students. For more information on any of the ESL programs, please visit our web site at <http://csd.mcmaster.ca/esl>, or contact the ESL coordinators at csdesl@mcmaster.ca.

The Dr. Mary E. Keyes Leadership Program

The goal of the Dr. Mary E. Keyes Leadership Program is to assist students in developing personal and professional skills necessary to become responsible community leaders and role models. The focus of the program is on becoming a collaborative team player and leader, and the Certificate courses and workshops aim to introduce and teach students some of those skills.

The Certificate is comprised of a series of required and elective courses and workshops, community service and a short written component. Additional resources are available on the Leadership web site and events such as a Poster and Speaker Series are offered during the year. Please note that the certificate does not qualify for credit towards an undergraduate degree. For more information and to register for courses and workshops, please visit our web site at: <http://csd.mcmaster.ca/leadership>.

Peer Helper Program

Peer Helpers are full or part-time undergraduate and graduate student volunteers who play an integral role in delivering programs and services at the Centre for Student Development and Career Services at McMaster. All faculties and levels of study are represented within the Peer Helper Program.

Peers are trained and supervised by professional staff and assist students with academic, disability, personal and career needs. The Peer Helper Program represents one of the premier student personal and professional development opportunities at the University. For more information, please visit our web site at <http://csd.mcmaster.ca/peerhelper>.

International Student Services (ISS)

The major purpose of the office is to assist international students, visiting scholars, post-doctoral fellows and faculty.

ISS provides a number of services such as:

- reception and orientation for newly arriving students,
- preliminary information concerning immigration matters,
- an exchange and student mobility program, where students can apply to work, study, volunteer, intern, or teach abroad,
- liaison with sponsoring agencies, foreign governments, consulates and embassies, and
- general advising and counselling regarding personal, financial and academic problems.

ISS is also the Plan Administrator for the University Health Insurance Plan (UHIP) which is mandatory for all international students.

Events and Volunteer Opportunities

Throughout the academic year, the Centre holds various workshops, events and groups relating to its wide range of services. Visit <http://csd.mcmaster.ca/events> for current offerings.

There are many ways for students to use their special skills to help someone else. Some of the many volunteer opportunities are:

1. Speakeasy/conversation Circle
2. Note taking Program (volunteer or one-on-one)
3. Volunteer (Students with Disabilities)
4. Peer Helper Program

THE OFFICE OF ACADEMIC INTEGRITY

➤ McMaster University Student Centre, Room 211, ext. 24303

Web Address

<http://www.mcmaster.ca/academicintegrity>

Email Address

thyreta@mcmaster.ca

Academic Integrity Officer

Andrea Thyret-Kidd

The Office of Academic Integrity serves as the primary resource to students, faculty and staff on all matters related to academic integrity. Please visit the web site to find information on plagiarism, inappropriate collaboration and to test your knowledge of academic integrity.

THE OFFICE OF HUMAN RIGHTS AND EQUITY SERVICES (HRES)

➤ McMaster University Student Centre, Room 212, ext. 23641

Web Address

<http://www.mcmaster.ca/hres>

Email Address

hres@mcmaster.ca

Director

Mark Walma

ext. 23641

Email: walma@mcmaster.ca

Program Coordinator

Vilma Rossi
ext. 24235
Email: rossiv@mcmaster.ca

Human Rights Educator

Deidre Walton
ext. 24067
Email: dwalton@mcmaster.ca

Administrative Assistant

Elaine Hay
ext. 27581
Email: hayelain@mcmaster.ca

HRES is responsible for human rights issues on campus and administers the Sexual Harassment and Anti-Discrimination policies for McMaster University. The goal of the office is to ensure that students, staff and faculty can live, learn and work in an environment free from all forms of harassment and discrimination. HRES takes two avenues of approach to accomplishing this goal: education/training and resolution of complaints.

The services offered by HRES are available to the entire McMaster community. Our staff are available to listen to questions or concerns regarding situations that may involve harassment, discrimination or other human rights issues. We provide advice, explain strategies for dealing with discrimination or harassment and identify options for how to approach such situations, either through informal mediation or the lodging of a complaint under university policies. Except in rare circumstances where the situation involves immediate danger to a member of the community, HRES services are completely confidential and advice is offered without obligation to the person contacting the office.

In addition to services related to specific situations, HRES is also responsible for developing and implementing training workshops and educational programs dealing with human rights, anti-discrimination and anti-harassment topics. In meeting this mandate, we offer regular awareness-raising programs and situation-specific workshops as well.

The HRES office is located on the second floor of the Student Centre and is completely wheelchair accessible. The office's fax number is (905) 522-7102. Our office hours are 8:30 a.m. to 4:30 p.m., or after hours by appointment.

ATHLETICS AND RECREATION**Web Address**

<http://www.athrec.mcmaster.ca>

Email Address

iwynne@mcmaster.ca (Customer Service)

Director of Athletics and Recreation

Thérèse A. Quigley

The Department of Athletics and Recreation provides a wide variety of opportunities for students involved in high performance athletic competition, intramural and club competition as well as recreation, fitness, instructional and outdoor recreation programs.

A diverse program of recreational opportunities is available for those who wish to keep fit, compete at their own individual level and enjoy sports and active living opportunities of their choice.

Access to the Athletic Facilities on campus is open to all McMaster students.

The fall of 2006, McMaster opened the new David Braley Athletic Centre. The facility features one of the largest fitness centres in Canada (17,000 square feet), a cycling studio, fitness studio, two multipurpose studios, new locker rooms, two additional gymnasiums (seven gymnasiums in total), a 200-metre indoor track, international squash courts and an indoor climbing wall.

McMaster Athletics and Recreation facilities also include a 50-metre pool, an outdoor 400-metre track, dance studio, activity studio and seven North American squash courts.

The Department of Athletics and Recreation ALTITUDE program utilizes the 50-foot Alpine Tower and Team Development Course. The first of its kind in Canada, it includes over 30 climbing routes, rope ladders, swinging logs, a giant swing and low ropes elements.

Many different club activities are available, along with instructional assistance. Off-campus field trips in canoeing, rock climbing, horse-back riding, hiking and many other opportunities are offered.

A highly developed intramural program is a very popular outlet for student activity. Intramurals run from early fall until late spring and provide students with a competitive environment that fosters social interaction.

The varsity program at McMaster fields 41 teams competing at the club, provincial (OUA) and national (CIS) level. Highly skilled coaches help McMaster student-athletes achieve their potential while competing against other universities in Ontario and across Canada.

The outstanding efforts of McMaster's student-athletes and the social involvement of student supporters are focal points of student life on campus. Varsity events are a major source of school spirit for competitors and spectators alike.

The Department of Athletics and Recreation takes pride in the quality programs and services provided to the McMaster community, and urges all members of the community to take advantage of its facilities and programs.

BOOKSTORE

➤ Gilmour Hall, Room B101, ext. 24751

Web Address

<http://titles.mcmaster.ca>

Email Address

bookstr@mcmaster.ca

Director

Donna Shapiro

Titles, McMaster University Bookstore, is owned and operated by the University. *Titles* is dedicated to assisting the learning process and proceeds from bookstore sales fund student services.

Titles offers a wide range of course materials that have been selected by professors for use in their courses. With three permanent and two temporary bookstores we strive to meet the needs of McMaster students.

Titles offers a buyback program and purchases used books back from students at the end of term. For more details regarding this program visit <http://buyback.mcmaster.ca>.

Bookstore charge accounts may be set up using a student ID card once a valid registration sticker has been obtained. The current credit limit is \$1,500.

MAIN BOOKSTORE

➤ Gilmour Hall, Room B101

The main bookstore is located in the basement of Gilmour Hall and features an extensive general book and magazine selection. Our giftware, clothing and stationery departments feature McMaster memorabilia. Our computer centre, Mac Micro, has an extensive selection of electronic hardware, software and peripherals. A full service Post Office is on site and Copicards for the library may be purchased here. During the first few weeks of September and January a selection of first year course materials are temporarily located in this location.

THE TANK

➤ Togo Salmon Hall, Room B203

This store contains all course materials, new and used, that are required. In order to save students money the bookstore actively seeks out as many used textbooks as possible. During peak periods some of the course materials will be relocated to temporary stores in order to reduce line-ups.

HEALTH SCIENCES BOOKSTORE, MEDIASHOP.COM

➤ Health Sciences Centre, Room 1G1

This store specializes in Medical, Nursing and Health Sciences titles. This store also features an extensive selection of current reference books in all health related fields. Stethoscopes and diagnostic instruments are also available here.

SUBTILES

➤ Downtown Centre

Located inside McMaster's Downtown Centre, Subtitles carries all course materials for the certificate classes held at the Downtown campus, 50 Main Street East, Hamilton. This is a temporary bookstore that operates at the start of term in September, January and May.

In addition, at the end of August and beginning of September a temporary bookstore is opened to house a portion of Level I course materials. The location of this store changes depending on room availability and students will need to check the web site or visit the store for more details.

CAREER SERVICES

➤ Gilmour Hall, Room 110, ext. 24254

Web Address

<http://careers.mcmaster.ca/>

Email Address

careers@mcmaster.ca

Manager

Lisa Boniface

For a complete listing of Career Services staff, please access our web site at: <http://careers.mcmaster.ca/>

At Career Services our purpose is to help you manage your career. Whether you are a current student or alumni, we can help you get where you want to go. From career planning to job search, we have a wealth of resources and services available to you.

Our staff is made up of experienced, knowledgeable professionals with a strong track record of assisting students and alumni in pursuing their career and educational goals. Our programs and services include:

- Career and employment counselling
- Drop-in career advising
- Job postings and On-Campus Recruitment (OCR) through McMaster's online job posting system, eRecruiting
- Career and education resources and information
- Resume critiques and workshops
- Interview skills and job search workshops
- Personality and interest testing
- Educational planning, including workshops on applying to professional schools (law, teaching, medicine, etc.)
- CareerLINKS mentoring program
- Events such as Career Fair, Continuing Education Fair and Summer Job Fair

The office hours are 8:30 a.m. to 4:30 p.m. Monday to Friday. For further information, please phone (905) 525-9140, ext. 24254 or fax (905) 529-8972.

OFFICE OF STUDENT FINANCIAL AID & SCHOLARSHIPS

➤ Gilmour Hall, Room 120, ext. 24319

Web Address

<http://sfas.mcmaster.ca>

Email Address

awards@mcmaster.ca or osap@mcmaster.ca

Director

E. Seymour

The office administers a variety of programs which are accessed by more than half of all full-time students as well as a large number of part-time students attending McMaster. These programs include the OSAP (Canada-Ontario integrated student loans and grants) out of province government Financial aid, U.S. Loans, Part-Time Canada Student Loan and Canada Study Grants, Ontario Work Study Program, Ontario Special Bursary Program, University Bursary and Emergency Loan Program, and Undergraduate Scholarships. In addition, the office provides administrative support to outside agencies offering scholarships and bursaries to students attending McMaster.

The office offers financial advice, budget counselling and information service to current and potential students designed to help identify, plan and cover post-secondary education expenses. All discussions with students are voluntary, private and confidential. Drop-in style counselling is available.

For more detailed profiles of program offerings, please refer to *Undergraduate Academic Awards and Student Financial Aid* sections in this Calendar.

CAMPUS HEALTH CENTRE

➤ Medical Clinic, McMaster University Student Centre, Room B101, ext. 27700

➤ Health Education, McMaster University Student Centre, Room B106, ext. 27619

Web Address

<http://www.mcmaster.ca/health>

Medical Director

Jan Young

Clinic Director

Julie Fairservice

Health care is available to all university students year-round at the Campus Health Centre (CHC). Appointments can be made by calling (905) 525-9140 ext. 27700.

Staffed by family physicians, registered nurses, health educators and administrative staff, the Campus Health Centre provides medical care similar to a family physician. Services include medical assessment and treatment; annual health examinations; birth-control counselling and low cost sale of the birth control products and emergency contraception; allergy injections; immunization; on-site laboratory; pregnancy tests; screening for sexually transmitted diseases; HIV prevention, testing and counselling; and information or counselling for any personal health concerns. A specialist in sports medicine is available for physical injuries. Our health centre provides on-site access to complementary health services including dietitian and Naturopathic Medicine.

Our health education staff are available in the Health and Wellness Centre at (905) 525-9140, ext. 27619 in the McMaster University Student Centre, Room B106. They are available to individuals or groups to address questions or concerns about health and lifestyle issues or academic studies. Popular topics are disease prevention, healthy relationships, sexuality, contraception options, nutrition and body image, stress and emotional health and alcohol/drug/tobacco use. A smoking cessation service is offered during the academic year. Free access is available to educational pamphlets, videos, computer programs and a lending library of books, reference material and information packages. Further information and an update on services can be obtained by calling the Campus Health Centre office at (905) 525-9140, ext. 27700 or visit our web site at <http://www.mcmaster.ca/health>.

HOSPITALITY SERVICES

➤ Commons Building, Room 116, ext. 24422

Web Address

<http://hospitality.mcmaster.ca>

Director, Hospitality Services

Albert Y. Ng

McMaster Hospitality Services is a self-supporting department dedicated to providing students with healthy, nutritious and flavourful food. We offer vegetarian choices, international food menus, healthy options, as well as quick snacks and made to order entrées. Our goal is to make the university dining experience exciting and fun, while at the same time providing high quality food services, variety and good value.

All students living in residence are required to purchase a meal plan. The MAC Express Meal Plan works on a debit system and offers a variety of meal plan options for residence and off-campus students. Depending on the meal plan chosen, this allows students to use one card at all Hospitality Services locations and at our off-campus vendors. For 2006-2007 the off-campus vendors included Boston Pizza, Basilique, East Side Mario's, Kelsey's, Mahal, Pita Pit, Pizza Pizza, Quarters Pub and Ramshead.

Off-campus students and other members of the University community may purchase a meal plan option at the MAC Express Centre located in the Commons Building, Room 128. For more information on meal plans, contact us at ext. 27448, via email at express@mcmaster.ca or visit our web site.

McMaster Hospitality Services has seventeen dining facilities conveniently located across campus:

- **Bymac** is the newest facility on campus located in the David Braley Athletic Centre and features the latest in dining trends which include a Pizza Pizza, Tim Hortons and Freshens' innovative new juice concepts.
- **Bridges Café** originally developed from a student-based initiative, is located in the renovated Refectory basement and provides an exciting vegetarian concept cafeteria, catering to the ideological and religious dietary needs of students, staff and faculty on campus.
- **Café One** in Michael G. Degroote Centre for Learning and Discovery provides Tim Hortons coffee and a variety of ready made items.
- **Café 2000** is located in the Institute for Applied Health Sciences and features Mr. Sub, Pizza Pizza, Tim Hortons, a 'wrap' station and more.

- **Commons Marketplace** provides students with a varied dining experience and is home to Your Healthy Choice, Pacific Rim, Chef's Table, Piller's Deli and Pizza++.
- **East Meets West Bistro** is our fine dining facility located in the Mary E. Keyes Residence Building. This restaurant is set in a two story glass atrium and features Asian and Continental cuisine. The Bistro offers gourmet pizza, rotisserie and stir fry menus. Located nearby, **My Mini Mac** offers Needa Pita and Tim Hortons in addition to a number of convenience store products.
- **La Piazza**, an open 'Marché Style' marketplace is located in the McMaster University Student Centre and features Pizza Pizza, Tim Hortons, Piller's Deli and Creation X International Grill. You will also find Made in Japan, Tim Hortons and Williams Coffee Pub kiosks in the Centre.
- **MAC Express** locations are conveniently found in the John Hodgins Engineering Building and Chester New Hall.
- **Made in Japan** prepares healthy meals with only water and fresh ingredients. Cooks prepare wholesome dishes in the McMaster University Student Centre.
- **Math Café** in Hamilton Hall provides fair trade coffees from regular coffee to a gourmet cappuccino with a variety of ready made items.
- **Tech Wave Café** located in the Information Technology Building, features Starbucks coffee in addition to a variety of delicious desserts.
- **Time Hortons** is a staple of Canadian culture; the Student Centre and other five locations of Tim Hortons serve fresh brewed coffee as well as donuts and muffins baked right on campus.
- **Williams Coffee Pub** in the McMaster University Student Centre has gourmet coffees and specialty beverages which are perfectly complemented by pastries, desserts and sandwiches to suit every taste.
- **The Wokery** in Kenneth Taylor Hall, is a popular lunch destination for Chinese food prepared fresh to order.

Visit our web site at <http://hospitality.mcmaster.ca> for our *Dining on Campus* menus, hours of operation, special events, meal plan information and more.

HOUSING AND CONFERENCE SERVICES

Web Address

<http://housing.mcmaster.ca>

Email Address

housing@mcmaster.ca

Director, Housing and Conference Services

Catherine Miller

RESIDENCES

The University owns and operates 12 on-campus residence buildings, accommodating a total of 3,683 students. The ten traditional-style residences offer a variety of theme and lifestyle options: International House and La Maison Française for those interested in learning about other cultures; Halcyon (Quiet) House and quiet floors; Wellness House for those wishing to balance healthy living with academic studies and all-female environments.

In addition, an apartment-style residence (Bates Residence) accommodates 503 male and female students and a suite-style residence building (Mary E. Keyes Residence) houses 280 students. All apartments and suites are furnished (except for a television).

Eighty percent of the spaces in residence are reserved for incoming first-year students. Admission offers to residence are based on a student's admission average to his/her academic program. All students with a 78% admission average are guaranteed a space in residence provided they meet the established residence application and deposit deadline.

Level I students will receive instructions regarding application procedures with their offer of admission to the University. To accept the offer of residence, a student's Residence Application and deposit must be received by the Residence Admissions Office before the specified deadline. Applications are completed on-line. Deposit payments are only accepted by credit card on-line (VISA/MasterCard) or by money order received in the Residence Admissions Office. No other payment methods are accepted. This deposit will then be applied to the student's residence fees. Students who do not receive an offer of residence with their offer of admission to the University may apply to the residence waiting list.

The waiting list is 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 by the specified deadline. Failure to do so by the specified deadline will result in forfeiture of the full amount of the deposit. Refer to the 2006-2007 *Campus Living* online at housing@mcmaster.ca. The 2007-2008 *Campus Living* is sent to all students who receive an offer of Residence with their offer of admission to McMaster.

The Residence Meal Plan is an integral component of living in any of the McMaster University residences and all students living in residence must purchase a mandatory meal plan. Residents use their ID cards as a debit card for food purchases made at Hospitality Services locations on campus. (Note: Residence Fees and Meal Plans do not include the December holiday break).

Go to <http://hospitality.mcmaster.ca> for specific Meal Plan information (also available in *Campus Living*).

The Director of Housing and Conference Services is responsible for policy, budget and the overall administration of McMaster's Residence system. The department has five distinct functional units: Admissions, Residence Life, Facilities, Conference Services and Off-Campus Housing.

Visit our web site to learn more about each Residence, the Residence Code of Conduct, and the other services available to McMaster's Residence students.

RESIDENCE ADMISSIONS

This area is responsible for residence admission policies and procedures, including: the Residence Agreement/Contract; residence applications, deposits and room assignments; the waiting list and withdrawal procedures; medical and grade appeals; and various Housing publications. Enquiries about residence should be directed to Residence Admissions, Housing and Conference Services, Commons Building, Room 101, (905) 525-9140 ext. 24342; email: housing@mcmaster.ca.

RESIDENCE LIFE

This area is responsible for programs designed to provide students with a positive living and learning environment and to assist them with the transition to university. Living in residence provides students with the opportunity to participate in educational and personal development interest programs, and positive and inclusive social activities. Residence Life also provides leadership opportunities including student staff, peer helper and elected residence council positions.

Residence students and student staff are supported by 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 programs and activities.

All students agree to be bound by the Residence Agreement/Contract and the Residence Code of Conduct as a condition of applying to residence at McMaster University.

RESIDENCE FACILITIES

The Residence Facilities Team is responsible for repairs and maintenance, renovations, student damages, safety and security needs, furnishings, cleaning, residence recreational facilities, and the 24 hour Housing and Conference Service Centres located in Mary E. Keyes Residence (west campus, ext. 24898) and the Commons Building (north campus, ext. 27222).

CONFERENCE SERVICES

➤ McKay Hall, Room 124, ext. 24781

Web Address

<http://housing.mcmaster.ca/confs/mainpage.html>

Conference Services is responsible for booking all indoor and outdoor non-academic events on campus.

During the summer months, Conference Services arranges accommodation, food and meeting facilities on campus for conferences, conventions, and touring groups. Residence accommodation is also available for summer students and casual guests. For more information, please visit our web site.

OFF-CAMPUS HOUSING

➤ McMaster University Student Centre, Room B112, ext. 24086

Web Address

<http://www.macocho.com>

Email Address

ocho@mcmaster.ca

The Off-Campus Resource Centre (OCRC) maintains up-to-date lists of available rental accommodation in Hamilton and the surrounding area. Among other services, it also provides free bus route maps, city zone maps, free use of telephones for students to contact landlords, information on housing by-laws and Tenant Protection Act, and personal assistance with the housing search. OCRC is operated on a year-round basis. Visit our web site to see all the listings of available rental units by zone and category.

TRANSPORTATION, PARKING AND SECURITY

ALTERNATIVE COMMUTING AND TRANSPORTATION (ACT OFFICE)

➤ E.T. Clarke Centre, ext. 24772

Web Address

<http://ACT.mcmaster.ca>

Travel to and from the University on foot, bicycle, by transit and in carpools is encouraged.

Full time undergraduate students benefit from a U-pass program where they have unlimited access to the city of Hamilton transit by simply showing their student card to transit bus operators. GO Transit provides frequent and direct services to campus from the Lakeshore corridor and the Highway 407 corridor. The University continually monitors the bike rack supply on campus to provide convenient facilities for cyclists and SWHAT (Student Walk Home Attendant Team) is a student program offering escorted walks home from campus. The University also subscribes to a web based ride matching program to assist people to find carpool partners to share the costs of driving and reduce the demand for parking at McMaster.

PARKING SERVICES

➤ E.T. Clarke Centre, ext. 24232

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 from undergraduates are accepted between June 1 and the close of the last business day of July. **It is now possible to apply electronically using the following web address: <http://parking.mcmaster.ca>** Completed application forms, accompanied by a Visa or MasterCard number and authorizing signature, or a cheque or money order payable to McMaster University, in the amount required for the full period must be forwarded to: Security and Parking Services, E.T. Clarke Centre, Room 102, McMaster University, Hamilton, Ontario L8S 4K1. **Cheques post-dated after 4:00 p.m. on the last business day of July will not be accepted.** (Parking applications and/or parking permits will be withdrawn and additional fees applied for NSF cheques or declined credit cards.)

If any applicable zone is oversubscribed, there may 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 may apply at any time of the year.

Special arrangements can be made for disabled parking privileges. Copies of the complete rules and regulations concerning parking at McMaster University are available at the Security and Parking Services Office or on the web at: <http://parking.mcmaster.ca/>

The Security and Parking Services Office has the overall responsibility for dealing with parking matters. If you have a problem, parking personnel will assist you. The office is located in the E.T. Clarke Centre, Room 102, (905) 525-9140 ext. 24232 or 27416 and is open Monday to Friday from 9:00 a.m. to 4:00 p.m.

SECURITY SERVICES

➤ E.T. Clarke Centre, ext. 24281

Web Address

<http://mcmaster.ca/security>

Security Services coordinates with other University services to make McMaster a safe and secure environment. Uniformed Special Constables patrol the campus on foot, bike and car. Security Services works under an agreement with the Hamilton Police Service to provide both security and police services on the campus. Telephone calls are always answered personally for emergencies or general information. Please visit our web site for more information.

McMaster Security Services primary responsibility is the protection of persons and property within the McMaster community. This office is open 24 hours daily. Security utilizes CCTV cameras on campus to enhance safety and security. These cameras are monitored by Security Services.

Security Services also offers the assistance of a Crime Prevention Sergeant. This Sergeant is available for any questions or concerns on safety and security issues on the campus. Crime Prevention can be reached at ext 26060.

McMASTER UNIVERSITY CHAPLAINCY CENTRE

➤ McMaster University Student Centre, Room 231, ext. 24207

Web Address:

<http://www.mcmaster.ca/chaplain>

Email Address:

chaplain@mcmaster.ca

The McMaster Chaplaincy Centre is open to all students and members of the campus community. The Chaplaincy Centre is staffed by Carol Wood, Ecumenical Chaplain; Michael Fallon, Christian Reformed Chaplain; Father Peter Nguyen, Roman Catholic Chaplain and the Assistant to the Chaplains. Regular office hours fall between 8:30 a.m. and 4:30 p.m., Monday through Wednesday, 10:00 a.m. and 7:00 p.m. Thursdays, and between 8:30 a.m. and 3:30 p.m. on Friday. Appointments outside of these hours can be arranged.

The Centre offers personal and confidential counselling for a wide range of concerns; groups to deal with topics such as bereavement support; and an experience of community through 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. 22003

Web Address

<http://www.msu.mcmaster.ca>

Purpose: The McMaster Students Union is a student-operated corporation with a cash flow exceeding 3.5 million dollars and extensive operations spanning over 30 unique departments. More than 18,000 full-time undergraduate students (enrolled in 18 units or more) belong to the MSU by virtue of their supplementary fees paid at registration.

Services of the MSU: Considered one of the most extensive student unions in Canada, the MSU offers an array of services as well as employment and volunteer opportunities for students at McMaster. These services include the campus restaurant/night club (Quarters), a convenience store (The Union Market), a games room (House of Games), the Underground Media and Design Centre, an information centre (Compass), the Gay, Lesbian, Bisexual and Transgendered Centre, a yearbook (The Marmor), the Student Health Insurance and Dental Plans, a campus events department (which organizes much of Welcome Week, Homecoming and other special events), MSU Childcare Centre, and a jointly funded Ombuds Office. The MSU offers volunteer opportunities through the Emergency First Response Team (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, a foodbank, and more than 200 clubs, including academic, political, religious, cultural and general interest.

Student Government: The Student Representative Assembly (SRA) consists of 35 elected individuals who represent student needs in crucial matters and is the governing body of the MSU. The President is elected by the entire student body while the Vice-Presidents Administration, Education and Finance are elected by the SRA.

The MSU also offers a First Year Council made up of first year students which deals with issues specific to first year students.

Student Centre: The MSU is the major stakeholder in the McMaster University Student Centre. Most of the mentioned services are located here, including the President and student representatives offices. For further information, visit the MSU Main Office, MUSC Room 201, or call (905) 525-9140, ext. 22003.

Fraternities and Sororities are not recognized by McMaster University and are not permitted to associate with the University in any way. The University is not responsible for any acts by these groups.

OMBUDS OFFICE

➤ McMaster University Student Centre, Room 210, ext. 24151

Web Address

<http://www.mcmaster.ca/ombuds>

Email Address

ombuds@mcmaster.ca

Ombudspersons

Shelley Lancaster
Carolyn Brendon

The Ombuds Office provides information and advice to the McMaster community to assist in the resolution of University related complaints and concerns. The Ombuds Office handles academic and non-academic matters as well as issues arising out of the provision of services. Students come to the Office with questions about such issues as grade appeals, petitions, codes of conduct and employment on campus.

The Ombuds Office is a neutral, confidential service provided by the McMaster Students Union in conjunction with the University.

McMASTER ASSOCIATION OF PART-TIME STUDENTS (MAPS)

➤ McMaster University Student Centre, Room 234, ext 22021

Web Address

<http://www.mcmaster.ca/maps/>

Email Address

maps@mcmaster.ca

MAPS 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: 9:30 a.m. to 8:30 p.m.
- Friday: 9:30 a.m. to 2:00 p.m.

All other time, MAPS office hours are:

- Monday to Thursday: 9:30 a.m. to 7:00 p.m.
- Friday: 9:30 a.m. to 2:00 p.m.

If students have a question pertaining to university procedure or a problem of any kind the MAPS staff can either supply the answer or refer individuals to someone who can. A handbook is published annually to help guide students through the University system and it is also mailed to students.

The part-time student newsletter, *The Link*, is published on a regular basis and is also mailed to students. If a copy is not received, students are advised to call or drop by the office.

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 a number of awards including: the Centennial Award for degree students, the Centennial Award for certificate/diploma students, the Martin W. Johns Award and a Gold Medal. MAPS has also established bursaries to assist students who have demonstrated financial need. More information is available on the MAPS web site.

There are three computers in the office where students can access their student record, surf the Web, use email, Word or Excel.

MAPS provides a bridge between students and the University, helping them to feel a part of McMaster's student body. We urge students to participate as often as possible in the academic and social events which are available at McMaster.

McMASTER UNIVERSITY ALUMNI ASSOCIATION

➤ President's Residence, ext 23900
or 1-888-217-6003 (Toll-free)

Web Address

<http://www.mcmaster.ca/ua/alumni>

Email Address

alumni@mcmaster.ca

Following convocation, all graduates of McMaster University automatically become members of the McMaster Alumni Association (MAA) and join our over 125,000 alumni living in 125 countries. The Association's mission statement addresses a number of goals: support of McMaster University, involvement of alumni, recognition of alumni achievements, alumni services and benefits, alumni communication, and involvement of current students.

Our alumni branch program creates connections in geographic areas like Brantford, Vancouver, Ottawa, Toronto and Hong Kong. Branches also connect alumni to their faculty or department through groups like the Michael G. DeGroote School of Business Alumni Association. Still other branches create connections among Mac grads who share a common interest or affinity, like the MSU Alumni Association.

The MAA also offers programs in the greater Hamilton community. The McMaster Alumni Connection (MAC) Luncheon Series brings high profile speakers to downtown Hamilton to talk with McMaster alumni, students and friends, and the Albert Lager Event Series expands the educational relationship with Mac into a lifelong affair by providing fun and unique opportunities to enjoy lectures, trips and seminars. Alumni Weekend occurs every year in June and is the largest single alumni event. It incorporates class reunions and other events like the Alumni Gallery Induction Ceremony designed to attract alumni to the McMaster campus. In the Fall, Homecoming is another important highlight of the alumni calendar.

The Association also gives its members the chance to obtain unique or discounted products or services through its Services and Benefits portfolio. Alumni can experience fantastic trips, obtain unique McMaster merchandise, use their McMaster MasterCard to help benefit the Association, receive high-quality home, auto, life, dental and extended health insurance at group rates, or investigate the other services offered through the MAA.

The McMaster Alumni Association also acts as an advocate, with representatives on the University Senate and Board of Governors. These representatives, along with other elected alumni, compose the MAA Board of Directors, and along with hundreds of other alumni volunteers, provide alumni programming in conjunction with the Office of Alumni Advancement. Both the Office and the Association can be contacted in the President's Residence, or by phone at (905) 525-9140 ext 23900, 1-888-217-6003 (Toll free), by email at alumni@mcmaster.ca or by fax at (905) 524-1733.

STUDENT FINANCIAL AID

WEB ADDRESS: <http://sfas.mcmaster.ca>

EMAIL ADDRESS: osap@mcmaster.ca

Associate Director, Student Financial Aid

Tracie Long

For information on any of the programs which follow, please contact:

Office of Student Financial Aid & Scholarships

Gilmour Hall, Room 120

McMaster University

Hamilton, Ontario, L8S 4L8

Telephone: (905) 525-9140, ext. 24319

ONTARIO STUDENT ASSISTANCE PROGRAM

Financial aid to help students meet the costs of their post-secondary education is available from the federal and provincial governments through the Ontario Student Assistance Program (OSAP). The various components of OSAP are:

- Canada-Ontario Integrated Student Loans
- Canada Access Grants/Millennium Ontario Access Grants/Ontario Access Grants
- Canada Study Grants
- Ontario Special Bursary Plan
- Ontario Work-Study
- Child Care Bursary
- Bursaries for Students with Disabilities/Canada Study Grant for the Accommodation of Students with Permanent Disabilities
- Queen Elizabeth II (Aiming for the Top) Scholarship
- Millennium Bursary
- Part-time Canada Student Loans/Canada Study Grants for High-Need Part-time Students

To be eligible to be considered for assistance under these OSAP programs, a student must be a Canadian citizen, permanent resident of Canada or a protected person; must meet Ontario residency requirements and must meet the specific application requirements of the program. The amount of financial aid awarded is based on financial need.

It is strongly recommended that students apply for OSAP at <http://osap.gov.on.ca> by July 15 to ensure that their applications are processed by the start of classes.

All of the government programs described in this text are modified and restructured annually to reflect the changing needs of students from the Province of Ontario. It is, therefore, recommended that you discuss your specific financial requirements with a Student Loan Officer in the Office of Student Financial Aid & Scholarships as early as possible and review program details and eligibility criteria at <http://osap.gov.on.ca>.

Canada-Ontario Integrated Student Loans

Eligible students demonstrating financial need, who are enrolled in at least 60% of a full course load (students with permanent disabilities may enrol in 40% of a full course load) per term in an approved degree, diploma or certificate program of at least 12 weeks in length at a Ministry approved educational institution and have passed a credit check may be eligible for loan funding. Loans are interest-free while the student is studying full-time.

Part-Time Canada Student Loans

The federal government also provides Canada Student Loans for eligible part-time students demonstrating financial need, who are enrolled in 20-39% of a full course load (students with permanent disabilities may enrol in 20-39% of a full course load) per term in courses leading to a degree, diploma or certificate in an approved program at a Ministry approved educational institution. Part-time Canada Student Loans assist with a student's allowable costs for tuition, books, transportation, day care and incidentals and are interest-bearing after 30 days. Repayment responsibilities begin within 30 days of negotiating the loan.

Canada Study Grants are available to high need part-time students who are studying part-time for very specific reasons (inability to attend full-time). Students submitting part-time loan applications will be assessed for grant eligibility.

Canada Access Grants/Millennium Ontario Access Grants/Ontario Access Grants

The Canada Access Grants for Low-Income Families and the Millennium Ontario Access Grants assist eligible first-time first-year students from low-income families with their tuition costs to a maximum of \$3000. The Canada Access Grants for students with Permanent Disabilities replaces the first \$2000 of eligible federal loan funding with non-repayable grant funding for students who self-identify and provide proof that they have a permanent disability. The Ontario Access Grants assist eligible second-year students from low-income families with their tuition costs to a maximum of \$3000. These grants do not have to be repaid. See detailed eligibility requirements at <http://osap.gov.on.ca>.

Ontario Special Bursary Plan

This plan helps students who demonstrate exceptional levels of financial need who are unable to attend school full-time. Bursaries are available to eligible part-time students enrolled in approved programs at recognized post-secondary institutions in Ontario only. Students must be working towards their first post-secondary degree, diploma or certificate. This bursary does not require repayment.

Ontario Work-Study

The Work-Study Program provides part-time jobs during the school year to students who demonstrate financial need to help them meet their education-related costs. It also helps students who lack the resources expected under OSAP or, who have an assessed need under OSAP which is not met because of loan maximums or, who do not wish to borrow further due to high debt load. Costs of this plan are shared by the provincial government and McMaster University.

Child Care Bursary

This plan is intended to assist full-time students who have applied and qualified for OSAP and who demonstrate financial need. Eligible students must have three or more dependent children, 11 years of age and under living with the student full-time throughout the study period. This bursary does not require repayment.

Bursaries for Students with Disabilities/ Canada Study Grant for the Accommodation of Students with Permanent Disabilities

This plan is intended to assist students with disabilities, who demonstrate financial need, to meet disability-related costs related to their participation in post-secondary education. A single application is used to be considered for this funding. For more information, contact the Centre for Student Development at <http://csd.mcmaster.ca/>.

Canada Study Grants

Canada Study Grants are funded by the federal government and administered by the provincial government, through the Ontario Student Assistance Program (OSAP). Policies regarding eligibility and amounts are established by the federal government and procedures on how to apply are established by the province of Ontario.

- Canada Study Grants include the following:
 - Canada Study Grant for Students with Dependents
 - Canada Study Grant for High-Need Part-time Students
 - Canada Study Grant for Women in Doctoral Studies
- All Canada Study Grants are non-repayable.

Queen Elizabeth II (Aiming for the Top) Scholarship

The Queen Elizabeth II (Aiming for the Top) Scholarship is designed to recognize students who have shown academic excellence at the high school level and to assist students with financial need. The value of the scholarship varies between \$100 and \$3,500 per academic year. You may be considered for a Queen Elizabeth II (Aiming for the Top) Scholarship if you:

- attend an Ontario high school in 2006/2007 and achieve academic excellence;
- are an Ontario resident (as defined by OSAP);
- apply to attend an Ontario university through the Ontario Universities' Application Centre, or a college of applied arts and technology through the Ontario College Application Service, or apply to attend another Ontario post-secondary institution (e.g. a private career college) that is approved for the purposes of this scholarship;
- will be a full-time post-secondary student in the 2007/2008 academic year; and
- meet all other application requirements/deadlines.

Millennium Bursary

The Canada Millennium Scholarship Foundation Bursary is available for full-time students who have the highest assessed need, as determined by the Province of Ontario, and who meet all of the program's eligibility requirements. Details on the eligibility requirements are available on the Canada Millennium Scholarship Foundation web site at <http://www.millenniumscholarships.ca>. The value of the bursary is \$3,000. The Millennium Bursary does not require repayment.

McMASTER SUMMER WORK PROGRAMS

McMaster Summer Work Programs offer part-time and full-time summer jobs to students demonstrating financial need to help them to meet costs not recognized under regular federal and provincial financial aid programs. In particular, these programs are intended to assist students who lack resources relative to their assessed financial need and those who do not wish to borrow further due to a high debt load.

To apply for the McMaster Summer Work Programs identified below, students should see application and deadline information at <http://sfas.mcmaster.ca>.

THE R. ROSS CRAIG MEMORIAL FUND WORK PROGRAM

Established in 1997 in memory of R. Ross Craig. A variable number of employment opportunities made available to students in any program who demonstrate financial need. To be eligible for consideration, students must be approved for the Summer Work Program through the Office of Student Financial Aid & Scholarships. (90763)

THE HAMLIN FAMILY FOUNDATION WORK PROGRAM

Established in 1996 by the Hamlin Family Foundation. A variable number of employment opportunities made to students in any program who demonstrate financial need. Preference will be given to students in disciplines related to the fields of Health Sciences and Engineering. To be eligible for consideration, students must be approved for the Summer Work Program through the Office of Student Financial Aid & Scholarships. (90656)

THE SALLY HORSFALL WORK PROGRAM

Established in 1996, the Centre for Studies of Children at Risk, McMaster University has a variable number of employment opportunities made available to students demonstrating financial need. These jobs will provide an opportunity for students to pursue research and/or assist with activities sponsored by the Centre. To be eligible for consideration, students must be approved for the Summer Work Program through the Office of Student Financial Aid & Scholarships. (90657)

THE HUMANITIES COMMUNICATIONS CENTRE WORK ENDOWMENT

Established in 1997 by Edward and Margaret Lyons, McMaster alumni of the Class of '49 and later augmented by friends of The Edward and Margaret Lyons Humanities Communications Centre. A variable number of employment opportunities will be made available to students in any program who demonstrate financial need. Preference will be given to students in Humanities and Social Sciences. To be eligible for consideration, students must be approved for the Summer Work Program through the Office of Student Financial Aid & Scholarships. (90658)

THE McMASTER "McWORK" PROGRAM

Established in 1996 by the University with the goal of creating meaningful employment opportunities for current students who demonstrate financial need. To be eligible for consideration, students must be approved for the Summer Work Program through the Office of Student Financial Aid & Scholarships. (90659)

EMERGENCY FUNDING

EMERGENCY LOANS

Assistance in the form of short-term emergency loans is sometimes available to graduate or undergraduate students. Such loans cannot be given to pay tuition, bookstore, residence or other university expenses. Repayment of any loan is expected within 90 days or before the end of the student's study period. Students requesting a short-term loan must meet with a representative from the Office of Student Financial Aid & Scholarships to complete an application.

A number of funds exist to provide assistance to students in financial need.

THE UNIVERSITY LOAN FUNDS

Small short-term emergency loans from the University funds are available to assist students in any program. These funds have been supported through contributions from a number of local Chapters, Imperial Order Daughters of the Empire, including the Emma Frances Pratt, Princess Marina and Sovereign Chapters.

THE IVOR WYNNE MEMORIAL LOAN FUND

Established in 1971 in memory of Ivor Wynne, Dean of Students. To assist students in any program.

EMERGENCY BURSARIES

Assistance in the form of emergency bursaries is sometimes available to students who have dire need. Students with extreme circumstances must meet with a representative from the Office of Student Financial Aid & Scholarships to discuss their situation.

BURSARIES

Bursaries are granted on the basis of demonstrated financial need according to the principles of the Province of Ontario's Student Access Guarantee. They are intended to supplement a student's own financial contribution, parental assistance, government aid and personal loans/lines of credit to help the student to complete the academic year.

Application procedures and deadlines are available from the Office of Student Financial Aid & Scholarships, Gilmour Hall, Room 120 or on our web site at <http://sfas.mcmaster.ca>. Any government-sponsored student loan applicant who is registered as a student of McMaster University is eligible to apply.

Bursaries are listed in alphabetical order.

Legend

AS	Arts & Science Program	EX	Exchange
AT	Athletic	HS	Health Sciences
B	Business	H	Humanities
CS	Community Service	R	Regional
D	Disabilities	S	Science
E	Engineering	SS	Social Sciences
		T	Travel
		U	University-wide

THE 4 WINDS BURSARIES (U)

Established in 1997 by John F. Evans, Q.C. and Patricia Peacock-Evans in recognition of John's long-standing association with McMaster as Chair of The President's Club Executive Committee. The Bursary is named after the island where the family's cottage is located. A variable number of bursaries to be granted to students who demonstrate financial need. (90708)

THE AINSWORTH BURSARIES (U)

Established in 1996. To be granted to undergraduate students in any program who demonstrate financial need. Preference to be given to female students. (90578)

THE PHYLLIS MAY AITKEN BURSARY FUND (U)

Established in 1997 by the bequest of Phyllis May Aitken. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90653)

THE JAMES N. ALLAN FOUNDATION BURSARY (R)

Established in 1996 from funds donated by the James N. Allan Foundation, Dunnville, Ontario, in support of its belief that all students should have the opportunity to achieve their educational goals. To provide assistance to McMaster students who demonstrate financial need. Preference will be given to students from Haldimand Norfolk County. (90803)

THE GARY ALLEN MEMORIAL BURSARY (B)

Established in 1987 by friends and family of the late Gary Allen (Class of '84) and augmented in 1996 in conjunction with the McMaster Student Opportunity Fund initiative, to assist a Commerce student in Year III or IV whose major area of study is accounting and who demonstrates financial need. Preference will be given to a mature student. (90501)

THE ROSE (NÉE D'ALESSIO) AND PAUL ALLISON BURSARY (E)

Established in 2004 by Rose (née D'Alessio) Allison, B. Eng. (Class of '81) and Paul Allison, B. Eng. Mgt. (Class of '80) and M.B.A. (Class of '81) in support of their belief that all students should have the opportunity to pursue their educational goals. To be granted to students enrolled in the Faculty of Engineering who demonstrate financial need. (91023)

THE AMEX CANADA BURSARY (U)

Established in 1997 by AMEX Canada Inc. in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to a student enrolled in any program who demonstrates financial need. (90805)

THE ANCASTER LIONS CLUB BURSARY (R)

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 program who demonstrates financial need. Preference to be given to students who currently reside in the town of Ancaster. (90804)

THE ANDREW FOUNDATION BURSARIES (E)

Established in 1997 by the Andrew Foundation under the McMaster Student Opportunity Fund initiative. A variable number of bursaries to be granted to students enrolled in a program in Engineering who demonstrate financial need. Preference to be given to students who are studying Electrical Engineering or Mechanical Engineering. (90806)

THE ANTHROPOLOGY BURSARY (SS)

Established in 1996 by faculty, alumni and other friends of the Department of Anthropology. To be granted to students who have completed Level II of a program in Anthropology and who demonstrate financial need. Preference will be given to students entering Level III. (90579)

THE JENNIFER AND THEODORE ARCAND ENGLISH BURSARY (H)

Established in 1997 by Theodore Arcand (Class of '57), in memory of his wife, Jennifer (Class of '57), whose interest was Baroque English poetry. To be granted to an undergraduate or graduate student enrolled in a program in English, who demonstrates financial need. (90807)

THE FRED AND JEAN ARMER BURSARY (SS)

Established in 2006 by Jean Armer in memory of her husband Frederick B. Armer, B.A. (Class of '75) and in support of her belief that all students should be able to pursue their educational goals. To be granted to a student enrolled in the Faculty of Social Sciences who demonstrates financial need. Preference will be given to students enrolled in Level II or Level III of a program in Anthropology. (91044)

THE A.H. ATKINSON BURSARIES (E)

Established in 1989 by the A.H. Atkinson Education Fund Inc. of Hamilton and augmented in 1996 in conjunction with the McMaster Student Opportunity Fund initiative. A variable number of bursaries to be awarded to undergraduate students in a full-time program in Engineering who demonstrate financial need. (90500)

THE ATKINSON CHARITABLE FOUNDATION BURSARY (SS)

Established in 1996 by The Atkinson Charitable Foundation. To be granted to students enrolled in the Faculty of Social Sciences who demonstrate financial need. Preference will be given to the recipient of The Atkinson Charitable Foundation Award. (90896)

THE AUBURN INDUSTRIAL SERVICES LTD BURSARY (U)

Established in 1997 by Auburn Industries Services Ltd. under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Auburn Industrial Services Ltd. Award. (90897)

THE JOY BÄBY BURSARY (U)

Established in 1997 by Joy BÄby under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in any program who demonstrates financial need. (90809)

THE BACHELOR OF HEALTH SCIENCES (HONOURS) BURSARY (HS)

Established in 2004 by the Bachelor of Health Sciences (Honours) Program in the Faculty of Health Sciences through the generosity of its alumni and friends under the McMaster Student Opportunity Fund II initiative. To be granted to a student in the Bachelor of Health Sciences (Honours) program who demonstrates financial need. (90985)

THE CHARLES MURRAY BALL BURSARIES (U)

Established in 1993 by bequest of May Alexandra Ball in memory of her brother Charles Murray Ball. To assist students in any program who demonstrate financial need. (90560)

THE BARTEK BURSARIES (E)

Established in 1996 by Bartek Ingredients Inc. of Stoney Creek in support of McMaster students. A variable number of bursaries to be granted to students enrolled in the Faculty of Engineering who demonstrate financial need. Preference to be given to students currently on the Deans' Honour List. (90672)

THE BIRGIT AND ROBERT BATEMAN BURSARY (AS, S, SS)

Established in 1997 by Birgit and Robert Bateman under the McMaster Student Opportunity Fund initiative. To be granted to a student who demonstrates financial need and is enrolled in the Arts and Science program, the Faculty of Social Sciences or the Faculty of Science. Preference to be given to students who are studying Environmental Studies or Environmental Science. (90810)

THE HELEN AND MORRIS BAUGHMAN BURSARY (S)

Established in 2005 by Marvin Ryder in honour of Helen and Morris Baughman. To be granted to students enrolled in the Faculty of Science who demonstrate financial need. Preference to be given to students in Level III or IV of a Biology program. (91025)

THE ESTELLE AND CHUB BAXTER BURSARY (HS)

Established in 2003 by Estelle and Chub Baxter under the McMaster Student Opportunity Fund II initiative. To be granted to a student in the Faculty of Humanities who demonstrates financial need. Preference will be given to a student enrolled in an Art History program in the School of the Arts. (90991)

THE BEALE-LINCOLN-HALL EXCHANGE PROGRAM BURSARIES (EX)

Established in 1996 by Arnold A. Beale in memory of his parents, F. Arnold Beale and Margaret S. Beale and, Mr. and Mrs. Walter Gould Lincoln and Commander Harley H. Hall, U.S.N. To be granted to a student who demonstrates financial need and is enrolled in a program in Commerce, Biochemistry, Biology, English, Chemistry, Earth Sciences, History, Materials Science, Mathematics, Physics, Engineering Physics or Religious Studies who is participating in one of McMaster's formal exchange programs. Preference will be given to students who have demonstrated a lively interest in the humanities and the human and social implications of scientific developments. (90677)

THE MARJORIE E. (WATSON) BEATTIE BURSARY (H)

Established in 1997 by William W. Beattie (Class of '68) in honour of his mother, Marjorie E. (Watson) Beattie (Class of '33), under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in any program who demonstrates financial need. Preference to be given to students enrolled in the Faculty of Humanities. (90811)

THE DR. C. HOWARD AND DR. SHIRLEY F. BENTALL BURSARIES (U)

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 program who demonstrate financial need. (90855)

THE NORMA BERTI BURSARY (SS)

Established in 1996 under the McMaster Student Opportunity Fund initiative by Norma Berti, active Stelco employee for 34 years and recognized by the Hamilton Council of Women as *Woman of the Year* for her charitable community contributions. To be granted to a student who demonstrates financial need and is enrolled in a program in Labour Studies. (90812)

THE BETZNER FAMILY MEMORIAL BURSARIES (U)

Established in 1996 by the Betzner Family of Dundas, Ontario. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90580)

THE BIRKS FAMILY FOUNDATION BURSARY FUND (U)

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 SIDNEY L. BLUM BURSARY (SS)

Established in 1989 by friends and associates in memory of Sidney L. Blum. To be granted to one undergraduate and one graduate student enrolled in a program in Social Work who demonstrate financial need. Preference will be given to the undergraduate students registered in the summer term in SOC WORK 3D06. (90506)

THE SYLVIA BOWERBANK MEMORIAL BURSARY (H)

Established in 2005 by family and friends in memory of Dr. Sylvia Bowerbank. To be granted to female students enrolled in the Department of English and Cultural Studies who demonstrate financial need. Preference will be given to female students who reside in a native community in Canada. (91059)

THE BOWES FAMILY BURSARIES (U)

Established in 1996 by Eleanor and Terrence Aurini of Cambridge. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. Preference to be given to female students. (90581)

THE BRANTFORD ALUMNI BRANCH BURSARY (U)

Established in 2000 by the Brantford Alumni Branch of the McMaster Alumni Association under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Brantford Alumni Branch Award. (90969)

THE LOUILA BRAYFORD MEMORIAL BURSARY (AS)

Established in 1998 by Mrs. Janet Leenaars in memory of her late mother, Mrs. Louila Brayford (nee Bingham, Class of '34). To be granted to a student enrolled in the Arts and Science Program who demonstrates financial need. Preference will be given to a student enrolled in a course in Mathematics. (90839)

THE ERIC JOHN BRETZLER BURSARY (CS)

Established in 1997 by family and friends in memory of Eric John Bretzler (Class of '92). To be granted to a student enrolled in any program who demonstrates financial need. Preference will be given to students associated with the McMaster Students Union. (90814)

THE WILLIAM DAVID BROADHEAD MEMORIAL BURSARY (H)

Established in 2003 by family in memory of William David Broadhead (Class of '39) under the McMaster Student Opportunity Fund II initiative. To be granted to a student in the Faculty of Humanities who demonstrates financial need. Preference will be given to a student enrolled in a program in the Department of English and Cultural Studies. (90992)

THE DOUGLAS IAN BROWN BURSARY (HS)

Established in 1997 by Douglas A. and Lois Aileen Brown in honour of their son Douglas Ian Brown. To be granted to a McMaster student enrolled in the Faculty of Health Sciences who demonstrates financial need. (90815)

THE DR. RICHARD A. BRYMER MEMORIAL BURSARY (SS)

Established in 1998, under the McMaster Student Opportunity Fund initiative, by Mrs. Isabelle Brymer in memory of her husband, Dr. Richard Brymer, who served as a faculty member in the Department of Sociology at McMaster University from 1969 to 1996. To be granted to a student enrolled in a program in Sociology or Anthropology who demonstrates financial need. (90845)

THE ED BUFFETT BURSARY (HS)

Established in 1997 under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in a program in Health Sciences who demonstrate financial need. Preference will be given to students who have demonstrated leadership in their school and community. (90816)

THE JODIE ANNE BULL MEMORIAL BURSARIES (SS)

Established in 1996 by her family in memory of Jodie Anne Bull. A variable number of bursaries to be granted to students enrolled in the Faculty of Social Sciences who demonstrate financial need. At least one bursary to be granted to a student enrolled in Labour Studies. (90673)

BURSARIES FOR IN-COURSE VISA STUDENTS (U)

Established in 1982 by the University to assist visa students in any program. (90547)

BURSARIES FOR VISA STUDENTS (U)

Established in 1999. A variable number of bursaries to be granted to visa students in any program who demonstrate financial need. (90933)

THE MARIE IRELAND BUSH MEMORIAL BURSARIES (H)

Established in 1996 by Helen Ireland Caldwell in memory of Marie Ireland Bush, (Class of '48) and dedicated teacher, who instilled in her students a love of learning. A variable number of bursaries to be granted to students enrolled in a program in English who demonstrate financial need. (90583)

THE BUSINESS MANAGEMENT SERVICES BURSARIES (U)

Established in 1996 by staff of McMaster's Business Management Services who through their leadership, guidance and support, enable the University community to deploy its financial resources to the greatest advantage. A variable number of bursaries to be granted to students in any program who demonstrate financial need. (90584)

THE HELEN CALDWELL BURSARY (H)

Established in 2000 by Helen Caldwell (Class of '42, Faculty of Humanities.) To be granted to a student enrolled in Level III or IV of the Women's Studies Program who demonstrates financial need. (90940)

THE JAMES CALVIN BURSARIES (U)

Established in 1997 by bequest of James Calvin. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90831)

THE CAMCO INC. BURSARIES (U)

Established in 1997 by Camco Inc. in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90817)

THE BETTY TAYLOR CAMPBELL BURSARIES (U)

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)

THE CANADA DIRECT SALES DIVISION BURSARY (E, S, SS)

Established in 1997 by Canon Canada Inc. - OE Division, and augmented in 2005, in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries will be granted annually to McMaster students who demonstrate financial need and are enrolled in an Earth and Environmental Sciences program, the Honours Geography and Environmental Studies program or an Engineering and Society program. (90820)

THE CANADIAN FEDERATION OF UNIVERSITY**WOMEN (BURLINGTON) ELEANOR EWING BURSARY (U)**

Established in 1997 by the Canadian Federation of University Women (Burlington) under the McMaster Student Opportunity Fund initiative, in honour of Eleanor Ewing, who was instrumental in establishing the Burlington Chapter of the Canadian Federation of University Women. To be granted to a full-time student in any program who demonstrates financial need. Preference to be given to a mature female student. (90704)

THE CANADIAN FEDERATION OF UNIVERSITY**WOMEN (HAMILTON) BURSARY (U)**

Established in 1997 by the Canadian Federation of University Women (Hamilton) in support of the McMaster Student Opportunity Fund initiative. To be granted to a student in any academic program who demonstrates financial need. (90828)

THE CANADIAN SOCIETY FOR MECHANICAL ENGINEERING BURSARY (E)

Established in 1997 by The Canadian Society for Mechanical Engineering in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to a student enrolled in the Faculty of Engineering who demonstrates financial need. Preference will be given to a student enrolled in Mechanical Engineering. (90819)

THE ELEANOR TURNER CARMENT BURSARY (SS)

Established in 1997 under the McMaster Student Opportunity Fund initiative. To be granted to a student who demonstrates financial need. Preference will be given to a student enrolled in a program in Women's Studies. (90884)

THE ELVA CARROL BURSARY (AT)

Established in 1996 by Elva Carol under the McMaster Student Opportunity Fund initiative. To be awarded to a female athlete who participates on an inter-university team and demonstrates financial need. Preference will be given to the recipient of The Elva Carol Award. (90899)

THE MATT CASEY BURSARY (B)

Established in 1997 by Mr. Matthias Casey (Class of '83) under the McMaster Student Opportunity Fund initiative. To be granted to a student who demonstrates financial need and is enrolled in the Faculty of Business. Preference will be given to students enrolled in the M.B.A. program in the Finance stream. (90681)

THE NORMAN NATHANIEL CASKEY BURSARIES (H)

Established in 1996 by June Caskey of Hamilton in memory of her father. A variable number of bursaries to be granted to students enrolled in a program in Music who demonstrate financial need. (90585)

THE CHAN YIN CHAK BURSARY (EX)

Established in 1997 by Tak Chan in honour of his great grandfather, Mr. Chan Yin Chak. This bursary will be used to help defray expenses of Level III Commerce students or M.B.A. students, who demonstrate financial need, and are participating in one of the international exchange programs at the DeGroote School of Business. (90682)

THE ANNE AND HAROLD CHALK MEMORIAL BURSARIES (U)

Established by bequest of Anne Maria Luise Chalk and Harold Henry Chalk of Ottawa. A variable number of bursaries to be granted to students in any program who demonstrate financial need. (90586)

THE CHAWKERS FOUNDATION BURSARIES (U)

Established in 1996 by The Chawkers Foundation, Ottawa, Ontario in support of its belief that all students should be able to pursue their educational goals. To provide assistance to students who demonstrate financial need. Value: \$1,800 (90587)

THE CIBC BURSARIES (U)

Established in 1997 by the Canadian Imperial Bank of Commerce under the McMaster Student Opportunity Fund initiative. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90683)

THE SAM M. CINO BURSARY (U)

Established in 1997 by Sam Cino in support of McMaster students. To be granted to a student enrolled in any program who demonstrates financial need. (90684)

THE CITY OF HAMILTON BURSARIES (R)

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 DAVID CLARK BURSARIES (B)

Established in 1996 by David I. Clark and Marilyn D. Eustace. A variable number of bursaries to be granted to students enrolled in a program in Commerce who demonstrate financial need. Preference to be given to students demonstrating interest in Asian Studies. (90588)

THE HUGH CLARK BURSARIES (U)

Established in 1997 by Hugh Clark in support of McMaster students. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of the Hugh Clark Scholarship. (90685)

THE CLASS OF '35 BURSARIES (U)

Established in 1985 by the Year '35 in honour of their 50th class reunion and augmented in 1996 in conjunction with the McMaster Student Opportunity Fund initiative. To be awarded to a student in good academic standing who is a Canadian citizen or permanent resident. (90507)

THE CLASS OF '46 BURSARIES (SS)

Established by the Year '46 in honour of their 40th class reunion. To be granted to a student in a program in Gerontology. (90821)

THE CLASS OF '46 GOLDEN ANNIVERSARY BURSARIES (U)

Established by the Year '46 in honour of their fiftieth reunion on June 1, 1996. A variable number of bursaries to be granted to students enrolled in any program at McMaster who demonstrate financial need and are in good academic standing. (90564)

THE CLASS OF '47 GOLDEN ANNIVERSARY BURSARIES (U)

Established in 1997 by the Class of '47 in honour of their 50th Anniversary Reunion. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90590)

THE CLASS OF '49 GOLDEN ANNIVERSARY BURSARIES (U)

Established by the Class of '49 in honour of their 50th Anniversary Reunion in 1999. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90591)

THE CLASS OF '51 GOLDEN ANNIVERSARY BURSARIES (U)

Established by the Class of '51 in honour of their 50th Anniversary Reunion in 2001. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90686)

THE CLASS OF '57 BURSARIES (U)

Established in 1997 by the Class of '57 in honour of their 40th Anniversary Reunion. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90687)

THE CLASS OF 1959, 50TH ANNIVERSARY BURSARY (U)

Established by the Class of '59 in honour of their 50th Anniversary. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (91021)

THE CLASS OF 1960 GOLDEN ANNIVERSARY BURSARIES (U)

Established by the Class of 1960 in honour of its 50th reunion. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90942)

THE JANET HOLDER AND NEAL COCKSHUTT BURSARY (R, U)

Established in 2004 by Janet Holder, M.B.A. (Class of '83) and Neal Cockshutt in honour of Ignatius Cockshutt, founder of Cockshutt Farm Equipment Co. Ltd. To be granted to students enrolled in any program who demonstrate financial need. Preference to be given to students from Brant County. (91020)

THE DORIS PARTRIDGE COLE BURSARY (U)

Established in 1981, this bursary is to be granted to a worthy student in memory of Doris Partridge Cole (Class of '45). (90508)

THE DOUGLAS AND BEVERLY COLEMAN BURSARY (S)

Established in 2005 by Douglas and Beverly Coleman, both of Class of '54. To be granted to students enrolled in the Department of Biochemistry and Biomedical Sciences in the Faculty of Science who demonstrate financial need. (91043)

COMMUNITY NURSING REGISTRY - HAMILTON BURSARIES (HS)

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 COMPUSMART BURSARIES FUND (E, S)

Established in 1997 by JMG Compusmart in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted annually to students who demonstrate financial need. Preference will be given to McMaster students enrolled in a program in Computer Science or Computer Engineering. (90741)

THE CONNOR, CLARK & LUNN BURSARY (U)

Established in 1996 by Connor, Clark & Lunn in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to a McMaster student in any program who demonstrates financial need. (90666)

THE GERALDINE LORETTA COSFORD BURSARIES (H)

Established in 1997 by Geraldine Loretta Cosford under the McMaster Student Opportunity Fund initiative. A variable number to be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. Preference to be given to students who have completed Level I. (90692)

THE IAN AND JILL COWAN BURSARY (U)

Established in 1997 by Ian Cowan (Class of '71) and Jill (nee Robinson) Cowan (Class of '74) in support of McMaster students. To be granted to a student enrolled in any program who demonstrates financial need. (90693)

THE SUZANNE E. CRAVEN BURSARY (H)

Established in 1997 by Mrs. Suzanne Craven in support of McMaster students. To be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. (90694)

THE CREATIVE IMPACT COMMUNICATIONS BURSARY (SS)

Established in 2005 by Natalie Muryn (Class of '80) under the McMaster Student Opportunity Fund II initiative. To be granted to a student enrolled in the Faculty of Social Sciences who demonstrates financial need. (90986)

THE CROSS COUNTRY BURSARY (AT, R)

Established in 1997 by coaches, former team members and supporters of the Men's and Women's Varsity Cross Country running teams under the McMaster Student Opportunity Fund initiative. To be granted to a student who demonstrates financial need and who is a member of the varsity men's or women's cross country team. (90695)

THE ARCHIBALD R. CROZIER BURSARIES (CS)

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. (90565)

THE CRS ROBOTICS CORPORATION BURSARIES (E)

Established in 1997 by CRS Robotics Corporation Inc. in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to students enrolled in the Faculty of Engineering who demonstrate financial need. (90696)

THE MRS. MARGARET CUDMORE BURSARY (SS)

Established in 2005 under the Ontario Trust for Student Support initiative. To be granted to students enrolled in the Faculty of Social Sciences who demonstrate financial need. Preference will be given to students enrolled in an Economics or Political Science program. (91034)

THE AUBREY DALGLEISH BURSARY (B, D)

Established in 1985. To be granted to a student in any program who demonstrate financial need with special preference given to handicapped students and/or students in the Faculty of Business. (90509)

THE THOMAS DALY BURSARIES (U)

Established in 1996 by family, friends and colleagues of Thomas Daly. A variable number of bursaries to be granted to students in any undergraduate program who demonstrate financial need. (90592)

THE EARL FRANKLIN DAMUDE BURSARY (H)

Established in 1993 by Dr. Christa Saas, in memory of Earl Franklin Damude (Class of '36.) To be granted to a student who demonstrates financial need and has completed Level II of a program in English or History. (90570)

THE SAM DARRAGH GENERAL ATHLETIC BURSARY (AT)

Established in 1997 by friends of Sam Darragh under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in any academic program who demonstrates financial need and who is a member of any inter university team at McMaster. (90697)

THE SAM DARRAGH MEMORIAL BURSARY (AT)

Established in 1997 by friends of Sam Darragh under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in any program who demonstrates financial need and who has demonstrated outstanding athletic achievement in intervarsity football. (90827)

THE DARVILLE BURSARY (H)

Established in 2004 by Jack S. Darville (Class of '68) under the McMaster Student Opportunity Fund II initiative. To be granted to a student in the Faculty of Humanities who demonstrates financial need. Preference will be given to a student enrolled in a music or art program in the School of the Arts. (90987)

THE DAUGHTERS OF THE EMPIRE CLUB, HAMILTON LTD. BURSARIES (B)

Established in 1996 in honour of The Daughters of the Empire Club, Hamilton, Limited (1911-1996) in support of its belief that all students should have the opportunity to pursue their educational aspirations. A variable number of bursaries to be granted to students in financial need. Preference to be given to women enrolled in the Faculty of Business. (90593)

THE EDWARD FRANK DAVIS MEMORIAL BURSARIES (U)

Established in 1996 by bequest in memory of Edward Frank Davis under the McMaster Student Opportunity Fund initiative. A variable number of bursaries to be granted to students enrolled in Level I who demonstrate financial need and a commitment to community involvement. (90900)

THE GORDON H. DEAN BURSARIES (AS, H)

Established in 1996 by Gordon H. Dean of Stoney Creek. To be granted to a student who demonstrates financial need. Preference will be given to a student enrolled in Level III of a program in Arts and Science or Level III of a program in the Faculty of Humanities. (90594)

THE JOHN DEERE BURSARIES (U)

Established in 1997 by John Deere in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to students enrolled in any program who demonstrate financial need. (90698)

THE DeGROOTE SCHOOL OF BUSINESS**BUSINESS ADVISORY COUNCIL BURSARY (B)**

Established in 1997 by the DeGroot School of Business Business Advisory Council under the McMaster Student Opportunity Fund initiative. To be granted to a student who demonstrates financial need and is enrolled in Business I or in the first year of the M.B.A. program at the DeGroot School of Business. (90699)

THE DEBORAH AND TERENCE DEMPSEY BURSARY (U)

Established in 2005 under the Ontario Trust for Student Support program to ensure that all students have the opportunity to pursue their educational goals. To be granted to students in any Faculty who demonstrate financial need. (91049)

THE BEN F. DESROCHES BURSARIES (SS)

Established in 1996 as a tribute to Ben F. DesRoches, Stelco employee from 1949 to 1966 and elected Municipal Councillor for Saltfleet and Stoney Creek from 1969 to 1978, in recognition of his outstanding contributions to labour and to men and women in the greater Hamilton area. A variable number of bursaries to be granted to students enrolled in a program in Labour Studies who demonstrate financial need. The value of this award shall be not less than \$300. (90595)

THE DETENBECK FAMILY BURSARIES (U)

Established in 2005 by bequest of Patricia Detenbeck (Class of '32). To be granted to students enrolled in any program who demonstrate financial need. (91031)

THE WILLIAM A. DETENBECK BURSARIES (R)

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)

PATRICIA ANNE DICICCIO MEMORIAL BURSARY (SS)

Established in 1988 this bursary is to be granted to a student or students enrolled in a program which includes Gerontology as a major, who is a Canadian citizen or permanent resident and who exhibits financial need. (90510)

THE MARGERY E. DIXON MEMORIAL BURSARY (H)

Established in 2003 in loving memory of Margery E. Dixon (Class of '35) by Geraldine Phenix under the McMaster Student Opportunity Fund II initiative. A variable number of bursaries to be granted to students in the Faculty of Humanities who demonstrate financial need. Preference will be given to students enrolled in a program in the Department of English and Cultural Studies. (90994)

THE DOFASCO INC. BURSARIES (U)

Established in 1996 by Hamilton-based Dofasco Inc., one of Canada's and North America's leading steelmakers in support of students pursuing their post-secondary studies at McMaster. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90598)

THE JEAN, MARTHA AND LAURIE DOUCET MEMORIAL BURSARIES (HS)

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 and who demonstrate financial need. Preference will be given to students from the Regional Municipality of Niagara. (90851)

THE STEPHEN DULMAGE BURSARY (B)

Established in 2005 by Stephen Dulmage, B.A. (Class of '64). To be granted to students enrolled in the Bachelor of Commerce program in the DeGroot School of Business who demonstrate financial need. (91048)

THE MARGARET E. DUNCAN BURSARY (SS)

Established in 1998 by Mr. and Mrs. J. Bruce Duncan in honour of his late mother who was a long-term volunteer in McMaster's Gerontology Program as a Tutor and, subsequently, a Senior Class Assistant. A variable number of bursaries to be granted annually to students enrolled in a Gerontology course who demonstrate financial need. (90846)

THE DUNDAS BURSARIES (R)

Established in 1996 from funds donated anonymously for the purpose of providing students with an opportunity to achieve their educational goals. To provide assistance to McMaster students in financial need. Preference will be given to students from the Dundas area. (90599)

THE ALAN AND CLAIRE EATOCK BURSARIES (H)

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. (90856)

THE CYRUS EATON FOUNDATION BURSARY (R)

Established in 2000 by the Cyrus Eaton Foundation of Cleveland, Ohio, in support of McMaster students. To be granted to a student in any program who demonstrates financial need. Preference will be given to students from Nova Scotia. (90944)

THE GEORGE AND MARGARET EDRUPT BURSARY (B, S)

Established in 1997 by Sandra Edrupt in honour of her parents George and Margaret Edrupt under the McMaster Student Opportunity Fund initiative. To be granted to a student who demonstrates financial need and is enrolled in either the Faculty of Business or the Computer Science program in the Faculty of Science. (90701)

THE ENERSYSTEM INSULATION LTD. BURSARY (H)

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 a program in French who demonstrates financial need. (90702)

THE ENGINEERING CLASS OF '97 LEGACY BURSARY (E)

Established in 1997 by the graduating class in Engineering under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in the Faculty of Engineering who demonstrates financial need. (90688)

THE ENGINEERING AND SOCIETY TRAVEL BURSARY (T)

Established in 1994 by the Department of Engineering and Society. To assist students with travel costs associated with their summer placement in the Engineering and Society program. To be granted to a student who demonstrates financial need and is enrolled in the Faculty of Engineering. Applications will be reviewed by the Director, Engineering and Society and the Office of Student Financial Aid & Scholarships. (90963)

THE EVANS, PHILP BURSARIES (U)

Established in 1996 by the partners of Evans, Philp in support of McMaster students. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90671)

THE FACULTY OF BUSINESS BURSARIES (B)

Established in 1997 under the McMaster Student Opportunity Fund initiative with proceeds from the Fundraising Auction held at Vineland Estates Winery Ltd. To be granted to students enrolled in the Faculty of Business who demonstrate financial need. (90705)

THE EILEEN GRAY FARLEY BURSARY (U)

Established in 1998 by Eileen Gray Farley (Class of '43) and winner of the D.E. Thompson Scholarship) in grateful memory of Mr. D.E. Thompson who established the D.E. Thompson Scholarship of 1909. To be granted to students in any program who demonstrate financial need. (90833)

THE DONALD A. FEATHER BURSARY (U)

Established in 2003 by family in honour of Donald A. Feather, B.A. (Class of '64) under the McMaster Student Opportunity Fund II initiative in support of his belief that all students should have the opportunity to pursue their educational goals. To be granted to a student in any Faculty who demonstrates financial need. (91010)

THE MARGO AND FRASER FELL BURSARIES (HS)

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. (90945)

THE EDITH E. FERRIE BURSARIES (U)

Established in 1965 by the late Edith E. Ferrie. To be granted to students in any program who demonstrate financial need. (90511)

THE FESTITALIA CORPORATION BURSARY (H)

Established in 1997 by the Festitalia Corporation under the McMaster Student Opportunity Fund initiative. To be granted, in alternating years, to a student who demonstrates financial need and is enrolled in the Department of Linguistics and Languages, specializing in Italian, or is enrolled in the School of the Arts. (90706)

THE FINANCIAL EXECUTIVES INSTITUTE BURSARY (B)

Established in 1997 by the Hamilton Chapter of the Financial Executives Institute in support of its belief that all students should have the opportunity to achieve their educational goals. To be granted to a student enrolled in Level II of the Commerce program who demonstrates financial need, has attained a minimum CA of 6.0 and who plans to major in Accounting and/or Finance. The bursary is renewable for up to two additional years on condition that the student continues to demonstrate financial need and maintains a minimum CA of 6.0 in the Commerce program. (90829)

FIRSTONTARIO CREDIT UNION (R)

Established in 1989 by members in celebration of 50 years of service in the Hamilton area. Two or three bursaries to be granted to students in any program who, are from the Regional Municipality of Hamilton-Wentworth, City of Burlington or Town of Haldimand-Norfolk, who have demonstrated financial need.

Value: \$700 each (90504)

THE W.H. FLEMING BURSARIES (U)

Established in 2005 by bequest of W.H. Fleming. To be granted to graduate or undergraduate students in any program who demonstrate financial need. (91045)

THE FORRESTER/GREGORY BURSARY (U)

Established in 1997 by Shelley Forrester and Douglas Gregory in support of McMaster students. To be granted to a student in any program who demonstrates financial need. (90707)

THE JOHN C. FORSTER BURSARIES (U)

Established by bequest of John Clifton Henry Forster of Windsor, Ontario. A variable number of bursaries to be granted to students in any program who demonstrate financial need. (90600)

THE EMMA FOX BURSARIES (U)

Established in 1961 by the Wallingford Hall Committee of which Emma Fox was treasurer from 1918 to 1958. To assist female students in any program. (90512)

THE WAYNE C. FOX BURSARIES (B, H, SS)

Established in 1999 by Wayne C. Fox in support of his belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries will be granted to students who demonstrate financial need and are enrolled in the Faculty of Humanities or the Faculty of Social Sciences or the Commerce program at the DeGroote School of Business. (90857)

THE FREEMAN FAMILY FOUNDATION BURSARY FUND**FOR STUDY AT THE HEBREW UNIVERSITY OF JERUSALEM (T)**

Established in 1997 under the McMaster Student Opportunity Fund initiative in the belief that all students should have the opportunity to pursue their educational goals. To be granted, on the recommendation of the Religious Studies Selection Committee, to graduate and undergraduate students who demonstrate financial need and have enrolled in session(s) of study at the Hebrew University of Jerusalem. Applicants must have lived in Ontario for 12 consecutive months directly prior to commencing full-time post-secondary studies. Students should contact the Department of Religious Studies. (90818)

THE BILL FULLER BURSARY (SS)

Established in 1996 in commemoration of the 50th anniversary of the historic 1946 Stelco strike by William E. (Bill) Fuller, recognized by the City of Hamilton for his volunteer work which included serving as Vice-President of Labour Community Services of the United Way for six years, member of The Hamilton Community Foundation Board from 1990-96, Chairman of the Finance Committee of the Holy Family Church and Hamilton's Citizen of the Year in 1991. To be granted to students enrolled in any program who demonstrate financial need. Preference to be given to students enrolled in a Labour Studies program. (90601)

THE GENERAL CONTRACTORS ASSOCIATION OF HAMILTON BURSARIES (E)

Established in 1997 by the General Contractors Association of Hamilton under the McMaster Student Opportunity Fund initiative. A variable number of bursaries to be granted to students enrolled in the Faculty of Engineering who demonstrate financial need. (90710)

THE GENERAL ELECTRIC CANADA INC. BURSARY (U)

Established in 1997 by General Electric Canada Inc. under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in any program who demonstrates financial need. (90711)

THE GENNUM CORPORATION BURSARIES (E)

Established in 1997 by the Gennum Corporation in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to students who are enrolled in the Faculty of Engineering and who demonstrate financial need. (90712)

THE GWEN GEORGE UNDERGRADUATE BURSARIES (CS)

Established in 1997 in loving memory of Gwen George by her family and friends under the McMaster Student Opportunity Fund initiative. To be granted to students in any undergraduate program who have demonstrated financial need. Preference to be given to students who have demonstrated leadership and service to McMaster University and/or the Hamilton-Wentworth, surrounding or world communities. (90713)

THE GEORGE P. GILMOUR MEMORIAL BURSARY (AS)

Established in 1997 by the Class of '62 in support of McMaster students. To be granted to a student enrolled in the Arts and Science Program who has demonstrated financial need. Preference will be given to the student who wins the George P. Gilmour Memorial Scholarship. (90714)

THE DR. GEORGE P. GILMOUR '21 MEMORIAL BURSARY (U)

Established in 2006 by the families of Marnie Gilmour-Fisher (Class of '50) and Gwen Gilmour-Laurie (Class of '54) to honour their father's achievements as Chancellor of McMaster University from 1941 to 1950 and President and Vice Chancellor from 1950 to 1961. To be granted to students in any Faculty who demonstrate financial need. (91060)

THE ALLEN AND MILLI GOULD FAMILY FOUNDATION BURSARIES (B)

Established in 1997 from funds donated by the Allen and Milli Gould Family Foundation, in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to McMaster students enrolled in the Faculty of Business who demonstrate financial need. Preference to be given to M.B.A. Co-op students. (90716)

THE JAMES EDWARD GRADER MEMORIAL BURSARY (S)

Established in 1964 by his sister. To be granted to a student enrolled in the Faculty of Science specializing in Earth Sciences who demonstrates financial need. (90513)

THE GARY GRAHAM BURSARY (B)

Established in 1997 by Gary Graham under the McMaster Student Opportunity Fund initiative. To be granted to a student who demonstrates financial need and is enrolled in Business I, or in the first year of the M.B.A. program at the DeGroote School of Business. (90717)

THE GRAND & TOY BURSARIES (U)

Established in 1996 by Grand & Toy in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90602)

THE GRAY FAMILY BURSARY (E)

Established in 1997 by Donald Gray (Class of '70) and Glenn Gray (Class of '73) and Kerry Gray (Class of '77 and '82 (M.B.A.)) under the McMaster Student Opportunity Fund initiative. To be granted to a third year student enrolled in the Engineering and Management program who demonstrates financial need. Preference to be given to students who permanently reside in the Hamilton-Wentworth Region. (90718)

THE LELAND GREGORY BURSARIES (U)

Established in 1997 by the bequest of Leland Andrew Gregory. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90719)

THE JAMES R. (JAMIE) GREILICH MEMORIAL BURSARY (D)

Established in 1991 in memory of Jamie Greulich (Class of '88) by the Operating Committee on the Disabled through its Awareness Week Activities. To be granted to a disabled student in any program who demonstrates financial need. Students should have registered with the Centre for Student Development. (90553)

THE GUARDIAN CAPITAL INC. BURSARIES (U)

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 program who demonstrate financial need. (90674)

THE GUPTA FAMILY EMERGENCY BURSARY FUND (U)

Established in 2005 by Kulbushan Gupta and family. To be granted to international students who demonstrate urgent financial need due to exceptional circumstances as determined by the Office of Student Financial Aid & Scholarships. (91041)

THE ASMAHAN HAFEZ MEMORIAL BURSARY (S)

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)

THE BILL AND HELEN HAIGHT BURSARY (H)

Established in 2004 by Helen (Class of '49) and Bill Haight under the McMaster Student Opportunity Fund II initiative. To be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. Preference to be given to students in Level II or III of a Music program. (91007)

THE HALCYON HOUSE BURSARY (U)

Established in 1999 by past residents of Halcyon House under the McMaster Student Opportunity Fund Initiative. To be granted to a student enrolled in any program who demonstrates financial need. Preference to be given to a student in residence at Halcyon House. (90859)

THE HALL FAMILY BURSARY (H)

Established in 2004 by Frederick A. Hall under the McMaster Student Opportunity Fund II initiative. To be granted to a student enrolled in the Faculty of Humanities who demonstrates financial need. (91001)

THE HAMILTON ALUMNI BRANCH BURSARIES (R)

Established in 1997 by the McMaster Alumni Association, Hamilton Branch, in honour of the long-standing accomplishments of the Hamilton Alumni Branch. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. Preference will be given to students graduating from a high school in the Hamilton-Wentworth Region. (90725)

THE HAMILTON CHAPTER OF THE HUMAN RESOURCES**PROFESSIONALS ASSOCIATION BURSARY (B)**

Established in 1999 by the Hamilton Chapter of the Human Resources Professionals Association under the McMaster Student Opportunity Fund initiative. To be granted to a Level III or Level IV Commerce student taking two or more of the Human Resource and Management Area courses who demonstrates financial need. (90860)

THE HAMILTON CITIZENS' MEMORIAL BURSARIES (R)

Established in 1947 by the Hamilton Citizens' Committee for War Services. Proceeds to be used to assist undergraduate students who are residents of the Hamilton-Wentworth Region. (90516)

HAMILTON COMMUNITY FOUNDATION BURSARIES (R)

Established in 1996-97 by Hamilton Community Foundation from the income of funds generously donated by citizens of this community, notably the late sisters Genevieve Chaney and Cordelia Ensign, and the late Mr. Ross F. Webb. A variable number of bursaries to be awarded to full-time students,

registered in any year of any undergraduate program, who have graduated from publicly-funded secondary schools in Hamilton-Wentworth and who demonstrate financial need. The criteria established for these bursaries are consistent with the intention of the original donors. (90723)

THE HAMILTON AND DISTRICT LABOUR COUNCIL BURSARY (SS)

Established in 1997 by the Hamilton and District Labour Council under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in the Labour Studies Program who demonstrates financial need. (90726)

THE HAMILTON FOLLIES INC. (GERITOL FOLLIES) BURSARY (SS)

Established in 1997 by the Hamilton Follies Inc. (Geritol Follies) under the McMaster Student Opportunity Fund initiative. To be granted to a student in any program who demonstrates financial need. Preference to be given to a student who has completed at least 30 units in the Gerontology program. (90722)

THE HAMILTON PERFORMING ARTS BURSARY (H)

Established in 1997 by the Hamilton Performing Arts Foundation Inc. under the McMaster Student Opportunity Fund initiative. To be granted to students who have completed at least 30 units of a program in the School of the Arts, who has shown service to the community-at-large and who demonstrates financial need. Preference to be given to students who are currently on the Deans' Honour list. (90724)

THE HAMILTON PORCELAINS BURSARY (U)

Established in 1997 by Hamilton Porcelains Limited in the belief that all students should have the opportunity to pursue their educational goals. To be granted to a student enrolled in any program who demonstrates financial need. (90727)

THE HAMILTON SPECTATOR BURSARY (U)

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 program who demonstrates financial need. (90728)

THE HAMLIN FAMILY FOUNDATION BURSARY (U)

Established in 2004 by The Hamlin Family Foundation under the McMaster Student Opportunity Trust Fund II initiative. To be granted to students enrolled in any program who demonstrate financial need. (91016)

THE MARGARET HARGREAVES BURSARIES (H, SS)

Established in 1997 by Susan Hargreaves Walker in loving memory of her mother, Margaret Hargreaves. A variable number of bursaries to be granted to Social Sciences and Humanities students who demonstrate financial need. Preference will be given to mature, female students. (90729)

THE HARWOOD BURSARIES (H)

Established in 1990 by bequest of Dr. William Harwood of Hamilton in memory of his beloved wife Grace and devoted daughter Willa Ruth Laurie (Class of '50). A variable number of bursaries to be granted to students studying Music who demonstrate financial need.

Value: Not to exceed \$1,000 (90517)

THE M.A. (JACK) HASSAL BURSARY (B)

Established by the Hamilton and District Chartered Accountants' Discussion Group in 1982 in memory of M.A. (Jack) Hassal. To assist a student in Commerce who is a Canadian citizen or permanent resident of Canada. It is hoped that recipients, after graduation, will reimburse the fund to the extent of their award so that the fund may assist increasing numbers of students. (90518)

THE HATCH ASSOCIATES BURSARY (E)

Established in 1997 by Hatch Associates in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to a student enrolled in the Faculty of Engineering who demonstrates financial need. (90730)

THE DAMIAN MIGUEL HEADLEY BURSARY (U)

Established in 1997 by family and friends in memory of Damian Miguel Headley (Class of '89) under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Damian Miguel Headley Award. (90902)

THE JACK AND THELMA HEATH MEMORIAL BURSARIES (HS)

Established in 1985 by Norton Canada Inc. in memory of Jack and Thelma Heath, former employees of the Company, who were tragically killed in a boating accident. The fund provides up to four awards to assist students, with demonstrated financial need, in Level III or IV of the B.Sc.N. program (basic and/or post-diploma stream). (90519)

THE MIKE AND MURIEL HEDDEN BURSARIES (U)

Established in 1996 by Muriel Hedden in memory of her husband, D.M. (Mike) Hedden, former Vice-President (Administration), who faithfully served McMaster for over 25 years. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90603)

THE RUDY HEINZL BURSARY (U)

Established in 1996 by family, friends and colleagues upon his retirement as Dean of Student Affairs in recognition of 32 years of dedicated service to students and to the McMaster University Community. To be granted to students in any program who demonstrate financial need. Preference will be given to the recipient of The Rudy Heinzl Award. (90577)

THE EDWIN W. HILBORN BURSARY (U)

Established in 1965 by bequest of Edwin W. Hilborn. To be granted to a student in any program. (90520)

THE MARY A. HILL BURSARY (R)

Established in 1976 by bequest of Mary A. Hill. To be granted to a female student in any program who demonstrates financial need. Preference to be given to one who has graduated from a secondary school in Hamilton. (90521)

THE LLOYD ANDREW HILLGARTNER BURSARIES (U)

Established in 1997 by bequest of Lloyd Andrew Hillgartner. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90834)

THE HAZEL MAY HINKS BURSARIES (HS)

Established in 1996 by bequest of Hazel May Hinks of Burlington, Ontario. A variable number of bursaries to be granted to students enrolled in a program in Nursing who demonstrate financial need. Preference will be given to students who have graduated from a high school located in the City of Burlington. (90604)

THE JOHANNES MICHAEL HOLMBOE MEMORIAL BURSARY (B)

Established in 2004 by bequest of Ruth Anna Holmboe in memory of her husband Johannes Michael Holmboe. To be granted to students enrolled in the Faculty of Business who demonstrate financial need. (91006)

THE WILLIAM NEIL HOTRUM BURSARIES (R, U)

Established in 2004 by Mr. William Neil Hotrum under the McMaster Student Opportunity Trust Fund II initiative in support of his belief that all students should have the opportunity to pursue their educational goals. To be granted to students who demonstrate financial need. Preference will be given to (i) students from the Hamilton area and (ii) students from a single parent family. (91026)

THE GENERAL HUMANITIES BURSARY FUND (H)

The General Humanities Bursary Fund, established in 1997 by Humanities alumni, will be granted to undergraduate students at McMaster registered in any Humanities program who demonstrate financial need. (90734)

THE DONALD W. HURD BURSARY (S)

Established in 2006 by Alice Hurd in honour of her husband Donald W. Hurd, M.Sc. (Class of '50). To be granted to students registered in the Earth and Environmental Sciences program in the Faculty of Science who demonstrate financial need. (91053)

THE JULIA HURTIG BURSARY (H)

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. (90522)

THE INGLIS BURSARIES (B, E)

Established in 1996 by Paul F. Inglis of Mississauga. A variable number of bursaries to be granted to students enrolled in a program in Commerce or Engineering Management who demonstrate financial need. Preference to be given to students enrolled in Engineering Management. (90606)

THE INTER-RESIDENCE COUNCIL BURSARY (U)

Established in 1996 by the Inter-Residence Council in support of McMaster students. To be granted to a student in any program who demonstrates financial need. (90680)

INTERNATIONAL SCIENCE AND ENGINEERING FAIR 1995 BURSARY (E, S)

Established in 2005 by the Board of the International Science and Engineering Fair 1995 under the Ontario Trust for Student Support initiative. A variable number of bursaries to be granted to students enrolled in Level I in the Faculties of Science or Engineering who demonstrate financial need. Preference will be given to students who have participated in local science fairs. (91036)

THE JOHN B. ISBISTER BURSARY (SS)

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 program in Labour Studies who demonstrates financial need. (90605)

THE IVEY BURSARY (H)

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 IVISON FAMILY BURSARY FUND (B, E, HS)

Established in 1998 by Don and Betty Ivison in support of McMaster students under the McMaster Student Opportunity Fund initiative. A variable number of bursaries to be granted to students enrolled in the Faculty of Engineering, the Faculty of Business or the Schools of Medicine and Rehabilitation Science in the Faculty of Health Sciences who demonstrate financial need. (90841)

THE STUART AND MARJORIE IVISON BURSARIES (H)

Established in 1997 by Donald Ivison (Class of '53) and Betty Ivison (Class of '52) in honour of his parents Stuart and Marjorie Ivison (Class of '28 (Arts)). To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to recipients of The Stuart and Marjorie Ivison Award. (90736)

THE CLIFFORD JACKSON MEMORIAL BURSARIES (R)

Established in 1997 by family and friends in memory of Clifford Jackson. A variable number of bursaries to be granted annually to students in any program who demonstrate financial need. Preference will be given to children and grandchildren of employees and retirees of The Hamilton-Wentworth Regional Police. (90737)

THE JADDCO ANDERSON BURSARY (U)

Established in 1997 by Jaddco Anderson Limited in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to a student enrolled in any program who demonstrates financial need. (90738)

THE MARK JANTZI MEMORIAL BURSARY (B)

Established in 2004 by Paul and Hanne Jantzi under the McMaster Student Opportunity Fund II initiative, in memory of their son Mark Jantzi, an Honours Commerce 2002 graduate who passed away tragically in a car accident at the age of 25. This bursary is in support of the belief that all students should have the opportunity to pursue their educational goals. To be granted to students who demonstrate financial need and are enrolled in the DeGroote School of Business. (91004)

THE JENSEN BURSARY (S)

Established in 1997 by Dr. Doris E.N. Jensen in conjunction with the McMaster Student Opportunity Fund initiative. To be granted to a student in the Faculty of Science, Level II or higher, who demonstrates financial need. Preference to be given to a student registered in a co-op program in the Faculty of Science. (90740)

THE JOHNS FAMILY BURSARIES (AS)

Established by Martin W. Johns and family. A variable number of bursaries to be granted to students enrolled in the Arts and Science Program who demonstrate financial need. (90568)

THE JAMES A. JOHNSON CLASS OF '97 BURSARIES (SS)

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 program in Economics who demonstrate financial need. Preference will be given to the recipient of The James A. Johnson Community Contribution Award. (90742)

THE ANDREW JOHNSTONE MEMORIAL BURSARY (SS)

Established in 2002 by colleagues, family and friends in memory of Andrew Johnstone. To be granted to a Level III student enrolled in the Faculty of Social Sciences who demonstrates financial need. Preference will be given to a student in an Economics program. (90972)

THE JONES-TURNER BURSARY (U)

Established in 1997 by Sheila Lang (Class of '53) in honour of her family's long-standing association with the University. To be granted to a student enrolled in any program who demonstrates financial need. (90743)

THE DR. RONALD V. JOYCE BURSARIES (U)

Established in 2003 by Dr. Ronald V. Joyce (Class of '98) to support students at McMaster. A variable number of bursaries to be granted to undergraduate students in any program who demonstrate financial need. (90977)

THE JUNIOR LEAGUE OF HAMILTON/BURLINGTON, INC. BURSARY (U)

Established in 1997 by the Junior League of Hamilton-Burlington, Inc. under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Junior League of Hamilton/Burlington, Inc. Award. (90905)

THE MURIEL MCBRIEN KAUFFMAN BURSARIES (U)

Established in 1997 by the Muriel McBrien Kauffman Foundation in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted annually to students enrolled in any program who demonstrate financial need. (90744)

THE JAN KELLEY MARKETING BURSARY (B)

Established in 1997 by Kelley Advertising Inc., founded in Hamilton in 1913. This bursary to be granted to a student enrolled in Business I, or in the first year of the M.B.A. program at the DeGroote School of Business who demonstrates financial need. (90745)

THE ROBERT ALAN KENNEDY BURSARIES (U)

Established in 1997 by Robert Alan Kennedy under the McMaster Student Opportunity Fund initiative. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90746)

THE KENTS FAMILY BURSARY (HS)

Established in 1997 by the Kents Family under the McMaster Student Opportunity Fund initiative. To be granted to a student who demonstrates financial need and is enrolled in the School of Medicine, the School of Nursing or the School of Rehabilitation Science. (90747)

THE PHILLIP GORDON KETTLE BURSARY (HS)

Established in 1996 in memory of Phillip Gordon Kettle. To be granted to a student enrolled in a Nursing program who demonstrates financial need. Preference to be given to a student studying herbal medicine as alternative therapies. (90678)

THE MARY KEYES MEMORIAL BURSARY (U)

Established in 2002 by family and friends as a tribute to Dr. Mary E. Keyes, long-time teacher, coach, administrator and mentor at McMaster University. To be granted to a student who demonstrates financial need with a minimum 8.0 Cumulative Average in any program. Preference to be given to students who show leadership and participation in McMaster student life. (90974)

THE KHAKI UNIVERSITY AND YOUNG MEN'S CHRISTIAN ASSOCIATION MEMORIAL BURSARIES (U)

Established in 1921 by the Khaki University of Canada and the Young Men's Christian Association. To assist students in any program who demonstrate financial need. (90523)

THE DAVID KINSLEY MEMORIAL BURSARY (H, SS)

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 part-time students who have completed at least Level I of an undergraduate program in either the Faculty of Social Sciences or the Faculty of Humanities. Preference to be given to students who have attained a minimum Cumulative Average of 7.0. (90962)

THE KIWANIS CLUB OF HAMILTON EAST BURSARY (R)

Established in 1997 by the Kiwanis Club of Hamilton East under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in any program who demonstrates financial need. Preference to be given to members and former members of the Hamilton East Kiwanis Boys' and Girls' Club. (90749)

THE KNAP MARSHALL BURSARY (AT, B)

Established in 2005 under the Ontario Trust for Student Support initiative. To be granted to students enrolled in the DeGroote School of Business who demonstrate financial need and who have demonstrated outstanding athletic achievement in an interspersed sport. (91032)

THE RICHARD KONRAD BURSARIES (D)

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:

- The Richard Konrad Bursaries for students enrolled in any program.
- The Richard Konrad Bursaries for physically challenged students registered with the Centre for Student Development, who are enrolled in any program. (90750)

THE KPMG BURSARIES (B)

Established in 1996 by KPMG in support of its belief that students should have the opportunity to pursue their educational aspirations. A variable number of bursaries to be granted to students enrolled in the Faculty of Business who demonstrate financial need. (90607)

THE HAROLD J.L. KRUGEL BURSARY (H)

Established in 2000 by Mrs. J. Beverly Krugel (Class of '53) in honour of her husband, Harold J.L. Krugel. To be granted to a student enrolled in the Faculty of Humanities who demonstrates financial need. Preference will be given to a student in the Department of Linguistics and Languages. (90947)

THE RAYMOND C. LABARGÉ MEMORIAL BURSARIES (U)

Established in 1973 by friends and associates in memory of Raymond C. Labarge (Class of '36) of Ottawa. A variable number of bursaries to be granted to students enrolled in Level III or IV of any program who demonstrate financial need. A minimum Cumulative Average of 8.0 is required. (90524)

THE LAIDLAW INC. BURSARIES (U)

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 program who demonstrate financial need. (90608)

THE BETTY MAY LAMB MEMORIAL BURSARY (U)

Established in 1991 by family, friends, colleagues in memory of Betty May Lamb, an employee at McMaster University for 22 years, most recently as Executive Assistant to the Faculty Association from 1988-91. To assist students in any program who demonstrate financial need. (90555)

THE LANCASTER SHEET METAL LIMITED BURSARY (U)

Established in 1997 under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. (90751)

THE LANDMARK CONSULTING GROUP BURSARIES (U)

Established in 1996 by The LANDMARK Consulting Group Inc. in support of its belief that all students should have the opportunity to pursue their educational aspirations. A variable number of bursaries to be granted to students in any program who demonstrate financial need. (90609)

THE NORMAN D. LANE BURSARIES (S)

Established in 1996 by family and friends in honour of Dr. Norman D. Lane, distinguished geometer and member of the Department of Mathematics and Statistics from 1952 to 1987 and now Professor Emeritus. A variable number of bursaries to be granted to students enrolled in a program in Mathematics who demonstrate financial need. (90610)

THE LANG FAMILY BURSARIES (U)

Established in 1996 by H. Murray Lang (Class of '44) of Etobicoke, Ontario in honour of his family's connection to McMaster. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90611)

THE JAMES R. A. LANGS BURSARIES IN THE ARTS (H)

Established by family in memory of James R. A. Langs (Class of '37), a Hamilton business leader and great supporter of the Hamilton Community. A variable number of bursaries to be granted to students enrolled in a program in Art, Theatre & Film Studies or Music who demonstrate financial need. (90612)

THE JAMES R.A. LANGS STUDENT EXCHANGE PROGRAM BURSARIES (EX)

Established in 1996 by family in memory of James R.A. Langs (Class of '37), a Hamilton business leader and great supporter of the Hamilton Community. A variable number of bursaries to be granted to students enrolled in a program in Humanities who demonstrate financial need and who are participating in a formal McMaster Exchange Program. (90655)

THE KELLY DAWN LAPP MEMORIAL BURSARY (SS)

Established in 1997 by family and friends under the McMaster Student Opportunity Fund initiative in memory of Kelly Dawn Lapp who received her B.A./B.S.W. degree from McMaster University in 1996. To be granted to a student enrolled in the Social Work program who demonstrates financial need. Preference will be given to a student who has volunteered or worked in programs related to violence against women and children, employment and affordable housing for women, advocacy and treatment of mental health patients, addiction treatment or prevention of cruelty to animals. (90847)

THE GARY LAUTENS MEMORIAL BURSARIES (U)

Established in 1996 by Mrs. Jackie Lautens, the Toronto Star, family and friends, in memory of Gary Lautens (Class of '50), columnist and editor of the Toronto Star (1962-92), the Hamilton Spectator (1950-62) and the McMaster Silhouette (1948-50), remembered as a journalist with wit and insight. A variable number of bursaries to be granted to students in any program who demonstrate financial need. Preference will be given to the recipient of The Gary Lautens Memorial Scholarship. (90613)

THE SZE-WAI LEE MEMORIAL BURSARY (E)

Established in 1997 under the McMaster Student Opportunity Fund initiative in honour of Sze-Wai Lee. To be granted to a student enrolled in the Faculty of Engineering who demonstrates financial need and has shown involvement in support of the community, particularly multicultural events. (90752)

THE LEFLAR FOUNDATION BURSARY (R)

Established in 1997 by The Leflar Foundation in support of its belief that all students should be able to pursue their educational goals. To be granted to students enrolled in any program who demonstrate financial need. Preference to be given to students who are from the Owen Sound area. (90753)

THE BERTRAM LEGGAT MEMORIAL BURSARIES (U)

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)

THE KEVIN LENGYELL BURSARY (B)

Established in 2006 by Kevin Lengyell, B.Com. (Class of '82). To be granted to students who have completed Level II or Level III of the Bachelor of Commerce program who demonstrate financial need. Preference to be given to students from the Region of Waterloo. (91056)

THE LIBURDI ENGINEERING LIMITED BURSARY (E)

Established in 1997 by Liburdi Engineering Limited under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in an Engineering program who demonstrates financial need. (90754)

THE LINCLUDEN MANAGEMENT BURSARIES (U)

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 program who demonstrate financial need. (90755)

THE SADIE LUDLOW BURSARIES (AT)

Established in 1996 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 intervarsity football or intervarsity women's tennis. (90615)

THE LVIV POLYTECHNIC STATE UNIVERSITY EXCHANGE PROGRAM BURSARY (EX)

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 Lviv Polytechnic State University Exchange Program. (90954)

THE LYNDEN LIONS CLUB BURSARY (CS)

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 program who has displayed commendable service to the community-at-large. Preference to be given to students who currently reside in the Lynden or Troy area. (90758)

THE JOHN A. 'JACK' MacDONALD BURSARIES (SS)

Established in 1996 as part of the Hamilton Sesquicentennial Celebrations in honour of John A. 'Jack' MacDonald for his 45 years of outstanding service and leadership to Hamilton and the region. A variable number of bursaries to be granted to students enrolled in a Political Science program who demonstrate financial need and interest in extracurricular or community activities. (90616)

THE EWAN MACINTYRE BURSARIES (SS)

Established in 1999 by the Social Work Alumni Branch, the Citizen Action Group, the Social Work Students Association, faculty (past and present), staff, friends, alumni, and various organizations associated with McMaster's School of Social Work as a tribute to Dr. Ewan Macintyre for his 29 years of service to the School, including 12 years of service as the School's Director. A variable number of bursaries to be granted to students who demonstrate financial need and are enrolled in a Bachelor of Social Work program. (90861)

THE BOB MacKENZIE BURSARY (SS)

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 program in Labour Studies who demonstrates financial need. (90617)

THE ALEC JOHN ROYSTON MacMILLAN MEMORIAL BURSARY (U)

Established in 1996 by his family in memory of Alec John Royston MacMillan under the McMaster Student Opportunity Fund initiative. To be granted to students in any program who demonstrate financial need. Preference will be given to the recipients of The Alec John Royston MacMillan Memorial Awards. (90907)

THE PAUL R. MacPHERSON BURSARY (R)

Established in 1998 by Paul R. MacPherson (Class of '57) and augmented in 2003 under the McMaster Student Opportunity Fund II initiative in support of his belief that all students should be able to pursue their educational goals. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to (i) students from Bracebridge and Muskoka Lakes Secondary School and (ii) Aboriginal students from a First Nations community in Ontario. (90838)

THE MAKSTEEL BURSARY (U)

Established in 1997 by Maksteel Inc. in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to students enrolled in any program who demonstrate financial need. (90761)

THE MALLOCH FOUNDATION BURSARIES (R)

Established in 1996 by the Malloch Foundation, Hamilton, in the belief that all students should be able to achieve their educational goals. A variable number of bursaries to be granted to students in any program who demonstrate financial need. Preference to be given to students from the Hamilton area. (90618)

THE ENRICO HENRY MANCINELLI BURSARIES (SS)

Established in 1996 by the Labourers' International Union of North America, Local 837 in honour of Enrico Henry Mancinelli, LIUNA Canadian Director and Vice President and Local 837 President. Two bursaries to be granted to students enrolled in a program in Labour Studies who demonstrate financial need. Preference to be given to students attaining a Sessional Average of at least 7.0 at the most recent review. (90619)

THE MANULIFE FINANCIAL BURSARIES (B, HS)

Established in 1997 by Manulife Financial under the McMaster Student Opportunity Fund initiative. A variable number of bursaries to be granted to students who demonstrate financial need and are enrolled in the Faculty of Business or the Faculty of Health Sciences. (90762)

THE DR. ALBERT MARTIN BURSARIES (H)

Established in 1996 by Joyce Beverly Krugel, a former student of Dr. Albert Martin who was a Professor of German in the Faculty of Arts and Science from 1939 to 1961. A variable number of bursaries to be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. Preference will be given to students enrolled in the Department of Linguistics and Languages. (90620)

THE RONALD E. MATERICK/TISHMAN BURSARY (E)

Established in 1996 by Ronald E. Materick (Class of '70). To be granted to a student enrolled in the Faculty of Engineering who demonstrates financial need. Preference to be given to a student enrolled in Civil Engineering. (90665)

THE DOROTHY DEAN MATHESON MEMORIAL BURSARY (U)

Established in 2004 by bequest of Kenneth Matheson, in memory of Dorothy Dean Matheson (Class of '84). To be granted to female part-time students who demonstrate financial need. (91028)

THE LINDA MATTHEWS BURSARIES (U)

Established in 1996 by Linda Matthews (Class of '69). A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. Preference to be given to female students. (90664)

THE JOHN AND HELEN MAXWELL BURSARIES (S)

Established in 1996 by John and Helen Maxwell of Ottawa. A variable number of bursaries to be granted to students enrolled in the Faculty of Science who demonstrate financial need. Preference to be given to students enrolled in a program in Earth Sciences or Chemistry. (90621)

THE HARRISON MAYNARD MEMORIAL BURSARY IN MIDWIFERY (HS)

Established in 2005 in memory of Harrison Maynard by his family and friends. To be granted to students enrolled in Level II or above of the Midwifery Education Program who demonstrate financial need. (91030)

THE J. B. McARTHUR BURSARY (H)

Established in 2005 by Joseph B. McArthur, son of J. B. McArthur, a 1905 graduate of McMaster University, who conscientiously served his alma mater for forty two years as President of the McMaster Alumni Association (1911), member of McMaster's Senate (1911-1931) and member of McMaster's Board of Governors (1931-1953). To be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. (91039)

THE NEIL D. McARTHUR BURSARIES (E, S)

Established in 1997 by the Anne and Neil McArthur Foundation in memory of Mrs. McArthur's parents, Joseph and Josephine Hrynyszak. To be granted to students in any program who demonstrate financial need. Preference to be given to students enrolled in either the Faculty of Science or the Faculty of Engineering. (90765)

THE JOHN McCALL MEMORIAL BURSARY (AT)

Established in 2001 in loving memory of John (Jack) Woodhouse McCahill by his family and friends. To be granted to a student who demonstrates financial need and who demonstrates outstanding athletic achievement in men's basketball, golf, football, hockey or tennis. (90968)

THE KATHLEEN AND DENNIS MCCALLA BURSARIES (AS, H, S)

Established in 2003 by Kathleen and Dennis McCalla, former Dean, Faculty of Science and later Vice-President, Faculty of Health Sciences at McMaster University. To be granted to students who demonstrate financial need and are enrolled in a program in Science, Humanities, or Arts and Science. Preference will be given to students with a minimum admission average of 80% and who are from Grey or Bruce Counties. Value: Minimum \$1,000 (90970)

THE DR. BRIAN MCCANN MEMORIAL BURSARY (S)

Established in 2004 by friends, colleagues and former students in memory of Dr. Brian McCann. To be granted to a student in the School of Geography and Earth Sciences who demonstrates financial need and is enrolled in a course offered by the School with an additional cost for a field component. (91015)

THE ANDREW McFARLANE BURSARIES (U)

Established in 1989 by bequest of Andrew McFarlane of Hamilton. To be granted to a student or students who are in good standing and have demonstrated financial need. (90526)

THE R. CRAIG McIVOR BURSARIES (SS)

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 the Faculty of Social Sciences who demonstrate financial need. Preference will be given to students enrolled in an Honours program in Economics. (90622)

THE JANET MCKNIGHT MEMORIAL BURSARIES (HS)

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 program who demonstrate financial need. (90623)

THE McLAY BURSARY (EX)

Established in 1997 by David and Jean McLay under the McMaster Student Opportunity Fund initiative. To be granted to a student in any program who demonstrates financial need and who is participating in one of McMaster's formal exchange programs. Preference to be given to students who have been active in international clubs and associations. (90767)

THE McLEAN FAMILY EXCHANGE BURSARIES (EX)

Established in 1997 by the McLean Family under the McMaster Student Opportunity Fund initiative, in gratitude for the learning and relationship enrichment which they obtained first at McMaster University, and subsequently through international travel. To be granted to students who wish to participate in exchange programs, who demonstrate financial need and who are enrolled in Level II or III of a program. Preference to be given to international exchanges, for students from the Faculty of Engineering or the Faculty of Humanities with a CA above 7.0 at the most recent review and who have shown leadership and involvement in university and/or community activities. (90849)

THE McMASTER ATHLETIC COUNCIL (MAC) BURSARY (AT)

Established in 1997 by the Men's Athletic Council and the Women's Intercollegiate Athletics Council under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in any program who demonstrates financial need and who is a member of any inter-university team at McMaster. (90906)

THE McMASTER BURSARIES (U)

Established in 1980 by the University to assist undergraduate students in any program. (90527)

THE McMASTER ENGINEERING SOCIETY BURSARY (E)

Established in 1999 by the McMaster Engineering Society. To be granted to a student in the Faculty of Engineering who demonstrates financial need. (90863)

THE McMASTER GENERAL BURSARIES (U)

Established in 1996 by the University to assist undergraduate students in any program who demonstrate financial need. (90624)

THE McMASTER ALUMNAE CENTENNIAL BURSARY (U)

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)

THE McMASTER ALUMNI ASSOCIATION BURSARY (U)

Established in 1997 by the McMaster Alumni Association in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries will be granted annually to McMaster students who demonstrate financial need. (90862)

THE McMASTER ASSOCIATION OF PART-TIME STUDENTS BURSARIES (U)

Established in 1988 in celebration of McMaster's Centennial to assist students currently enrolled in a degree or certificate program who, without such assistance, would be unable to continue their studies. Consideration may also be given to students who would not otherwise enrol without such assistance. Applications will be reviewed by the MAPS Awards Committee. (90529)

THE McMASTER ASSOCIATION OF PART-TIME STUDENTS 20TH ANNIVERSARY BURSARY (U)

Established in 1999 to commemorate its 20th anniversary by the McMaster Association of Part-Time students. The bursary was further augmented by friends and colleagues of Helen Barton, MAPS' first President and founding member, in recognition of her 27 years of service and retirement as Senior Associate Registrar at McMaster. To be granted to students currently enrolled, on a part-time basis, in a degree, diploma or certificate program, who demonstrate financial need. Applications will be reviewed by the MAPS Awards Committee. (90835)

THE McMASTER ASSOCIATION OF PART-TIME STUDENTS 25TH ANNIVERSARY BURSARY (U)

Established in 2004 by the McMaster Association of Part-Time Students (MAPS) to commemorate its silver anniversary. To be granted to students currently enrolled, on a part-time basis, in a degree, diploma or certificate program, who demonstrate financial need. Applications will be reviewed by the MAPS Awards Committee. (90988)

THE McMASTER HISPANIC SOCIETY BURSARY (H)

Established in 1999 by the McMaster Hispanic Society under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in a Modern Languages program and enrolled in Hispanic Studies courses who demonstrates financial need. Preference will be given to students who demonstrate a lively interest in the University and community through their involvement in extracurricular activities. (90864)

THE McMASTER M.B.A. ALUMNI ASSOCIATION BURSARIES (B)

Established in 1996 by the McMaster M.B.A. Alumni Association. A variable number of bursaries to be granted to students enrolled in the first year of the DeGroote School of Business M.B.A. program who demonstrate financial need. (90626)

THE McMASTER MEN'S ATHLETICS BURSARY (AT)

Established by past and present student-athletes and friends of McMaster Interuniversity Athletics to assist students in any academic program who demonstrate financial need and who demonstrate outstanding athletic participation in men's interuniversity athletics. (90625)

THE McMASTER MEN'S BASKETBALL BURSARY (AT)

Established by past and present student-athletes and friends of McMaster Men's Basketball to assist students in any academic program who demonstrate financial need and who demonstrate outstanding athletic participation in the sport of men's basketball. (90770)

THE McMASTER SAVINGS AND CREDIT UNION LIMITED BURSARY (U)

Established in 1997 by McMaster Savings and Credit Union Limited in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted annually to McMaster students enrolled in any program who demonstrate financial need. (90822)

THE McMASTER SQUASH AND GOLF BURSARY (AT)

Established by past and present student-athletes and friends of McMaster Golf and Squash to assist a student in any academic program who demonstrates financial need and who demonstrates outstanding athletic participation in the sport of golf or squash. (90771)

THE McMASTER STUDENT OPPORTUNITY FUND BURSARIES (U)

Established in 1996 by McMaster University from general donations to the University bursary program and matching funding provided through the Ontario Student Opportunity Trust Fund initiative. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90627)

THE McMASTER STUDENT OPPORTUNITY FUND II BURSARIES (U)

Established in 2003 by McMaster University from general donations to the University bursary program and matching funding provided through the Ontario Student Opportunity Trust Fund II initiative. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (91002)

THE McMASTER STUDENTS' UNION BURSARIES (U)

Established in 1982 by the McMaster Students' Union. To assist those undergraduate MSU members who demonstrate financial need. (90530)

THE McMASTER UNIVERSITY FACULTY ASSOCIATION BURSARY (U)

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 program who demonstrates financial need. (90768)

THE McMASTER WOMEN'S BASKETBALL BURSARY (AT)

Established by past and present student-athletes and friends of McMaster Women's Basketball to assist a student in any academic program who demonstrates financial need and who demonstrates outstanding athletic participation in the sport of women's basketball. (90772)

THE McMASTER WOMEN'S CLUB BURSARY (HS)

Established in 1983 by the McMaster Women's Club and augmented in 1996 in conjunction with the McMaster Student Opportunity Fund initiative to assist a student beyond Level I in the University's Bachelor of Science in Nursing program. (90531)

THE McMASTER WOMEN'S VOLLEYBALL BURSARY (AT)

Established by past and present student-athletes and friends of McMaster Women's Volleyball to assist a student in any academic program who demonstrates financial need and who demonstrates outstanding athletic participation in the sport of women's volleyball. (90773)

THE KATHERINE M. COLLYER McNALLY BURSARY (HS)

Established in 1997 by her children in honour of Katherine M. Collyer McNally under the McMaster Student Opportunity Fund initiative. To be granted to a student who demonstrates financial need and has completed at least 30 units in the Midwifery, Physiotherapy or Nursing program. (90774)

THE MDS INC. BURSARY (HS)

Established in 1997 by MDS Inc., under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in the Faculty of Health Sciences who demonstrates financial need. (90775)

THE A.J. MELLONI MEMORIAL FUND (U)

To be granted to a student in any program. (90532)

THE MELOCHE MONNEX INC. BURSARY (U)

Established in 1997 by Meloche Monnex Inc. under the McMaster Student Opportunity Fund initiative in the belief that students should have the opportunity to pursue their educational goals. To be granted to a student enrolled in any program who demonstrates financial need. (90776)

THE MERITOR AUTOMOTIVE INC. BURSARY (E)

Established in 1999 by Meritor Automotive Inc. under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in a Mechanical Engineering program who demonstrates financial need. (90865)

THE EDNA C. AND FRANK CHARLES MILLER BURSARY (U)

Established in 1997 by Frank C. Miller in memory of his parents, Edna C. and Frank Charles Miller, in support of McMaster students. To be granted to a student enrolled in any program who demonstrates financial need. (90778)

THE ANN MINER MEMORIAL BURSARY (E)

Established in 2005 in memory of Ann Miner by her brother Jim Sweetman (Class of '77) and his wife Sheila. To be granted to students enrolled in a program in Chemical Engineering in the Faculty of Engineering who demonstrate financial need. (91033)

THE MINICH FAMILY BURSARIES (B)

Established in 1996 by E. A. Minich and family. A variable number of bursaries to be granted to students enrolled in Business I who demonstrate financial need. Preference to be given to students who demonstrate a lively interest in the University and community through their involvement in extracurricular activities. (90628)

THE GARY JAMES MINNETT BURSARY (SS)

Established in 1999 in memory of Gary James Minnett, B.A./B.P.E. (Class of '72) by his wife, Barbara, and daughters, Samantha and Erin. To be awarded to a student enrolled in a Kinesiology program who demonstrates financial need. Preference will be given to a student enrolled in Kinesiology I from a high school in the Hamilton area. (90866)

THE DR. F. A. MIRZA BURSARY (E)

Established in 1997 under the McMaster Student Opportunity Fund initiative. Preference will be given, if financial need is demonstrated, to the recipient of The Dr. F.A. Mirza Scholarship. (90895)

THE CAROL R. MITCHELL BURSARY (B)

Established in 2005 by Carol R. Mitchell, M.B.A. (Class of '82). To be granted to students enrolled in the Bachelor of Commerce program in the DeGroote School of Business who demonstrate financial need. (91051)

THE JAMES C. MOORE MEMORIAL BURSARY (H, SS)

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)

THE THERESE E. MOORE BURSARY (H)

Established in 2003 by David M. Moore (Class of '00) in honour of his mother, Therese E. Moore. To be granted to a student enrolled in a program in History who demonstrates financial need. (91000)

THE ROBERT JOHN MORRIS BURSARIES (E)

Established in 1996 by family, friends and colleagues of Robert John Morris. A variable number of bursaries to be granted to students who demonstrate financial need and are enrolled in the Faculty of Engineering. Preference will be given to in-course recipients and/or entrance level recipients of The Robert John Morris Awards in the year they receive the award. (90630)

THE WALLACE R. MORRIS BURSARY FUND (U)

Established in 1997 by bequest of Wallace Ronald Morris. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90780)

THE ARCHIE MOUGHALIAN BURSARIES (E)

Established by bequest in 1998. A variable number of bursaries to be granted to students enrolled in the Faculty of Engineering who demonstrate financial need. (90852)

THE JOHN DOUGLAS MOYER BURSARY (U)

Established in 1986 by bequest of John Douglas Moyer to assist needy students. (90534)

THE HONOURABLE JOHN C. MUNRO BURSARIES (SS)

Established in 1998 by family, friends and colleagues of the Honourable John C. Munro for his outstanding years of service and commitment to the political life of Canada and to the Regional Municipality of Hamilton-Wentworth. A variable number of bursaries to be granted to students enrolled in a program in Political Science who demonstrate financial need. (90848)

THE SAMMON MUNROE BURSARY (H)

Established in 2003 by Robert Munroe (Class of '72) and Sheila Sammon under the McMaster Student Opportunity Fund II initiative. To be granted to a student in the Faculty of Humanities who demonstrates financial need. Preference will be given to a student enrolled in a program in History. (90982)

THE HELEN K. MUSSALLEM BURSARY (U)

Established in 1996 by Dr. Helen K. Mussallem (C.C., B.N., Ed.D., LL.D (Queen's), D.Sc., D.St.J., F.R.C.N., M.R.S.H.) under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Helen K. Mussallem Award. (90909)

THE CAROLE AND ALEXANDER NAKEFF BURSARIES (SS)

Established in 2000 by Carole Anne Nakeff (Class of '69) and Dr. Alexander Nakeff. A variable number of bursaries to be granted to students enrolled in a Political Science or Environmental Studies program who demonstrate financial need. (90946)

THE NCR (WATERLOO) BURSARY (E)

Established in 1998 by NCR (Waterloo) under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in an Engineering and Management program who demonstrates financial need. (90842)

THE MARJORIE AND BILL NELSON BURSARY (U)

Established in 1997 by Marjorie and Bill Nelson under the McMaster Student Opportunity Fund initiative in support of the Hamilton community, and in support of the efforts of McMaster University to ensure that all students have the opportunity to achieve their educational goals. To be granted to a student enrolled in any program who demonstrates financial need. (90781)

THE NELSON STEEL BURSARY (U)

Established in 1997 by Nelson Steel in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to students in any program who demonstrate financial need. (90782)

THE NHL PLAYERS' ASSOCIATION BURSARY (AT)

Established in 1999 by The NHL Players' Association Alumni. To be granted to a student enrolled in any program who demonstrates financial need and who has demonstrated outstanding athletic achievement in an interspersed sport. (90889)

THE HAROLD NOLAN MEMORIAL FOOTBALL BURSARY (AT)

Established in 2003 by Els and John Swart. To be granted to a student enrolled in any program who demonstrates financial need and who has demonstrated outstanding athletic achievement in inter university football. (90978)

THE PERC AND JOAN NORMAN NURSING BURSARY (HS)

Established in 2005 by Perc and Joan Norman in support of students pursuing a career in healthcare. To be granted to students who demonstrate financial need and are enrolled in the Nursing program. (91019)

THE NORTHWATER CAPITAL MANAGEMENT BURSARY (SS)

Established in 1997 by Northwater Capital Management in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries will be granted annually to McMaster students enrolled in the Gerontology program who demonstrate financial need. Preference to be given to students who have participated in a conference or workshop on Gerontology. (90783)

THE CLAIRE AND JOHN NOVAK BURSARY (B)

Established in 1997 by Bruce Cumming (Class of '73) and Marie Cumming in honour of Claire and John Novak. To be granted to a student enrolled in the Faculty of Business who demonstrates financial need. (90784)

THE NURSING CLASS OF '86 BURSARY FUND (HS)

Established in 2006 by the Nursing Class of 1986 in honour of their 20th reunion. To be granted to students enrolled in the School of Nursing who demonstrate financial need. (91057)

THE DR. ALFRED AND LAURA OAKIE BURSARIES (B)

Established in 1996 by Dr. Alfred U. Oakie. A variable number of bursaries to be granted to students enrolled in Business I who demonstrate financial need. (90631)

OAKRUN FARM BAKERY BURSARY (HS)

Established in 2004 by Oakrun Farm Bakery, under the McMaster Student Opportunity Trust Fund II initiative. To be granted to students enrolled in the Faculty of Health Sciences who demonstrate financial need. (91013)

THE ONCOLOGY NURSING PROGRAM BURSARY (U)

Established in 1997 in recognition of the contribution of McMaster students under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Oncology Nursing Program Award. (90910)

THE ORLICK INDUSTRIES LIMITED BURSARIES (E)

Established in 1997 by Orlick Industries in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to students enrolled in a Mechanical Engineering program who demonstrate financial need. (90785)

THE O'SHAUGHNESSY BURSARY (HS)

Established in 1986 by the family and friends of the late Margaret O'Shaughnessy, RN; this bursary is to be used to alleviate financial need for students pursuing an education in Nursing (basic or post-diploma stream) in Level II, III, or IV. (90535)

THE OTIS CANADA BURSARIES IN ENGINEERING AND MANAGEMENT (E)

Established in 1996 by OTIS Canada Inc., the world's largest elevator company with over 50,000 employees and more than 1,700 worldwide locations. A variable number of bursaries to be granted to students enrolled in Level II of a program in Engineering and Management who demonstrate financial need. Preference to be given to students who demonstrate a lively interest in the university and community through their involvement in extracurricular activities. (90632)

THE LILLIAN AND LEROY PAGE BURSARIES (R)

Established in 1997 by the Lillian and Leroy Page Foundation to enable students to pursue their educational goals. A variable number of bursaries to be granted to students from the Hamilton-Wentworth Region who demonstrate financial need. Preference to be given to students in the Faculty of Science. (90786)

THE THOMAS ALEXANDER PAIN BURSARY (AT)

Established by past and present student-athletes and friends of McMaster Football to assist students in any academic program who demonstrate financial need and who demonstrate outstanding participation in the sport of football. (90777)

THE DR. JOHN H. PASSMORE BURSARY (S, SS)

Established in 2004 by Dr. John H. Passmore (Class of '33) under the McMaster Student Opportunity Trust Fund II initiative. To be granted to students enrolled in the Faculty of Science or the Faculty of Social Sciences who demonstrate financial need. Preference will be given to students who are studying Environmental Studies. (91011)

THE PATRIOT FORGE INC. BURSARY (E)

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. (90788)

THE PATTERSON-WILSON BURSARIES (H)

Established in 2003 by the bequest of Laurence Cholwill Patterson under the McMaster Student Opportunity Fund II initiative. To be granted to students in the Faculty of Humanities who demonstrate financial need. (90995)

THE MARION PEARCE BURSARIES (SS)

Established in 1990 by Dr. Sally Palmer in memory of her aunt Marion Pearce (Class of '20). Miss Pearce worked with New Canadians at the Beverly Street Baptist Church in Toronto. A variable number of bursaries to be granted to students enrolled in the Social Work program who have demonstrated financial need. (90536)

THE DR. HOLLAND AND MRS. ELVIRA PETERSON BURSARY (H)

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 Hispanic Studies or German program in the Department of Linguistics and Languages. (90789)

THE ELVIRA AND HOLLAND PETERSON BURSARY (H)

Established in 2000 by Mrs. Elvira Peterson (Class of '69) and Dr. Holland Peterson. To be granted to a Level III student enrolled in the Honours Art History or Combined Honours Art History Program who demonstrates financial need. (90948)

THE PETRO-CANADA BURSARIES (U)

Established in 1996 by Petro-Canada, the largest Canadian-owned oil and gas company and one of the country's leading refiners and marketers of petroleum products, in support of its belief that all students should have the opportunity to pursue their educational aspirations. A variable number of bursaries to be granted to students in any program who demonstrate financial need. (90634)

THE PEVENSING BURSARIES (SS)

Established in 1996 by David Hannaford (Class of '64). A variable number of bursaries to be granted to students enrolled in the penultimate year of an Honours program in Economics who demonstrate financial need. (90676)

THE ROBERT AND RUTH PHILIP STUDENT BURSARIES (U)

Established in 1996 by Robert and Ruth Philip of Hamilton, Ontario. A variable number of bursaries to be granted to students in any program who demonstrate financial need. (90635)

THE BETH PHINNEY BURSARY (SS)

Established in 2005 by Beth Phinney, B.A. (Class of '78), and Member of Parliament for Hamilton Mountain for 18 years. To be granted to a student enrolled in the Faculty of Social Sciences who demonstrates financial need. (91038)

THE PHYSICAL EDUCATION CLASS**OF '80 25TH ANNIVERSARY BURSARY (SS)**

Established by the Bachelor of Physical Education Class of '80 in honour of their 25th Anniversary. To be granted to students in Level II or above of a program in Kinesiology who demonstrate financial need. (91040)

THE MARC ANDRE ADRIEN PINEAULT BURSARY (E)

Established in 1995 by family and friends in memory of Marc Pineault and augmented in 1996 in conjunction with the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in a program in Engineering who has demonstrated financial need and involvement in University activities including the McMaster Choir, varsity wrestling, karate club and issues related to the environment and social justice. (90576)

THE PIONEER GROUP LTD. BURSARY (U)

Established in 1997 by the Pioneer Group of Companies Inc. under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Pioneer Group Inc. Award. (90911)

THE PITCHER-RATFORD BURSARIES (S)

Established in 2004 by Bruce Ratford (Class of '71) and Elda Ratford (Pitcher) (Class of '71) under the McMaster Student Opportunity Fund II initiative. A variable number of bursaries to be granted to students enrolled in the School of Geography and Earth Sciences who demonstrate financial need. Preference will be given to students who have completed Level III of an Honours Geography program with a Cumulative Average of 8.0 at the most recent review. (90983)

THE DR. SUSAN BEVERLEY PLANK MEMORIAL BURSARY (HS)

Established in 1997 by Mr. William J. Plank, family and friends, in memory of Dr. Susan Beverley Plank (Class of '90). To be granted to a student who demonstrates financial need and is enrolled in the Faculty of Health Sciences, School of Medicine. (90791)

THE GEORGE PLUMB MEMORIAL BURSARY (SS)

Established in 1996 by David Plumb in memory of his father George Plumb. To be granted to a student enrolled in a program in Gerontology who demonstrates financial need. Preference to be given to a mature student. (90636)

THE LILLIAN PLUMB BURSARY (H)

Established in 1998 by David Plumb in honour of his mother, Lillian Plumb. To be granted to a student enrolled in a program in the Department of English and Cultural Studies and who demonstrates financial need (90853)

THE GORDON AND JANE PRICE BURSARY (U)

Established in 1997 by their sons in honour of Gordon and Jane Price under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Gordon and Jane Price Award. (90912)

THE LES PRINCE BURSARIES (AT)

Established in 1996 in memory of Leslie A. Prince, dedicated teacher, coach and administrator at McMaster University remembered for his outstanding leadership and service in Athletics and Recreation, Student Life as well as the community-at-large. To assist student-athletes who demonstrate financial need. Preference to be given to students who demonstrate qualities of leadership and service to the community through programs such as *The Marauder Outreach program and Community Service*. (90637)

THE PROCOR BURSARIES (B, E)

Established in 1997 by Procor Ltd. in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to students enrolled in Engineering or Commerce who demonstrate financial need and undertake service to McMaster University and the community-at-large. (90669)

THE WALLACE M. RANKIN BURSARY IN THE SCHOOL OF NURSING (HS)

Established in 2006 by an anonymous donor. To be granted to students in the School of Nursing who demonstrate financial need. (91055)

THE GORDON RAYMOND BURSARY (U)

Established in 1996 by the McMaster Association of Part-time Students and other friends and colleagues under the McMaster Student Opportunity Fund initiative. To be granted to part-time students in any program who demonstrate financial need. Preference will be given to the recipient of The Gordon Raymond Award. (90638)

RBC FINANCIAL GROUP BURSARY (U)

Established in 1997 by the Royal Bank of Canada in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to McMaster students who demonstrate financial need. (90797)

THE REDPATH SUGARS BURSARY (U)

Established in 1997 by Redpath Sugars, Division of Redpath Industries Limited, in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to a student enrolled in any program who demonstrates financial need. (90824)

THE REGIONAL MUNICIPALITY OF HAMILTON-WENTWORTH BURSARIES (R)

Established in 1997 by The Regional Municipality of Hamilton-Wentworth in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries will be granted to students enrolled in any program who demonstrate financial need. Preference will be given to students who permanently reside in the Hamilton-Wentworth Region. (90794)

THE RICOH CANADA INC. BURSARIES (B, E)

Established in 1996 by Ricoh Canada Inc. in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to students who demonstrate financial need and are enrolled in the Faculty of Business or the Faculty of Engineering. (90639)

THE JAMES AND ELIZABETH ROBERTS BURSARIES (U)

Established in 1957 by R.H. Roberts in memory of his parents to assist any male student of good academic standing. (90538)

THE HUGH AND ALICE ROBERTSON MEMORIAL BURSARIES (U)

Established in 1997 by R. G. Hamish Robertson in honour of his parents Hugh and Alice Robertson under the McMaster Student Opportunity Fund initiative. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90795)

THE ROBERTSON-YATES CORPORATION BURSARIES (B, E)

Established in 1996 by the Robertson-Yates Corporation of Hamilton in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to students enrolled in a program in Business or Engineering who demonstrate financial need. (90640)

THE MARY ROMEO BURSARY IN ART HISTORY (H)

Established in 1997 by Mary Romeo, a lifelong patron of the arts. To be granted to undergraduate and graduate students who have demonstrated financial need and are enrolled in a program in Art History. (90668)

THE RANDOLPH E. ROSS MEMORIAL BURSARY (EX)

Established in 1998 by family and friends in memory of Dr. Randolph E. Ross, who was a dedicated and cherished faculty member for over 25 years at McMaster University. To be granted to a student enrolled in the School of Business or the Engineering and Management Program. Preference will be given to a McMaster student participating in an international exchange program. (90854)

THE HELEN LENORE ROSZELL MEMORIAL BURSARIES (U)

Established in 2000 by bequest of Helen Lenore Roszell. A variable number of bursaries to be granted to students in any program who demonstrate financial need. (90951)

THE ROTARY CLUB OF ANCASTER BURSARY (U)

Established in 1997 by the Rotary Club of Ancaster under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Rotary Club of Ancaster Award. (90914)

THE ROTARY CLUB OF BURLINGTON CENTRAL BURSARY (U)

Established in 1997 by the Rotary Club of Burlington Central under the McMaster Student Opportunity Fund initiative. To be granted to students who are enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Rotary Club of Burlington Central Award. (90915)

THE ROTARY CLUB OF HAMILTON BURSARY (U)

Established in 1997 by the Rotary Club of Hamilton under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Rotary Club of Hamilton Award. (90875)

THE ROTARY CLUB OF HAMILTON A.M. BURSARY (U)

Established in 1997 by The Rotary Club of Hamilton A.M. under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Rotary Club of Hamilton A.M. Award. (90876)

THE HARRY A. ROTHMANN BURSARY (S)

Established in 2005 by Harry A. Rothmann, B.Sc. (Class of '58). To be granted to students in the Faculty of Science enrolled in a program in Mathematics who demonstrate financial need. (91052)

THE ROYAL CANADIAN LEGION BRANCH 163 BURSARY (SS)

Established in 1997 by the Royal Canadian Legion Branch 163 in support of the McMaster Student Opportunity Fund initiative and in keeping with the Legion's intention to support community service, education and leadership programs in the country. To be granted to a student enrolled in a Gerontology program who demonstrates financial need. (90798)

THE ROYAL & SUNALLIANCE BURSARIES (U)

Established in 1997 by Royal & SunAlliance Canada in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries will be granted annually to McMaster students who demonstrate financial need. (90799)

THE CARMEN AND DOROTHY RYDER BURSARY (B)

Established in 1997 by Marvin Ryder under the McMaster Student Opportunity Fund initiative in honour of Carmen and Dorothy Ryder. To be granted to a student enrolled in the Faculty of Business who demonstrates financial need. Preference to be given to a student entering Level III or IV. (90800)

THE ELEANOR AND WILFRED RYDER BURSARY (R)

Established in 1999 by Marvin Ryder in honour of Eleanor and Wilfred Ryder. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to students from Oxford County or Norfolk County. (90894)

THE SALENA FAMILY BURSARY (HS)

Established in 1997 under the McMaster Student Opportunity Fund initiative by Dr. Bruno Salena (Class of '81), full-time faculty member in the Faculty of Health Sciences, and his family. To be granted to a student who demonstrates financial need and is enrolled in the Faculty of Health Sciences, School of Medicine. (90801)

THE HELEN SANSONE BURSARIES (U)

Established in 1996 by bequest of Helen Sansone of Hamilton, Ontario. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90641)

THE SATURN OF HAMILTON EAST BURSARY (U)

Established in 1996 by SATURN of Hamilton East under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Saturn of Hamilton East Achievement Award. (90919)

THE WILLIAM F. SCANDLAN BURSARIES (SS)

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 program who demonstrate financial need. Preference to be given to students enrolled in a Labour studies program. (90642)

THE GINO AND ROBERTA SCAPILLATI BURSARY (B, SS)

Established in 2004 by Gino Scapillati (Class of '81) and Roberta Scapillati (Class of '79) under the McMaster Student Opportunity Fund II initiative. To be granted to a student enrolled in the Faculty of Business or Faculty of Social Sciences who demonstrates financial need. (91005)

THE ERIC SCHLICHTING MEMORIAL BURSARY (S)

Established in 1966 by his family, classmates and friends. To assist a student in a program in the Faculty of Science who demonstrates financial need. Preference will be given to a student enrolled in Earth Sciences. (90539)

THE SCHOOL OF NURSING BURSARY (HS)

Established in 2004 by the School of Nursing through the generosity of its alumni and friends under the McMaster Student Opportunity Fund II initiative. To be granted to a student in the School of Nursing who demonstrates financial need. (91003)

THE SCIENCE ALUMNI BURSARY (S)

Established in 2004 by the Faculty of Science through the generosity of its alumni and friends under the McMaster Student Opportunity Fund II initiative. To be granted to a student in the Faculty of Science who demonstrates financial need. Preference to be given to a student who has attained a minimum Cumulative Average of 7.0 at the most recent review. (90984)

THE SCIENCE CLASS OF '97 LEGACY BURSARY (U)

Established in 1997 by the Science Class of '97 under the McMaster Student Opportunity Fund initiative. To be granted to students in any program who demonstrate financial need. Preference will be given to the recipient of The Science Class of '97 Legacy Award. (90920)

THE SCOTIAMCLEOD BURSARIES (B)

Established in 1997 by ScotiaMcLeod in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. Preference to be given to students enrolled in the Faculty of Business. (90802)

THE TERRY SEAWRIGHT BURSARY (B)

Established in 1996 by Terry Seawright, Lecturer in the Faculty of Business. To be granted to a student in the Commerce Program who demonstrates financial need. Preference to be given to the student who has completed COMMERCE 2MA3 and attained a grade of at least B. (90643)

THE MYKOLA SEMENIUK BURSARIES (U)

Established in 1991 by bequest of Mykola Semeniuk to assist students who demonstrate financial need and augmented in 1996 in conjunction with the McMaster Student Opportunity Fund initiative. (90551)

THE LOUIS SR. AND ROSITA SERAFINI BURSARY (U)

Established in 2004 by Louis Jr. and Lori Ann Serafini, graduates of McMaster University, in honour of Louis Sr. and Rosita Serafini under the McMaster Student Opportunity Fund II initiative. To be granted to a student enrolled in any program who demonstrates financial need. (91024)

THE LEO W. SETO BURSARY (U)

Established in 2003 by Leo W. Seto, B.Eng.Mgt. (Class of '87) and M.Eng. (Class of '90) under the McMaster Student Opportunity Fund II initiative. To be granted to a student in the Faculty of Engineering who demonstrates financial need. (90998)

THE ROSA MAUDE SHEARDOWN BURSARY (R, U)

Established in 1997 by Gordon R. Baker, Q. C. in honour of his foster mother, Rosa Maude Sheardown, and her belief in the importance of education and providing a helping hand to others. To be granted to students in any Faculty who demonstrate financial need. Preference to be given to students from single-parent families, foster or group homes, disadvantaged backgrounds or King Township. (90967)

THE LESLIE W. AND ELIZABETH SHEMILT BURSARY (E)

Established in 1997 under the McMaster Student Opportunity Fund initiative. To be granted to a student who demonstrates financial need and is enrolled in an Engineering program. (90663)

THE GERALD AND VERA SIMPSON BURSARY (SS)

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 MEENA AND NARESH SINHA BURSARY (U)

Established in 1996 by Meena and Narish Sinha under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of the Meena and Narish Sinha Award. (90921)

THE ALBERT EDWARD SMITH AND JEAN McTAVISH SMITH BURSARY (U)

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 program who demonstrates financial need. (90836)

THE SAM SMURLICK BURSARY (U)

Established in 1978 by the Smurlick family in memory of Sam Smurlick (Class of '35). To be granted to a student in any program who demonstrates financial need. (90541)

THE SMYRNIW BURSARY (H)

Established in 1996 by Dr. and Mrs. W. Smyrniw. To be granted to students who are Canadian citizens or permanent residents who demonstrate financial need and are in good academic standing in any undergraduate program of the Faculty of Humanities above Level I. (90661)

THE SOCIAL SCIENCES BURSARY (SS)

Established in 2004 by the Dean of the Faculty of Social Sciences through the generosity of its alumni and friends under the McMaster Student Opportunity Fund II initiative. To be granted to students enrolled in the Faculty of Social Sciences who demonstrate financial need. (91009)

THE SOCIAL SCIENCES SOCIETY BURSARIES (SS)

Established in 1990 by the Social Sciences Society Executive in recognition of the outstanding efforts of Dr. Peter George in establishing the Social Sciences Society. A variable number of bursaries to be granted to full-time students enrolled in a Social Sciences program involving Anthropology, Economics, Geography, Gerontology, Labour Studies, Political Science, Psychology, Religious Studies, Social Work or Sociology and who demonstrate financial need. (90542)

THE LORNA AND DAVID SOMERS BURSARY (U)

Established in 1997 by Lorna Somers (Class of '81) and David Somers (Class of '88) under the McMaster Student Opportunity Fund initiative. To be granted to students in any program who demonstrate financial need. Preference will be given to the recipient of The Lorna and David Somers Award. (90922)

THE SOMERVILLE BURSARY (U)

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 GEORGE SORGER BURSARY IN BIOLOGY (CS, S)

Established by the friends of Dr. George Sorger. To be granted to a student in Level IV of a Biology program who demonstrates financial need. Preference will be given to students who have attained a Cumulative Average of at least 9.0 at the most recent review and who are also involved in community service. (91029)

THE SALVATORE SPITALE MEMORIAL BURSARY (H)

Established in 1984 and augmented in 1997 by the Spitale family in conjunction with the McMaster Student Opportunity Fund initiative. To be granted to a student in the Department of Linguistics and Languages, Level II or above, who demonstrates financial need and has completed a minimum of nine units of Italian courses. Preference to be given to a student who has demonstrated active involvement in community life. (90703)

THE ST. PAUL GUARANTEE INSURANCE BURSARY (U)

Established in 1997 by London Guarantee Insurance in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted annually to McMaster students who demonstrate financial need. (90757)

THE LILLIAN R. STEGNE MEMORIAL BURSARIES (D)

Established in 1990 in memory of Lillian Rose Stegne (Class of '62) by family, friends and colleagues. Two or three bursaries to be granted to handicapped students in any program who demonstrate financial need. (90543)

THE STELCO UNDERGRADUATE BURSARIES (B, E, S)

Established in 1996 by Stelco- a market-driven, technologically advanced group of businesses committed to maintaining leadership roles as steel producers and fabricators-in support of students who, without financial aid, would be unable to pursue their educational goals. To be granted to students who demonstrate financial need and are enrolled in the Faculties of Business, Engineering or Science. Preference will be given to students who are enrolled in the Department of Materials Science and Engineering. (90644)

THE FRANK STERN/STERN LABORATORIES BURSARY (E)

Established in 2005 in memory of Frank Stern, Chairman and CEO of Stern Laboratories Inc.. To be granted to students enrolled in a program in Mechanical Engineering who demonstrate financial need. (91054)

THE ADAM SUDAR PRINTMAKING BURSARY (U)

Established in 1997 in memory of Adam Sudar by his friends under the McMaster Student Opportunity Fund initiative. To be granted to students in any program who demonstrate financial need. Preference will be given to the recipient of The Adam Sudar Printmaking Award. (90923)

THE THOMAS H.B. SYMONS BURSARY (SS)

Established in 1997 by Professor Thomas H.B. Symons under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in the Faculty of Social Sciences with a minimum Cumulative Average of 8.0 at the most recent review who demonstrate financial need. Preference will be given to students studying Canadian Politics. (90882)

THE TD BANK FINANCIAL GROUP BURSARIES (E, S, SS)

Established in 1999 by the TD Bank Financial Group in support of its commitment to helping students succeed in their post-secondary studies. A variable number of bursaries to be granted to students in any program who demonstrate financial need. Preference to be given to students enrolled in the Earth and Environmental Sciences, the Honours Geography and Environmental Studies or an Engineering and Society Program. (90939)

THE 3M CANADA INC. BURSARIES (B, S)

Established in 1980. To be granted to two students in their final year of studies who demonstrate financial need. One to an M.B.A. student who has attained at least a 6 point average and one to a Science student who has attained a Cumulative Average of at least 9.0 at the most recent review. (90525)

THE TARBUTT CONSTRUCTION LTD. BURSARY (U)

Established in 1997 by Tarbutt Construction Ltd. under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in any program who demonstrates financial need. (90732)

THE EDWIN A. TAYLOR BURSARY (SS)

Established in 2005 by Edwin A. Taylor, B.A. (Class of '54) and M.B.A. (Class of '63). To be granted to a student in the Faculty of Social Sciences who demonstrates financial need. (91046)

THE HERMAN TEN CATE MEMORIAL BURSARY (SS)

Established in 2002 in memory of Herman ten Cate by his family, in support of his belief that all students should have the opportunity to pursue their educational goals. To be granted to a student enrolled in the Faculty of Social Sciences who demonstrates financial need. (90975)

THE DONALD W. THOMAS BURSARIES (H)

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)

THE DONALD WILLIAM THOMAS MEMORIAL BURSARY (H)

Established in 2005 by Jack Craig in memory of Donald William Thomas, B.A. (Class of '70). To be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. Preference will be given to students enrolled in a program in the School of the Arts. (91050)

THE STEPHEN F.H. THRELKELD BURSARY (U)

Established in 1997 by friends and colleagues of Stephen F.H. Threlkeld under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Stephen F.H. Threlkeld Award. (90924)

THE TKK INC. BURSARY (U)

Established in 1997 by TKK Inc. under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The TKK Inc. Awards. (90925)

THE GRAHAM RONALD TOOP BURSARY (H)

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. (90883)

THE BROOKE P. TOWNSEND BURSARY (S)

Established in 1996 by Brooke P. Townsend. To be granted to a student in any program who has demonstrated financial need. Preference to be given to a female student enrolled in the Faculty of Science. (90670)

THE TOWNSHIPS OF NORTH DUMFRIES AND WOOLWICH IN WATERLOO REGION AND TOWNSHIP OF CENTRE WELLINGTON AND CITY OF GUELPH IN WELLINGTON COUNTY BURSARY (R)

Established in 2005 under the Ontario Trust for Student Support program to ensure that all students have the opportunity to pursue their educational goals. To be granted to students in any Faculty who demonstrate financial need. Preference will be given to students residing in the Townships of North Dumfries and Woolwich in Waterloo Region and Township Centre Wellington and City of Guelph in Wellington County. (91037)

THE TRILLIUM NON PROFIT VENTURES FOR YOUTH BURSARY (SS)

Established in 2004 by Trillium Non Profit Ventures for Youth. To be granted to students who demonstrate financial need. Preference will be given to students enrolled in the School of Social Work. (91014)

THE ROBERTA GRAY TROXEL BURSARY (H)

Established in 1997 by Roberta Gray Troxel under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in the Faculty of Humanities who demonstrates financial need. Preference to be given to a female undergraduate student enrolled in a History program. (90735)

THE TROY FAMILY BURSARY (B)

Established in 2004 by Kenneth, B.Com. (Class of '75) and Drenda Troy in honour of Anthony and Marie Troy in support of their belief that all students should have the opportunity to pursue their educational goals. To be awarded to a full-time student enrolled in Level II or above of the Bachelor of Commerce program who demonstrates financial need and was on the Deans' Honour List at the most recent review. (91027)

THE TRESSILA TRUBY MEMORIAL BURSARY (H)

Established in 1992 from the bequest of Tressila Truby (M.C.S.P.) and Past-President of the Zonta Club of Hamilton II. To be granted to a female student who has completed Level II of a program in Music. (90556)

THE RAY AND JOYCE TRULL BURSARY (U)

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 program who demonstrates financial need. (90837)

THE ROGER TRULL BURSARY (U)

Established in 1997 by friends and colleagues under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Roger Trull Award. (90926)

THE GEORGE ELIAS TUCKETT BURSARIES (U)

Established in 2005 in memory of George Elias Tuckett, a prominent Hamilton businessman and community leader who founded the oldest tobacco manufacturing company in Canada - a company that has been part of Imperial Tobacco since 1930. To be granted to students in any Faculty who demonstrate financial need. (91047)

THE TURKSTRA LUMBER BURSARY (E)

Established in 1996 by the Turkstra Lumber Company Limited. A variable number of bursaries to be granted to students enrolled in an Engineering and Society program who demonstrate financial need. Preference will be given to students who attain a Sessional Average of at least 7.0 at the most recent review. (90647)

THE EDITH H. TURNER FOUNDATION BURSARIES (U)

Established in 1996 by The Edith H. Turner Foundation in support of students pursuing their post-secondary studies at McMaster. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90648)

THE TURNER FAMILY BURSARY (S)

Established in 2005 by Mary Turner, B.Sc. (Class of '74) and Graham Turner, Ph.D. (Class of '76) in memory of Dr. Colin J.L. Lock, Professor of Chemistry and Pathology. To be granted to students enrolled in the Faculty of Science who demonstrate financial need. (91058)

THE TYNOWSKI BURSARY (U)

Established in 1997 under the McMaster Student Opportunity Fund initiative. Preference will be given, if financial need is demonstrated, to the recipient of The Tynowski Scholarship. (90953)

THE UBS GLOBAL ASSETS MANAGEMENT**(CANADA) COMPANY BURSARY (U)**

Established in 1997 by the UBS Global Assets Management (Canada) Company under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The UBS Global Assets Management (Canada) Company Award. (90898)

MOSSADIQ AND YASMIN UMEDALY BURSARIES (B)

Established in 1999, by Mossadiq, M.B.A. (Class of '74) and Yasmin Umedaly under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in Business I or first year of the M.B.A. program who demonstrate financial need. (90868)

THE UNITED STEELWORKERS OF AMERICA BURSARY (SS)

Established in 1997 by the United Steelworkers of America. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to students enrolled in a program in Labour Studies. (91042)

THE VALLEY CITY BURSARY (U)

Established in 1996 by Valley City in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to a student in any program who demonstrates financial need. (90662)

THE JOHN AND JOAN VAN DUZER BURSARY (H)

Established in 2003 by John (Class of '50) and Joan Van Duzer under the McMaster Student Opportunity Fund II initiative. To be granted to a student in the Faculty of Humanities who demonstrates financial need. (90993)

THE CATHERINE VASAS-BROWN BURSARIES (H)

Established in 1996 by J. Allan Brown in honour of Catherine Vasas-Brown. A variable number of bursaries to be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. (90649)

THE FILOMENA AND FERDINANDO VISOCCHI BURSARY (U)

Established in 2003 by their children and family in honour of Filomena and Ferdinando Visocchi under the McMaster Student Opportunity Fund II initiative. To be granted to a student in any program who demonstrates financial need. (90997)

THE SYLVIA AND BRIAN WALKER BURSARIES (H, HS)

Established in 1996 by Sylvia (Hunt) and Brian Walker. To be granted to a student enrolled in Humanities I or Nursing I who demonstrates financial need. Preference to be given to students who have demonstrated leadership and involvement in university and community activities. (90650)

THE WALLINGFORD HALL BURSARIES (U)

Established through anonymous donations to assist students in any program who demonstrate financial need. (90548)

THE G.S. WARK LTD. BURSARY (U)

Established in 1996 by G.S. Wark Ltd. General Contractors, in support of its belief that all students should have the opportunity to pursue their educational goals. To be awarded to a student in any program who demonstrates financial need. (90589)

THE SAM WATSON MEMORIAL BURSARY (U)

Established in 1996 by his wife Irene M. Watson and friends of Samuel Watson under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Sam Watson Memorial Award. (90928)

THE SAM AND IRENE WATSON BURSARY FUND (AS, B, E, H, S, SS)

Established in 1998 by the estate of Irene Mary Watson. To be granted to students who demonstrate financial need and who have completed their second year with a Cumulative Average of at least 8.0 in the Arts and Science Program or any of the Faculties of Business, Engineering, Humanities, Science and Social Sciences.

Value: \$2,000 (90840)

THE AUDREY AND BOB WAUGH BURSARY (HS)

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)

THE ROSS FAWCETT WEBB BURSARY FUND (U)

Established in 1983 by the Hamilton Community Foundation in memory of Ross Fawcett Webb. To be granted in the second term of study (any level) to a student who demonstrates financial need and is enrolled in any program at McMaster. Applicants must be Canadian Citizens or hold permanent resident status in Canada. (90971)

THE CLIFFORD JOHNSTON WEBSTER MEMORIAL BURSARIES (H)

Established in 1993 by Viola Webster in memory of her brother Clifford Johnston Webster (Class of '41). To assist students who demonstrate financial need enrolled in the Honours English program who are Canadian, citizens or permanent residents and who have graduated from a public secondary school in Ontario. Applicants should have a record of academic performance that has normally been at the upper second-class level or higher. If sufficient applicants are not eligible in the Honours English program, the bursaries are available, under similar conditions, to students in the Honours French program. (90559)

THE ARTHUR AND MARGARET WEISZ BURSARY (U)

Established in 2004 by Arthur Weisz (LL.D. 2004) and Margaret Weisz under the McMaster Student Opportunity Fund II initiative. To be granted to students enrolled in any program who demonstrate financial need. (91008)

THE DR. JANET WEISZ BURSARY (HS)

Established in 2004 by Dr. Janet Weisz, under the McMaster Student Opportunity Trust Fund II initiative. To be granted to students enrolled in the Faculty of Health Sciences who demonstrate financial need. (91012)

THE LLOYD WERDEN MEMORIAL BURSARIES (U)

Established in 1996 by bequest of Lloyd Werden of Bonavista in the Township of Louth in the County of Lincoln, former Physician. To be granted to students enrolled in any program who demonstrate financial need. (90651)

THE WESCOST INDUSTRIES BURSARY (U)

Established in 1997 by Wescost Industries Inc. under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Wescost Industries Continuous Learning Award. (90929)

THE WESTINGHOUSE CANADA INC. BURSARIES (B, E)

Established in 1996 by Westinghouse Canada Inc. in support of students who, without financial support, would be unable to pursue their educational goals. A variable number of bursaries to be granted to students in a program in the Faculty of Business and the Faculty of Engineering who demonstrate financial need. (90652)

THE ALLAN AND JOY WILLIAMS BURSARY (U)

Established in 1996 by Mary Williams (Class of '87), Anne Williams (Class of '89) and Ellen and Dan Walker under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Allan and Joy Williams Award. (90877)

THE LYNN R. WILLIAMS BURSARY (SS)

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 is enrolled in a program in Labour Studies. The value of this bursary shall be no less than \$300. (90793)

THE MARY DRYDEN WILLIS BURSARY (H)

Established in 1997, in memory of Mary Willis (Class of '26), by her daughter, Mary Lou Dingle and son-in-law Allan (both Class of '58), under the McMaster Student Opportunity Trust Fund initiative. To be granted to students enrolled in Level II or higher in the Faculty of Humanities who have attained a minimum CA of 7.0 and who demonstrate financial need. (90869)

THE KATHRYN A. WILSON BURSARIES (H)

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 FRIDA AND JOACHIM WOLTER BURSARY (S,SS)

Established in 1997 under the McMaster Student Opportunity Fund initiative by Claus Wolter (Class of '80) in honour of his parents, Frida and Joachim Wolter. To be granted to a student enrolled in the Kinesiology program who demonstrates financial need. (90790)

THE WRIGHT FAMILY BURSARY (B, S)

Established in 2003 by Thomas C. Wright, M.B.A. (Class of '72) under the McMaster Student Opportunity Fund II initiative. To be granted to a student in the Faculty of Business or the Faculty of Science who demonstrates financial need. (90999)

THE JOHN YARWOOD MEMORIAL BURSARY (S)

Established in 1998 by family and friends in memory of Dr. A.J. Yarwood. To be granted to a Level II student enrolled in an Honours Chemistry program who demonstrates financial need. (90844)

THE YATES BURSARIES (U)

Established in 1963 by bequest of William Henry Yates of Hamilton. To assist students in any program. (90549)

THE GLADYS A. YOUNG BURSARY (U)

Established in 1997 under the McMaster Student Opportunity Fund initiative. Preference will be given, if financial need is demonstrated, to the recipient of The Gladys A. Young Scholarship. (90878)

THE JAMES MASON YOUNG BURSARY (EX)

Established in 1996 by James Mason Young in honour of his family's long-standing association with McMaster University. A variable number of bursaries to be granted to students enrolled in the Faculty of Business who demonstrate financial need. Preference to be given to students participating in a formal McMaster Exchange Program. (90779)

THE SHEILA ZACK MEMORIAL BURSARY (H)

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 program in Theatre & Film Studies at McMaster University. (90764)

THE ZENON ENVIRONMENTAL BURSARY (U)

Established in 1997 by Zenon Environmental Inc. under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Zenon Environmental Award. (90931)

THE ZONTA CLUB OF HAMILTON I BURSARIES (B, E, SS)

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)

THE ZOOM MEDIA INC. BURSARY (U)

Established in 1997 by Zoom Media Inc. in support of McMaster students under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Zoom Media Award. (90932)

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 a Community Contribution Award, full-time and part-time students must be registered in Level II, III, IV or V of a first or second baccalaureate program. Eligible candidates must be registered and in good standing as a student of McMaster University.

A student may receive only one Community Contribution Award per year, but may be considered for the same or a different award the following year.

These awards have no monetary benefit but a notation will appear on the student's transcript. The recipient of a Community Contribution Award may be eligible to receive the corresponding donor bursary if financial need is demonstrated. Further information on our bursary program can be found at <http://sfas.mcmaster.ca/bursary/macbur.html>.

The Community Contribution Awards are awarded by a Selection Committee based on an application. The *Community Contribution Application* cover page will be available from the Office of Student Financial Aid & Scholarships' web site after February 1. Completed applications are to be received by the Student Financial Aid Office, by April 15.

THE ATKINSON CHARITABLE FOUNDATION AWARD

Established in 1996 by The Atkinson Charitable Foundation. To be awarded to a student enrolled in any program who participates in activities displaying superior leadership or innovative skills and demonstrates service to the community-at-large. Preference to be given to a student enrolled in the Faculty of Social Sciences. (80022)

THE AUBURN INDUSTRIAL SERVICES LTD. AWARDS

Established in 1997 by Auburn Industrial Services Ltd. To be awarded to students enrolled in any program who display superior leadership or innovative skills. (80037)

BRANTFORD ALUMNI BRANCH

COMMUNITY CONTRIBUTION AWARDS

Established in 2000 by the Brantford Alumni Branch of the McMaster Alumni Association. A variable number of awards to be granted to students enrolled in any program who demonstrate leadership and innovative skills through participation in either university or community activities. Preference will be given to students from the Brant County area high schools. (80052)

THE ELVA CARROL AWARD

Established in 1996 by Elva Carrol. To be awarded to a student enrolled in any program who demonstrates outstanding athletic participation. Preference to be given to an athlete who participates on an inter-university women's team and has demonstrated leadership and fair play. (80028)

THE EDWARD FRANK DAVIS MEMORIAL AWARD

Established in 1996 by bequest in memory of Edward Frank Davis. A variable number of awards to be granted to students entering any program who have shown commitment and contribution to their community through volunteer work. (80060)

THE DAMIAN MIGUEL HEADLEY AWARDS

Established in 1997 by family and friends in memory of Damian Miguel Headley (Class of '89). To be awarded to students enrolled in any program who demonstrate one or more of the following: service to McMaster University or the community-at-large, outstanding athletic or artistic participation or display superior leadership or innovative skills. (80050)

THE RUDY HEINZL AWARD

Established in 1996 by family, friends and colleagues upon the retirement of Rudy Heinzl as Dean of Student Affairs, in recognition of 32 years of dedicated service to students and to the McMaster University community. To be awarded to a student enrolled in any program who, in the judgment of a selection committee, has made a significant contribution to the university life of his/her fellow students. (80004)

THE STUART AND MARJORIE IVISON AWARDS

Established in 1997 by Donald Ivison (Class of '53) and Betty Ivison (Class of '52) in honour of his parents Stuart and Marjorie Ivison (Class of '28 (Arts)). A variable number of awards to be granted to students enrolled in a program in the Department of English and Cultural Studies who demonstrate a lively interest in English/Cultural Studies, involvement in extra-curricular activities and service to the University or community-at-large. (80061)

THE JAMES A. JOHNSON COMMUNITY CONTRIBUTION AWARD

Established in 1997 by the McMaster Social Sciences Society Executive Committee to recognize Dr. James A. Johnson, Dean of Social Sciences (1989-97), for his outstanding service to the Faculty of Social Sciences and the broader campus community. One award to be granted annually to a Social Sciences student enrolled in a program involving Anthropology, Economics, Geography, Gerontology, Labour Studies, Political Science, Psychology, Religious Studies, Social Work or Sociology who, in the judgment of the appropriate selection committee 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)

THE JUNIOR LEAGUE OF HAMILTON-BURLINGTON, INC. COMMUNITY CONTRIBUTION AWARD

Established in 1997 by the Junior League of Hamilton-Burlington, Inc. under the McMaster Student Opportunity Fund initiative. To be awarded to a student in any program who has demonstrated service to the community-at-large. (80032)

THE ALEC JOHN ROYSTON MACMILLAN MEMORIAL AWARDS

Established in 1996 by his family in memory of Alec John Royston MacMillan. Three awards to be granted upon completion of Level I: a) one to a student in any program; b) one to a student enrolled in the Faculty of Business, Humanities or Social Sciences; and, c) one to a student enrolled in the Faculty of Engineering, Health Sciences or Science who, in the judgment of a selection committee, demonstrate qualities of innovation, leadership and service to the community through participation in campus and community programs including athletics. (80012)

THE McMASTER ATHLETIC COUNCIL AWARD

Established in 1997 by the Men's Athletic Council and the Women's Intercollegiate Athletics Council under the McMaster Student Opportunity Fund initiative. To be awarded to a student enrolled in any program who demonstrates outstanding athletic participation. Preference will be given to students in Level II or higher who exhibit leadership and dedication to sport and prove to be an overall asset to their team(s). (80033)

THE ROBERT JOHN MORRIS AWARDS

Established in 1996 by family, friends and colleagues of Robert John Morris. Six awards: three to be granted to students upon completion of Level I or higher of a program in Engineering, and three to be granted to students upon completion of Level II or higher of a program in Engineering Physics who, in the judgment of the appropriate selection committee in the Faculty of Engineering, have demonstrated leadership or innovative skills in the field of Engineering or, through their participation in campus and community activities, have had a significant influence on the lives of Engineering students at McMaster University. (80024)

THE HELEN K. MUSSALLEM AWARD

Established in 1996 by Dr. Helen K. Mussallem (C.C., B.N., Ed.D., LL.D (Queen's), D.Sc., D.St.J., F.R.C.N., M.R.S.H.) to stimulate interest in professional nursing affairs through participation in meetings, conferences, professional associations and societies related to the field of nursing. A variable number of awards granted to students who have completed Nursing I and who, in the judgment of the School of Nursing, have demonstrated notable involvement in extracurricular activities. (80009)

THE ONCOLOGY NURSING PROGRAM AWARDS

Established in 1997 in recognition of the contribution of McMaster students. To be awarded to students enrolled in the Oncology Nursing program who display superior leadership or innovative skills. Preference to be given to students who are working in under-resourced communities and who must travel long distances to participate in the program. (80040)

THE PIONEER GROUP INC. LEADERSHIP AWARDS

Established in 1997 by the Pioneer Group of Companies Inc. in recognition of the community contributions of McMaster students. A variable number of awards to be granted to students enrolled in any program who, in the judgment of a selection committee, have demonstrated leadership and community service. (80025)

THE GORDON AND JANE PRICE AWARDS

Established in 1997 by their sons in honour of Gordon and Jane Price. To be awarded to students in the Arts and Science Program or in the Faculty of Health Sciences who demonstrate service to the community-at-large, outstanding athletic participation or who display superior leadership and innovative skills. (80048)

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)

THE ROTARY CLUB OF ANCASTER COMMUNITY CONTRIBUTION AWARD

Established in 1997 by the Rotary Club of Ancaster in keeping with Rotary's mission to foster the ideal of service within the community. To be awarded to a student enrolled in any program who demonstrates commendable service to the community-at-large. Preference to be given to a student enrolled in an Environmental Science Program. (80044)

THE ROTARY CLUB OF BURLINGTON CENTRAL COMMUNITY CONTRIBUTION AWARD

Established in 1997 by the Rotary Club of Burlington Central in keeping with Rotary's mission to foster the ideal of service within the community. To be granted to a student enrolled in any program who demonstrates involvement in extra-curricular or community activities. Preference will be given to a student from the Burlington area. (80041)

THE ROTARY CLUB OF HAMILTON A.M. COMMUNITY CONTRIBUTION AWARD

Established in 1997 by the Rotary Club of Hamilton A.M. in keeping with Rotary's mission to foster the ideal of service within the community. To be awarded to a student enrolled in any program who demonstrates outstanding service to the community-at-large. (80042)

THE ROTARY CLUB OF HAMILTON COMMUNITY CONTRIBUTION AWARD

Established in 1997 by the Rotary Club of Hamilton in keeping with Rotary's mission to foster the ideal of service within the community. To be awarded to a student enrolled in any program who demonstrates outstanding service to the community-at-large. (80043)

THE SATURN OF HAMILTON EAST ACHIEVEMENT AWARDS

Established in 1996 by SATURN of Hamilton East. To be awarded to McMaster students who promote the ideals of leadership and community service. One award to be granted in each Faculty. (80020)

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)

THE MEENA AND NARESH SINHA AWARD

Established in 1996 by Meena and Naresh Sinha. To be awarded to a student enrolled in the Faculty of Engineering who, in the judgment of the Department of Electrical and Computer Engineering, has demonstrated superior leadership or innovative skills through participation in either University and/or community activities. (80014)

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)

THE ADAM SUDAR PRINTMAKING AWARD

Established in 1997 in memory of Adam Sudar by his friends, this award fund will be used to assist students entering Level III or IV of the Honours Art Program at McMaster who, in the judgment of the School of the Arts, have demonstrated outstanding achievement or promise in the area of printmaking, and who have contributed significantly to the School's cultural presentations within the community. (80054)

THE STEPHEN F. H. THRELKELD AWARD

Established in 1997 by friends and colleagues of Stephen F. H. Threlkeld. To be awarded to a student entering Level IV of an Honours program in Biology who has demonstrated leadership or innovative skills through participation in either university and/or community activities. Preference will be given to students who have taken at least nine units of Genetics courses. (80026)

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)

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)

THE UBS GLOBAL ASSETS MANAGEMENT (CANADA) COMPANY AWARDS

Established in 1997 by Brinson Partners Inc. under the McMaster Student Opportunity Fund initiative. To be awarded to a student enrolled in any program who demonstrates one or all of the following: service to McMaster University or the community-at-large; superior leadership or innovative skills; outstanding athletic or artistic participation. (80036)

THE SAM WATSON MEMORIAL AWARD

Established in 1996 by his wife Irene M. Watson and friends of Samuel Watson. One or two awards to be granted to students enrolled in a program in Arts and Science who, in the judgment of the Arts and Science Program Admissions, Awards and Review Committee, have made a notable contribution in the community-at-large through participation in extra-curricular activities. (80002)

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)

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 program who, in the judgment of the Department of English and Cultural Studies, has made a notable contribution to campus and community life and demonstrates a lively interest in English studies. (80019)

THE 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. (80051)

THE ZOOM MEDIA AWARDS

Established in 1997 by Zoom Media Inc. in support of McMaster students. A variable number of awards to be granted to students enrolled in any program who, in the judgment of a selection committee, have demonstrated superior leadership and innovative skills through participation in either university and/or community activities. (80029)

UNDERGRADUATE ACADEMIC AWARDS

WEB ADDRESS: <http://sfas.mcmaster.ca>

EMAIL ADDRESS: awards@mcmaster.ca

Director, Student Financial Aid & Scholarships

Elizabeth Seymour

For information, please contact:

Office of Student Financial Aid & Scholarships
Gilmour Hall, Room 120
McMaster University
Hamilton, Ontario, L8S 4L8
Telephone: (905) 525-9140, ext. 24319

The University Senate, acting on behalf of generous benefactors and donors to the University, bestows academic awards on entering, in-course and graduating students to encourage and recognize high levels of scholarship.

In recognizing such scholastic achievement, the University requires all recipients of academic awards to fulfill a set of general conditions, in addition to meeting the particular terms attached to individual academic awards. The general conditions and terms have been established to ensure equity in competition and a high academic standing. Any interpretation of the conditions attaching to academic awards is solely the prerogative of the Undergraduate Council.

In accordance with the *Freedom of Information and Protection of Privacy Act* and McMaster University's *Statement on the Collection of Personal Information and the Protection of Privacy*, where notice is given, the University is permitted to publish an individual's name, Faculty, program and award information. McMaster University publishes the names of recipients of scholarships listed in the Undergraduate Calendar, in the University's Convocation program and other award publications. Further information can be found in the *General Academic Regulations* section of this Calendar.

TERMINOLOGY

An explanation of the terminology used to describe Academic Awards is provided in the sections of the Calendar described below. Please refer to the *Glossary* section of this Calendar for definitions of Continuing Students, Cumulative Average (CA), Level, Post-Degree Students, Review and Reviewing Period.

Baccalaureate Degrees are those listed in the Degrees and Programs section of this calendar, the abbreviations of which start with the letter B, such as B.A., B.Com.

Failures are determined by reviewing period, not by session. They include failures in Extra courses.

Full-time Student for academic purposes is an undergraduate student who is registered in at least 24 units in the Fall/Winter session, including Extra Courses.

Graduand Awards are granted to eligible students on the completion of their graduating session.

In-Course Awards are granted to eligible students, based on academic achievement in other than their graduating session.

Part-time Studies Awards are referred to under Category C. To be eligible for these awards, students must have been registered in at least 50% of all units attempted at McMaster, while fulfilling the University's definition of a part-time student as described in the *Glossary* section of this Calendar.

Reviewing Period for scholarship purposes, normally refers to work completed during the Fall/Winter session. Please refer to the *Glossary* section of this Calendar.

Session, for scholarship purposes, refers to the Fall/Winter session. The Fall/Winter session is the period from September to April as defined in the *Sessional Dates* section of this Calendar.

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

GENERAL CONDITIONS FOR ACADEMIC AWARDS

- The University Academic Awards listed below are provided exclusively for students entering, registered in, or graduating from baccalaureate degree programs at McMaster University. Continuing Students, Post-degree Students, and students registered in the McMaster Medical program are not eligible for these awards.
- 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:
 - travel scholarships and non-monetary awards such as books and medals; and
 - an award granted on the basis of an application; and
 - awards continued from a previous year (including entrance scholarships), except as provided by the particular terms of an award; and
 - either one (major) award greater than or equal to the value of a Senate Scholarship (\$800 in 2006-2007) and one (minor) award of less than the value of a Senate Scholarship; or two awards of less than the value of a Senate Scholarship; and
 - an academic grant.

When a student is named the winner of an award but may not receive it because of the conditions listed above, the next eligible student will be granted the award.
- 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.
- The monetary benefits of awards, other than those listed in 3. above will be disbursed only if the recipient is registered in a baccalaureate degree program, or a specific program when explicitly required by the terms of the award, at McMaster University in the next Fall/Winter session after the award was earned and will be credited to the student's University account.
- Amounts in excess of the student's monetary obligation to the University will be disbursed directly to the student in November or December.
- Awards credited to the student's University account are not refundable in cash if there is an outstanding balance.
- Students wishing to defer the benefits of an award to a later session (other than an award for entering students) should apply to the Office of Student Financial Aid & Scholarships. Approval of applications is not automatic, and deferments are not normally granted for more than one calendar year.
- Students holding four-year, full-fee scholarships who choose to accelerate their program and to complete their degree earlier than normal by completing Spring/Summer session courses and who wish to employ the benefits of their award to defray the academic fees for such courses should apply to the Office of Student Financial Aid & Scholarships. Approval of applications is not automatic.
- 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, and to suspend granting of an award or to adjust the stated value of an award in years in which insufficient investment income is available due to fluctuations in investment markets.
- Appeals on the basis of exceptional circumstances must be submitted in writing to the Office of Student Financial Aid & Scholarships. To submit an appeal, students must provide a covering letter outlining the situation and include relevant documentation which might include a letter of support from the Associate Dean/Director of the program and medical documentation if appropriate. The appeal must be submitted to the Undergraduate Council Awards Committee c/o the Awards Officer in Gilmour Hall, Room 120.
- The particular terms for University Academic Awards are listed in *AWARDS FOR ENTERING STUDENTS, AWARDS FOR IN-COURSE, GRADUAND, PART-TIME AND SECOND DEGREE STUDENTS* and *ACADEMIC GRANTS*.

CATEGORIES OF AWARDS

- Awards for Entering Students (page 364)
- Awards for In-Course, Graduand, Part-Time and Second Degree Students (page 365)
- Academic Grants for Full-Time, In-Course Students (page 385)

LISTING OF AWARDS AND ACADEMIC

GRANTS BY FACULTY (page 386)

To find awards offered to students in a specific Faculty or program

INDEX OF AWARDS, ACADEMIC GRANTS AND

COMMUNITY CONTRIBUTION AWARDS (page 394)

To find a specific award, use the Index of Awards.

CONDITIONS FOR AWARD CATEGORIES

Awards for Entering Students (A)

1. These awards are provided exclusively for those qualifying for admission as full-time students to Level I of a first baccalaureate degree in the Fall/Winter session.
2. A student who has registered at any post-secondary institution after graduation from secondary school will not be considered for an entrance award.
3. Canadian citizens and permanent residents are eligible for any entrance award regardless of where they complete their secondary school education.
4. Students completing their final year of secondary school in Canada are also eligible. International students studying outside Canada are not eligible for these entrance awards.
5. To be considered for an entrance award, students must obtain a minimum final average of 80% or equivalent in the secondary school credits required for University admission to their program of study and must apply for admission to the University not more than two years after completion of their secondary school studies.
6. Final admission average for entrance awards is calculated using the prerequisites for program of study plus the next best Grade 12 U or M courses to a total of six final grades.
7. Registration in, or transfer to, another program of study at any time may result in forfeiture, or adjustment in the value, of the award. Students are advised to consult with the Office of Student Financial Aid & Scholarships and their Faculty Advisors prior to making any changes to their program of study or course load.
8. Students who withdraw or drop below 24 units on or before December 31 will lose their entrance award.
9. Recipients of a renewable entrance award must complete a minimum of 24 units in the Fall/Winter session, obtain a Sessional Average of at least 9.5 with no failures, and register as a full-time student in the subsequent Fall/Winter session in order to retain the next installment of the award.
10. Co-op/Internship students are eligible to retain their entrance award provided they meet the minimum course load requirement for their program of study as defined in the Undergraduate Calendar; however funding will be deferred until they return to full-time study.
11. Once an entrance award is lost, it will not be reinstated.
12. In addition to meeting the General Conditions, entrance award recipients will 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 not automatic, and deferrals are not normally granted for more than one calendar year.

Awards for Full-Time, In-Course Students (B)

These awards are based on competition across the University or within a Faculty or program.

1. These awards, which are granted in June or November, are provided exclusively for first baccalaureate degree students registered full-time qualifying on the basis of work included at the May review (or deferred examinations resulting therefrom) in other than graduating session.
2. Students choosing to graduate at the subsequent Fall Convocation will retain the transcript notation and monetary value of any donor-funded awards (e.g. The Accenture Inc. Scholarship). Recipients of University awards (e.g. Dr. H. L. Hooker Scholarships) will retain the transcript notation but forfeit the monetary benefit of the awards.
3. Students choosing to withdraw after the May review will retain the transcript notation but forfeit the monetary benefit of all awards.
4. In addition to meeting the General Conditions, a student must remain registered as a full-time student during the Fall/Winter session immediately prior to the May review and obtain a Sessional Average of 9.5 and no failures.
5. For students who remain full-time in the Fall/Winter session, a Sessional Average will be computed, which is the weighted average of the grades in all courses taken during that session. The Sessional Average will be used to determine academic standing for the awards listed below, unless otherwise stated in the terms of a particular award.
6. The Sessional Average will be used to break any tie in the competition for awards which are based on another criterion.
7. Co-op/Internship students are eligible for full-time awards provided they meet the minimum course load requirement for their program of study as defined in the Calendar.

8. Students who participate in a formal exchange program are eligible for full-time, in-course awards on the basis of 15 units completed in one term at McMaster. In order to be considered, students should identify themselves to their Faculty by October 15 when they return to full-time study the following Fall/Winter session. Students on exchange for the full year may not be eligible.

Awards for Part-Time, In-Course Students (Part-Time Studies) (C)

The following awards are based on competition across the University or within a Faculty or program.

1. These awards, which are granted in November, are provided exclusively for part-time first baccalaureate degree students who have completed a minimum of 18 units and who qualify on the basis of work included at the most recent review in other than their graduating session.
2. In addition to meeting the General Conditions, a student must obtain, at the most recent review, a Cumulative Average of at least 8.0 and no failures.
3. The Cumulative Average will be used to break any tie in the competition for awards which are based on another criterion.

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 program.

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). Students must have completed a minimum of 18 units to be reviewed. Normally, these awards will be granted to In-Course students. A number of awards under this category are also listed under Category F for Second Degree Students.
2. In addition to meeting the General Conditions, a student must obtain, at the most recent review, a Cumulative Average of at least 8.0 and no failures.
3. The Cumulative Average will be used to break any tie in the competition for these awards which are based on another criterion.
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 program.

1. These awards, which are granted in May, are provided exclusively for graduating students qualifying on the basis of achievement in their first baccalaureate degree program.
2. In addition to meeting the General Conditions, a student must obtain:
 - a) Cumulative Average of at least 8.0;
 - b) no failures in the courses last taken equal to:
 - i) either the number of units specified in the Calendar for the final level of their program;
 - ii) or, if the Calendar does not specify the program work by individual levels, the final 24 units of work.

Awards for Second Baccalaureate Degree Students (F)

The following awards are granted based on competition across the University or within a Faculty or program.

1. These awards, which are granted in June or November, are provided for either full-time or part-time second baccalaureate degree students qualifying on the basis of achievement during the Spring/Summer or Fall/Winter sessions immediately preceding the May review (or deferred examinations resulting therefrom).
2. In addition to meeting the General Conditions, a student must obtain, at the most recent review, a Cumulative Average of at least 8.0 and no failures.
3. The Cumulative Average will be used to break any tie in the competition for these awards which are based on another criterion.
4. A number of awards in this category are also listed in Category D - Specific Achievement Awards, and are indicated by an asterisk after the award name.

Academic Grants for Full-Time Students (G)

The following awards are granted based on competition within a Faculty or program.

1. Academic Grants are provided exclusively for students registered full-time in a baccalaureate degree program at McMaster University.
2. Students must be taking 24 units or more.
3. The entrance grants will be awarded to students with high admission averages of 80% or greater, and who demonstrated financial need. The greater financial need will be used to break any tie.
4. The in-course grants will be awarded to students with high Sessional Averages of 9.5 or greater with no failures and demonstrated financial need. The greater financial need will be used to break any tie.
5. Entrance and in-course grants are awarded in November based on the previous Fall/Winter Sessional Average for students entering or continuing as full-time students and who have a complete OSAP file in the current Fall/Winter session.
6. A student may receive only one academic grant per Fall/Winter session and will remain eligible for bursaries and scholarships.

AWARDS FOR ENTERING STUDENTS

◆ The McMaster President's Awards

McMaster University will reward students with the highest academic standing in their final year of secondary school. Students must obtain a final admission average of 95% or higher to their program of study. No application is required.

Value: \$3,000 per year*

*The President's Award is renewable at the same value provided that students remain full-time (24 units or greater) and achieve a Sessional Average of 9.5 (approximately 80%) with no failures in each year of University study. Awards may be held until graduation or for four years, whichever is less.

◆ The McMaster Honour Awards

McMaster University will reward students with high academic standing in their final year of secondary school. Honour Awards are based on the final admission average to the program of study. No application is required.

- 90 - 94.99% \$2,000 per year*
- 85 - 89.99% \$1,000 per year*
- 80 - 84.99% \$750 per year*

*The Honour Awards are renewable at the same value provided that students remain full-time (24 units or greater) and achieve a Sessional Average of 9.5 (approximately 80%) with no failures in each year of University study. Awards may be held until graduation or for four years, whichever is less.

McMaster's Awards for Entering Students are supported by the following:

THE ASHBAUGH SCHOLARSHIPS

Established in 1989 by bequest of Frederick K. Ashbaugh of St. Petersburg, Florida, in memory of Mary Eliza Kingston. (20140)

THE A.H. ATKINSON EDUCATION FUND SCHOLARSHIP

Established in 2001 by the A.H. Atkinson Education Fund. To be awarded to a student entering the Faculty of Engineering. (20141)

THE CLASS OF 1952 GOLDEN ANNIVERSARY ENTRANCE AWARDS

Established in 2001 by the Class of 1952 in honour of its 50th reunion. A maximum number of four entrance scholarships to be awarded each year to students entering any Level I program. (20116)

THE CLASS OF 1956 50TH ANNIVERSARY ENTRANCE SCHOLARSHIPS

Established in 2006 by the Class of 1956 in honour of its 50th anniversary. Two scholarships to be awarded to students entering any Level I program. (20166)

THE COCA-COLA SCHOLARSHIPS

Established in 1998 by Coca-Cola Bottling Ltd. A variable number of scholarships to be awarded to students entering a full-time program of study. (20145)

THE HELEN M. CURREY SCHOLARSHIP

Established in 1941 by bequest of Helen Maud Currey of Drumbo, Ontario. To be awarded every four years. (20146)

THE DE VILLIERS - MAHAFFY MERIT AWARDS

Established in 1991 in memory of Nina De Villiers and Leslie Mahaffy of Burlington, by contributions from the local community and the employees of several area companies including Searle Canada, Boehringer Ingelheim, Smithkline Beecham, Monsanto and the Royal Bank. 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 program of study; and (b) one to a student entering full-time study in Science I or Music I. Preference will be given to women students. (20130)

THE DUNDAS SCHOLARSHIPS

Established in 1984 from funds donated anonymously. A variable number of scholarships to be awarded to students from Dundas and surrounding area entering a full-time program of study. (20147)

The recipient of this award is eligible to receive additional aid through the corresponding Supplementary Bursary Aid Fund if he/she demonstrates financial need. Please see the section on *Supplementary Bursary Aid for Award Recipients* in the *Student Financial Aid* section of this Calendar.

THE GEORGE AND NORA ELWIN SCHOLARSHIPS

Established in 1979 by bequest of George and Nora Elwin of Hamilton. (20148)

THE EILEEN GRAY FARLEY SCHOLARSHIP

Established in 1998 by Eileen Gray Farley (Class of '43 and winner of the D.E. Thomson Scholarship) in memory of Mr. D. E. Thomson who exemplified a generous spirit of giving throughout his life and established the D.E. Thomson Scholarship in 1909. A variable number of scholarships to be awarded to students entering the Faculty of Humanities. (20134)

THE FORTINOS SCHOLARSHIP

Established in 1990 by John Fortino. To be awarded to an outstanding full-time student entering the School of Business. (20137)

THE H.P. FRID SCHOLARSHIP

Established in 1982 by the family of H.P. Frid in her memory. To be awarded to a promising student entering a full-time program of study. (20136)

THE GENERAL MOTORS ENTRANCE SCHOLARSHIPS

Established in 1999 by General Motors of Canada Limited. A variable number to be awarded to female students entering the Faculty of Engineering. (20131)

THE JOHN HODGINS MEMORIAL SCHOLARSHIP

Established in 1985 by his wife, Jean, in memory of Dr. John W. Hodgins in recognition of his extraordinary contributions in founding the Faculty of Engineering which he served with distinction as the first Dean. To be awarded to an outstanding student entering the Faculty of Engineering. (20123)

THE NELLIE P. HOGG SCHOLARSHIP

Established in 1965 by bequest of Nellie P. Hogg of Hamilton. One scholarship to be awarded to a woman student entering a full-time program of study. (20150)

THE DR. HARRY LYMAN HOOKER ENTRANCE SCHOLARSHIPS

Established in 1981, and resulting from the bequest of Dr. H.L. Hooker. (20151)

THE CATHRYN E. KAAKE MERIT AWARD

Established in 1988 in memory of Cathryn E. Kaake (Class of '78) by family and friends. (20125)

THE RAYMOND C. LABARGE MERIT AWARDS

Established in 1990 in memory of Raymond C. Labarge (Class of '36) of Ottawa. (20127)

THE MARION LAING-KNOX ENTRANCE SCHOLARSHIP

Established in 2000 by bequest of Marion Laing-Knox. To be awarded to a student entering the Faculty of Humanities in a full-time program of study who presents an outstanding final admission average. (20126)

THE LLOYD MEMORIAL SCHOLARSHIP

Established in 1956 in memory of Henry Hoyes and Lizzie Lloyd by their children. Grade 12 U or M subjects to be included are: Physics, Chemistry, two credits of Mathematics, and either Biology or a third credit of Mathematics. (20152)

THE JOSEPHINE MAGEE SCHOLARSHIP

Established in 1959 by bequest of Josephine Magee of Hamilton. To be awarded on the basis of general proficiency in the subjects required for admission to students from any province or territory of Canada. (20153)

THE ALBERT MATTHEWS SCHOLARSHIP

Established in 1920. Grade 12 U or M subjects to be included are Latin and a language other than English. (20154)

THE HAROLD MATTHEWS MEMORIAL SCHOLARSHIP

Established in 1917. Grade 12 U or M subjects to be included are French and either German or Spanish. (20155)

THE ISABELLA CAMPBELL McNEE SCHOLARSHIP

Established in 1915 and augmented in 1926. Grade 12 U or M subjects to be included are three credits of Mathematics and Physics. (20156)

THE MOULTON COLLEGE ENTRANCE SCHOLARSHIP

Established in 1980 from funds originally subscribed by the Alumnae of Moulton College during the years 1946 to 1949. To be awarded to a woman student entering a full-time program of study. (20157)

THE ALVIN I. OGILVIE SCHOLARSHIPS

Established in 1984 by bequest of Alvin I. Ogilvie of Hamilton. Five scholarships to be awarded to students entering a full-time program of study. (20138)

THE LILLIAN AND LEROY PAGE SCHOLARSHIP

Established in 1982 by donation of the Lillian and Leroy Page Foundation for a student from the Hamilton area entering the Faculty of Science. (20129)

THE LESLIE A. PRINCE MERIT AWARDS

Established in 1979 in honour of Leslie A. Prince, Dean of Students, by his friends and colleagues upon the occasion of his retirement and in recognition of his outstanding contribution to the University community. Two to be awarded. (20128)

THE A.G. REILLY SCHOLARSHIPS

Established in 1991 by bequest of Lois E. Reilly of Toronto. A variable number of scholarships to be awarded to students entering a full-time program of study. (20158)

THE D.E. THOMSON SCHOLARSHIP

Established in 1909 and augmented in 1915. Grade 12 U or M subjects to be included are English and either Latin or French. (20159)

THE TYNOWSKI SCHOLARSHIP

Established in 1989 by the University, friends and colleagues of Olga Tynowski, for her outstanding contributions to McMaster University during 46 years of service. To be awarded to an outstanding student entering a full-time program of study. (20160)

THE WALLINGFORD HALL ENTRANCE SCHOLARSHIP

Established in 1993. To be awarded to a student entering a full-time program of study. (20135)

THE WHEELER SCHOLARSHIP

Established in 1915. Grade 12 U or M subjects to be included are: History, English and a language other than English. (20161)

◆ Music Awards

The Music awards are for one year.

THE JOAN FRANCES BOWLING ENTRANCE SCHOLARSHIPS

Established in 1997 from the estate of Marie Bowling in memory of her daughter, Joan Frances Bowling. Two scholarships to be awarded to students entering Music I, who in the judgment of the School of the Arts, have demonstrated excellence in classical music. Value: \$1,600 each (20059)

THE MERRILL FRANCIS GAGE ENTRANCE SCHOLARSHIP

Established in 1982 from the estate of Merrill Francis Gage of Hamilton. To be awarded to a keyboard student entering Music I who, in the judgment of the School of the Arts, has attained outstanding musical proficiency. Value: \$900 (20031)

THE FRANK THOROLFSON MEMORIAL SCHOLARSHIPS

Established in 1978 in memory of Professor Frank Thorolfson, first Chair of the Department of Music. Two scholarships to be awarded to students entering Music I who, in the judgment of the School of the Arts, have attained high scholastic achievement and musical proficiency. Value: \$1,000 each (20028)

◆ Other Awards

THE NORTEL NETWORKS ENTRANCE SCHOLARSHIPS

Established in 1999 by Nortel Networks. A variable number of scholarships to be awarded to students entering the Faculty of Engineering. Students must remain registered in the Faculty of Engineering to retain the second installment. Value: \$6,000 each (\$3,000/yr) (20120)

THE ONTARIO PROFESSIONAL ENGINEERS FOUNDATION FOR EDUCATION ENTRANCE SCHOLARSHIP

Established in 1961 by the Ontario Professional Engineers Foundation for Education. Two scholarships to be awarded, one to a female student and one to a male student, entering the Faculty of Engineering. Value: \$1,000 each (20027)

THE DOMINIC ROSART SCHOLARSHIP

Established in 2002 by Mrs. Patsy Rosart in loving memory of her husband Dominic Rosart. To be awarded to the student entering Level I of a full-time program of study in the Faculty of Health Sciences who has the highest final admission average and is eligible for OSAP or an equivalent provincial student assistance program. Award is tenable for up to four years provided the recipient maintains a Sessional Average of 9.5. Value: \$20,000 (\$5,000 per year) (20132)

THE TRANSPORTATION ASSOCIATION OF CANADA FOUNDATION SCHOLARSHIP

Established in 2006. To be awarded to an outstanding full-time student entering the Faculty of Engineering. Value: \$1,000 (20192)

◆ Awards Open to International Students

INTERNATIONAL AWARDS

The following awards are provided exclusively for international students qualifying for admission to Level I of a first baccalaureate degree program.

THE McMASTER CHINESE ALUMNI (TORONTO CHAPTER) INTERNATIONAL ENTRANCE SCHOLARSHIPS

Established in 1999 by Chinese Alumni (Toronto Chapter) of McMaster University. A variable number to be awarded to visa students entering Level I of any program.

Value: \$1,000 (20191)

THE McMASTER-HONG KONG FOUNDATION ENTRANCE SCHOLARSHIPS

Established in 2006 by the McMaster University-Hong Kong Foundation Ltd. To be awarded to a student entering Level I of any program who is a permanent resident of Hong Kong and who, in the judgment of a selection committee, has demonstrated outstanding academic performance and potential for future leadership.

Value: \$5,000 annually for four years. (20189)

An application is required no later than April 1. Applications are available on-line at <http://sfas.mcmaster.ca/>

NG MAN-CHUNG MEMORIAL SCHOLARSHIPS FOR INTERNATIONAL STUDENTS

Established in 2000 by Joe Ng Engineering Limited in memory of Joe Ng's father Ng Man-Chung. A variable number to be awarded to visa students entering Level I in Engineering.

Value: \$2,000 (20188)

THE WOO FAMILY INTERNATIONAL ENTRANCE SCHOLARSHIPS

Established in 1999 by Mr. Chung How Woo in honour of his late wife, Mrs. Ching Yung Chiu-Woo, mother and mother-in-law of four McMaster graduates. A variable number to be awarded to visa students entering Level I of any program.

Value: \$2,000 (20190)

AWARDS FOR IN-COURSE, GRADUAND, PART-TIME AND SECOND DEGREE STUDENTS

No application is required for any award unless noted in the listing of *Undergraduate Awards and Academic Grants by Faculty*.

An award name ending with an * indicates that the award is open to both full-time and part-time second baccalaureate degree students.

THE ACCENTURE INC. SCHOLARSHIP

Established in 1998 by Andersen Consulting. To be awarded to a student entering the final year of study in Engineering, Science or Commerce who, in the judgment of a Selection Committee, demonstrates a strong interest in Management Information Systems and qualities of leadership through service to McMaster University and/or the community in athletic, professional or social organizations.

Value: \$850 (30248)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE ACHIEVEMENT AWARDS OF EXCELLENCE

Established in 1998. A variable number of scholarships to be awarded to students who, in the judgment of the Centre for Student Development, give evidence of outstanding academic achievement.

Value: \$800 (40085)

Students who wish to be considered for this award must be registered with the Centre for Student Development, Disability Services. The application cover page can be downloaded from the Office of Student Financial Aid & Scholarships web site at <http://sfas.mcmaster.ca/downloadcentral.html>. Completed applications should be submitted to the Office of Student Financial Aid & Scholarships by April 15th.

THE ACI (ONTARIO CHAPTER) SCHOLARSHIP

Established in 1992 by the American Concrete Institute (Ontario Chapter). To be awarded to a student entering Level IV of the Civil Engineering program who, in the judgment of the Department of Civil Engineering, has demonstrated outstanding academic achievement and knowledge of concrete technology.

Value: \$300 (30215)

THE AIR LIQUIDE CANADA INC. SCHOLARSHIPS

Established in 1999 by Air Liquide Canada. One scholarship to be awarded to a student in a Level II or III program in Chemical Engineering, Materials Science and Engineering and/or Mechanical Engineering who, in the judgment of the Faculty of Engineering, has demonstrated outstanding academic achievement. The recipient must attain a minimum Sessional Average of 9.5 at the most recent Fall/Winter session.

Value: \$1,500 (30258)

THE HENRIETTA ALDERSON SCHOLARSHIP

Established in 2002 in memory of Henrietta Jane Alderson. Two scholarships to be awarded to students in the B.Sc.N. program who are entering Level II (A Stream) or Level IV (B and C Streams) and, in the judgment of the School of Nursing, have demonstrated exceptional achievement in required science courses.

Value: \$3,150 each (30287)

THE A.G. ALEXANDER SCHOLARSHIPS

Established in 1938 and augmented in 1946 by Sir Douglas Alexander, and members of his family, in memory of Archibald Grieg Alexander. A variable number of scholarships to be awarded to students who have completed Level I and an additional 30 - 75 units on the basis of excellence in an Honours program in the Faculty of Humanities. The purpose of the scholarships is to enable the recipients to study outside Canada during the twelve months prior to the final Fall/Winter session.

Value: \$5,500 each (30174)

Travel Scholarship applications are due February 15th.

THE W.K. ALLAN MEMORIAL SCHOLARSHIP

Established in 1994 in memory of William Kellock Allan (Class of '31) by his wife, Yvonne and augmented in 2002 by his family. To be awarded to a student entering the final level of a program in Mathematics or Physics who attains the highest Sessional Average.

Value: \$1,100 (30221)

THE CAMERON D. ALLEN BOOK PRIZE

Established in 1978 in memory of Cameron D. Allen. To be awarded to a student in an Honours program in the School of Geography and Earth Sciences who, in the judgment of the School of Geography and Earth Sciences, shows outstanding achievement in studies in a fourth year climatology course. Preference will be given to a graduating student.

Value: \$150 for books (40115)

THE ALUMNI ASSOCIATION SCHOLARSHIP

Established in 1974 by the McMaster University Alumni Association and later augmented by bequest of Harold E. Amy. One scholarship to be awarded to a part-time student who has attained the highest Cumulative Average at the most recent review.

Value: \$375 (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: \$300 (40001)

THE AMBASSADOR OF SPAIN BOOK PRIZE

Established in 1982. To be awarded to a graduating student in a program in the Department of Linguistics and Languages who, in the judgment of the Department, has achieved notable proficiency in Spanish.

Value: Book (50002)

THE E.H. AMBROSE GOLD MEDAL

Established in 1971 by Clarkson Gordon in memory of their former Hamilton partner, E.H. Ambrose, member of the University's Board of Governors from 1957 to 1967 and its Chair, 1965 to 1967, and augmented by Mrs. E.H. Ambrose in 1987. To be awarded to the student in the graduating class of a program in Commerce who, on the basis of scholarship and leadership, is judged to be the outstanding member of the class. (50014)

THE ANATOMY PRIZE

Established in 1992. To be awarded every other year to a student who has completed Level III (or equivalent), has studied biological structure and who, in the judgment of the Education Program in Anatomy, has demonstrated excellence in Anatomy.

Value: \$1,000 and a medal (40088)

THE ANTHROPOLOGY PRIZE

Established in 1982. To be awarded to the graduating student who has completed a program in Anthropology primarily on a part-time basis and who, in the judgment of the Department of Anthropology, has demonstrated outstanding academic achievement.

Value: \$100 (50004)

Students who wish to be considered for this award are encouraged to submit a resume to the Department of Anthropology by April 15th.

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 Earth Sciences, has achieved notable academic standing and who has made a significant contribution to university life through extra-curricular activities.

Value: \$75 for books (30234)

THE ARTS AND SCIENCE EXPERIENTIAL LEARNING TRAVEL SCHOLARSHIP

Established in 2002 by Arts and Science alumni. To be awarded to a student who has completed at least Level II of the Honours Arts and Science Program, is currently registered in an Arts and Science Experiential Learning course, and who, in the judgment of the Arts and Science Program, has achieved notable academic standing.

Value: \$1,000 (30290)

Travel Scholarship applications are due February 15th.

THE ARTS AND SCIENCE PROGRAM BOOK AWARD

Established in 1995. To be awarded from time to time to an Arts and Science student who, in the judgment of the Arts and Science Program Awards Committee, has demonstrated outstanding academic achievement in both arts and science.

Value: \$75 (40078)

THE EDGAR R. ASHALL SCHOLARSHIP

Established in 1965 by bequest of his wife, Edith M. Ashall.

Value: \$200 for books (30162)

THE A.H. ATKINSON PRIZE

Established in 1980 by Atkinson Engineering Consultants Limited. To be awarded to the student in a Civil Engineering program who achieves the highest average in CIV ENG 3G03 and 3J04, taken in one session.

Value: \$200 (30001)

THE ATOMIC ENERGY OF CANADA LIMITED SCHOLARSHIPS

Established in 2001 by Atomic Energy of Canada Limited (AECL). Four scholarships to be awarded to students who have completed Level I in the Faculty of Engineering and who, in the judgment of the Faculty of Engineering, have demonstrated outstanding academic achievement and qualities of leadership at McMaster or in the community.

Value: \$2,500 each (30276)

THE AUDCOMP COMPUTER SYSTEMS SCHOLARSHIPS

Established in 2005 by Audcomp computer Systems to support the dreams and aspirations of students attending university. To be awarded to a student who has completed Level II or above and who has attained the highest Sessional Average.

Value: \$2,000 each (30308)

Note: Faculties and programs will vary. This year the award will go to a student registered with the Department of Electrical and Computer Engineering.

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 program who attains the highest grade in ENGLISH 2I06 (Modern British Literature).

Value: \$425 (40105)

THE LAURA BALDWIN SCHOLARSHIP

Established in 2005 from the bequest of Laura Baldwin. To be awarded to a student registered in a program in English who, in the judgment of the Department of English and Cultural Studies, has submitted an original literary work or poem that demonstrates the highest degree of literary excellence.

Value: \$500 (30313)

THE CHARLES MURRAY BALL SCHOLARSHIPS IN EARTH SCIENCES

Established in 1991 by May A. Ball in memory of her brother Murray Ball. Four scholarships to be awarded to students entering Level II, III, IV or V of a B.Sc. program in the School of Geography and Earth Sciences who, in the judgment of the School of Geography and Earth Sciences, have attained notable standing. Ordinarily, not more than one scholarship will be awarded to any one program.

Value: \$2,300 each (30182)

THE BANK OF MONTREAL HUMANITIES MULTIMEDIA SCHOLARSHIPS

Established in 1999 by the Bank of Montreal. A variable number of scholarships to be awarded to students entering Level II, III or IV of the Humanities Combined Honours Multimedia program who, in the judgment of the Department of Communication Studies and Multimedia, demonstrate outstanding academic achievement in the Humanities Multimedia program or great promise in the area of Humanities multimedia.

Value: \$1,000 each (30259)

THE J. DOUGLAS BANKIER MEMORIAL SCHOLARSHIP

Established in 1977 in memory of Professor J. Douglas Bankier by his friends, colleagues, and former students. To be awarded to the student who has completed Level I and at least 60 units of an Honours program in the Department of Mathematics and Statistics, who attains the highest Sessional Average and who in that session achieves a grade of at least B in STATS 3D03 and 3DD3.

Value: \$375 (30076)

THE WILLIAM AND LIDA BARNES MEMORIAL PRIZE IN HISTORY

Established in 1969 by their son, William D. Barnes, of Morgantown, West Virginia. To be awarded to the graduand who, in the judgment of the Department of History, has attained notable standing in an Honours History program.

Value: \$150 (50050)

THE SCOTT BARTLETT MEMORIAL PRIZE

Established in 1985 in memory of Scott N. Bartlett by his family and friends. To be awarded to a student who has completed Level I and an additional 60 - 75 units of the Honours Commerce Program and who, in the judgment of the Faculty of Business, has achieved high standing in COMMERCE 3FA3 and 3FB3, taken in one session.

Value: \$200 (30134)

THE BASU MEDAL

Established in 1984 in memory of Professor Sanjoy Basu by friends, colleagues and accounting organizations. To be awarded to the graduating student who, in the judgment of the School of Business, has displayed outstanding achievement in accounting and has attained an average of at least 10.0 in any four of COMMERCE 4AA3, 4AC3, 4AD3, 4AE3, 4AF3.

Value: \$1,000 and a medal (50006)

THE M. BANKER BATES SCHOLARSHIP

Established in 1975 by Dr. M. Banker Bates and augmented in 1978 in his memory by his family, friends and colleagues. To be awarded to the student who has completed Level I and an additional 60 - 75 units of a program in Commerce and who attains the highest Sessional Average.

Value: \$1,400 (30102)

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 program in History who, in the judgment of the Department of History, has displayed outstanding achievement in Canadian history courses consistently throughout the degree program.

Value: \$85 for books (50034)

THE BATES RESIDENCE SCHOLARSHIP

Awarded to the student who resides in the residence with the highest Sessional Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session.

Value: \$750 (30155)

THE BARBARA AND RONALD BAYNE GERONTOLOGY INTERNSHIP AWARD*

Established in 2001 by Barbara and Ronald Bayne to provide practical learning experience for Gerontology students. To be awarded to a student who has completed at least Level II in a program in Gerontology and who, in the judgment of the Department of Health, Aging and Society, has indicated a clear internship plan and demonstrated notable academic achievement and qualities of leadership at McMaster or in the community.

Value: \$450 (40106)

Note: Application required (500 word essay outlining internship plans). To be submitted to the Chair of the Department of Health, Aging and Society by October 15th.

THE BEALE-LINCOLN-HALL TRAVEL SCHOLARSHIP

Established in 1996 by Arnold A. Beale in memory of his parents F. Arnold Beale and Margaret S. Beale and Mr. and Mrs. Walter Gould Lincoln and Commander Harley H. Hall, U.S.N. To be awarded to students who demonstrate high academic standing and are participating in one of McMaster's formal exchange programs. Preference will be given to students enrolled in a program in Biochemistry, Biology, Chemistry, Commerce, Cultural Studies and Critical Theory, Earth and Environmental Sciences, Engineering Physics, English, French, Geography, History, Materials Science, Mathematics, Modern Languages, Physics or Religious Studies and who demonstrate a lively interest in the humanities and the human and social implications of scientific developments.

Value: \$2,200 (30236)

Travel Scholarship applications are due February 15th.

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 Sessional Average and who is entering Level II of the Honours Biochemistry, or Honours Chemistry program.

Value: \$350 (30008)

THE BENTALL SCHOLARSHIPS

Established in 2001 by Dr. C. Howard Bentall (Class of '37) and Dr. Shirley F. Bentall (Class of '46). A variable number of scholarships to be awarded to students in any Faculty who demonstrate outstanding academic achievement.

Value: \$1,500 each (30281)

THE LOUISE E. BETTGER SCHOLARSHIPS IN MUSIC

Established in 1982 in memory of Louise E. Bettger of New Hamburg, Ontario, by her nieces and nephews. Three scholarships to be awarded to students in an Honours program in Music who, in the judgment of the School of the Arts, are outstanding: (a) one in the area of choral or vocal music to a student who has completed Music I or an additional 30 - 75 units; (b) one to a keyboard student who has completed Level I and an additional 30 - 75 units; and (c) one to a student who has completed Music I and who has demonstrated overall musical excellence.

Value: \$450 each (30097)

THE J.P. BICKELL FOUNDATION MINING SCHOLARSHIP

Established in 2002 by the J.P. Bickell Foundation. A variable number of scholarships to be awarded to students who, in the judgment of the School of Geography and Earth Sciences, demonstrate an interest in the field of mining, and have completed Level II of an Honours Earth and Environmental Sciences, Honours Geoscience or B.Sc. Geoscience program.

Value: \$2,000 minimum (30291)

THE BINKLEY MEDAL

Established in 2000 by the University, friends and colleagues of Margaret Bel c (nee Binkley) on the occasion of her retirement and for her outstanding contributions to McMaster University during her 43 years of service. To be awarded to a student graduating from an Honours program in Computer Science who has completed the program primarily on a part-time basis and who attains the highest Cumulative Average.

Value: \$350 and a medal (50085)

THE BIOLOGY ACHIEVEMENT AWARD

Established in 2004 by the Department of Biology. A variable number to be awarded to students registered in Science I who, in the judgment of the Department of Biology, have achieved the highest standing in BIOL-OGY 1A03 or the highest standing in BIOLOGY 1AA3.

Value: Book (40113)

THE ABE BLACK MEMORIAL PRIZE

Established in 1982 by friends and colleagues of Dr. A.H. Black in memory of a distinguished member of the Department of Psychology, Neuroscience and Behaviour from 1958 to 1978. To be awarded to the student who, in the judgment of the Department of Psychology, Neuroscience and Behaviour, has demonstrated outstanding achievement in PSYCH 4D06 (Honours Thesis).

Value: \$600 (40076)

THE ABE BLACK MEMORIAL PRIZES*

Established in 1982 by friends and colleagues of Dr. A.H. Black in memory of a distinguished member of the Department of Psychology, Neuroscience and Behaviour from 1958 to 1978. Three prizes to be awarded: (a) one to the student who attains the highest Cumulative Average in an Honours B.A. program in Psychology; (b) one to the student who attains the highest Cumulative Average in the Honours B.Sc. program in Psychology; (c) one to the student who attains the highest Cumulative Average in the Honours Biology and Psychology (Life Science) program.

Value: \$200 each (50000)

THE LEONE BETTY BLACKWELL MEMORIAL BOOK PRIZE

Established in 1999 by Dr. Bonnie Blackwell in memory of her mother, Leone Betty Blackwell. To be awarded to a graduating student with the highest grade in GEO 3P03.

Value: \$85 for books (50096)

THE BRIAN BLAKEY MEMORIAL SCHOLARSHIP

Established in 1979 in memory of Dr. Brian Blakey, Professor of French, by his friends, colleagues and former students, on behalf of his wife, Dorothy. To be awarded to the student who attains the highest Sessional Average on completion of Level I and an additional 60 - 75 units of an Honours program in Classics, Cultural Studies and Critical Theory, Theatre & Film Studies, English, French or Linguistics and Languages. Students in all programs except Theatre & Film Studies must have achieved a B- in both LINGUIST 1A03 and 1AA3.

Value: \$500 (30013)

THE HILDA DOROTHY BORMAN SCHOLARSHIP

Established in 1998 by bequest of Hilda Dorothy Borman. To be awarded to a student studying piano who, in the judgment of the School of the Arts, has attained high academic standing.

Value: \$1,050 (30245)

THE JOAN FRANCES BOWLING SCHOLARSHIPS

Established in 1997 from the estate of Marie Bowling in memory of her daughter, Joan Frances Bowling. Two scholarships to be awarded to outstanding classical music scholars registered in Level II and above of a Music program and who, in the judgment of the School of the Arts, have demonstrated excellence in Music.

Value: \$1500 each (30235)

THE BRIEN SCHOLARSHIP IN PHILOSOPHY

Established in 1944 by Dr. J.W. Brien of Windsor. To be awarded to the student who has completed Level I and an additional 30 - 45 units of an Honours program in Philosophy and who, in the judgment of the Department of Philosophy, shows the most academic promise.

Value: \$475 (30014)

THE JOSEPHINE STAPLES BRIEN SCHOLARSHIP

Established in 1936 by Dr. J.W. Brien of Windsor. To be awarded to a woman student who is entering her graduating session and who qualifies on the basis of academic standing and interest in undergraduate activities.

Value: \$350 for books (30091)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE DR. AND MRS. F.R. BRITTON SCHOLARSHIP IN MATHEMATICS

Established in 1962 by Dr. and Mrs. F.R. Britton and augmented by Mrs. Britton's bequest in 1982. To be awarded to the student who has completed Level I and an additional 29 - 45 units of an Honours program in Mathematical Sciences who attains the highest Sessional Average. Tenable in Levels III and IV provided that the recipient maintains satisfactory standing in an Honours program in which mathematics, pure or applied, is the major subject of study.

Value: \$1,200 (\$600 each year) (30051)

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 an additional 30 - 75 units of an Honours Program in Philosophy who, in the judgment of the Department of Philosophy, has demonstrated outstanding academic achievement.

Value: \$1,000 (30195)

THE BURKE MEMORIAL RING

Presented by science graduates of the University in memory of Dean C.E. Burke. To be awarded to a graduate of a B.Sc. program who is named to the Deans' Honour List and who has made the most outstanding contribution to undergraduate activities. (50007)

THE 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 program who, in the judgment of the Department of Computing and Software, has achieved notable academic standing and demonstrated qualities of leadership at McMaster or in the community.

Value: \$3,400 (30282)

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 2D03.

Value: \$1,700 each (30211)

THE BETTY TAYLOR CAMPBELL SCHOLARSHIP

Established in 1998 by William F. Campbell of Ottawa, Ontario in memory of his wife Betty Taylor Campbell, a 1937 McMaster graduate, an Olympic medalist in 1936 and 1990 inductee into the Athletics Hall of Fame. To be awarded to a student who has completed Level I in a program in Kinesiology and who, in the judgment of the Department of Kinesiology, demonstrates academic excellence and outstanding athletic ability. The award is renewable for up to three years provided the recipient maintains a Cumulative Average of 8.0.

Value: \$4,500 (\$1,500 each year) (30246)

Students who wish to be considered for this award are encouraged to submit a resume to the Department of Kinesiology by April 15th.

The recipient of this award is eligible to receive additional aid through the corresponding Supplementary Bursary Aid Fund if he/she demonstrates financial need. Please see the section on *Supplementary Bursary Aid for Award Recipients* in the *Student Financial Aid* section of this Calendar.

THE ELLA HALSTEAD CAMPBELL PRIZE

Established in 1978 by Mrs. 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 (30048)

THE CANADIAN FEDERATION OF UNIVERSITY WOMEN (HAMILTON) MEMORIAL PRIZE

Established in 1992 by current and past members of the Canadian Federation of University Women (Hamilton), formerly known as the University Women's Club of Hamilton. To be awarded to the graduating student from a program in Women's Studies who, in the judgment of the Committee of Instruction for Women's Studies, has demonstrated outstanding academic achievement in the Women's Studies component of the program.

Value: \$175 (50062)

THE CANADIAN FEDERATION OF UNIVERSITY WOMEN (HAMILTON) PAST PRESIDENT'S PRIZE

Established in 1976 by the Past Presidents of the University Women's Club of Hamilton which became the CFUW (Hamilton) on the occasion of the Club's 50th anniversary. To be awarded to the woman student who has completed Level I and an additional 60 - 85 units of a program in Engineering with the highest Cumulative Average.

Value: \$300 (30149)

THE CANADIAN FEDERATION OF UNIVERSITY WOMEN (HAMILTON) RUBY BROWN BOOK PRIZE

Established in 1970 by bequest of Mrs. Edgar Brown. To be awarded to a student in any Level I program for the most creative essay in a Level I English course.

Value: \$200 (40046)

THE CANADIAN FEDERATION OF UNIVERSITY WOMEN (HAMILTON) SCHOLARSHIP

Established in 1945 by the University Women's Club of Hamilton, now the Canadian Federation of University Women. To be awarded to the woman student who attains the highest Sessional Average in the penultimate level of any program.

Value: \$1,500 (30150)

THE CANADIAN INSTITUTE OF INTERNATIONAL AFFAIRS PRIZE*

Established in 1994 by the Canadian Institute of International Affairs (Hamilton Branch). To be awarded to a student who has completed Level I and at least an additional 30 units of a program in Political Science who, in the judgment of the Department of Political Science, has achieved notable standing in at least six units of International Politics courses including an outstanding essay dealing with a topic related to the field of International Politics.

Value: \$300 (40071)

THE CANADIAN INSTITUTE OF STEEL CONSTRUCTION (CISC) AWARD

Established in 2005 by The Canadian Institute of Steel Construction (CISC). To be awarded to a student who attains high standing in CIV ENG 3S03 and who, in the judgment of the Department of Civil Engineering, has an interest in steel structure research.

Value: \$2,000 (40116)

THE CANADIAN SOCIETY FOR CHEMICAL ENGINEERING PRIZE

Established in 1947 by the Chemical Institute of Canada. To be awarded to the student who is entering his/her final year of study of a program in Chemical Engineering and who attained the highest Sessional Average.

Value: \$50, medal and certificate (30016)

THE CANADIAN SOCIETY FOR CHEMICAL ENGINEERING (CSCHE) SCHOLARSHIP

Established in 2004 by the organizing committee of the 2003 CSCHE Annual Meeting. To be awarded to a student entering Level II of a program in the Department of Chemical Engineering who has attained the highest academic standing in Level I.

Value: \$500 (30307)

THE CANADIAN SOCIETY FOR CHEMISTRY PRIZES

Established in 1947 by the Chemical Institute of Canada. Two awards to be made to students who are entering their final year of study: (a) one to a student in an Honours program in Chemistry or Honours Applied Chemistry who attained high standing in Chemistry; (b) one to a student in the Honours Biochemistry or Honours Biochemistry and Chemistry programs who attained high standing in biochemistry and organic chemistry.

Value: Medal and certificate (30017)

**THE CANADIAN SOCIETY OF CIVIL ENGINEERS
(HAMILTON SECTION) PRIZE**

Established in 1987. To be awarded to a student entering the final level of a program in Civil Engineering who, in the judgment of the Department of Civil Engineering and Engineering Mechanics, has demonstrated participation in extracurricular activities and has attained high academic standing.
Value: Plaque (30018)

THE EZIO CAPPADOCIA MEDAL

Established in 1986 by Professor E. Cappadocia on the occasion of his retirement from the Department of History. To be awarded to a student graduating from an Honours program in History who, in the judgment of the Department of History, has displayed outstanding achievement and has contributed to the Department's activities.
Value: Medal (50018)

THE NANCY CAR MEMORIAL SCHOLARSHIP IN KINESIOLOGY

Established in 2001 in loving memory of Kinesiology student Nancy Car. To be awarded to a student entering Level IV of Kinesiology who, in the judgment of the Faculty of Social Sciences, has attained notable academic standing and demonstrated leadership at McMaster University or in the community.
Value: \$400 (30277)

Students who wish to be considered for this award are encouraged to submit a resume to the Department of Kinesiology by April 15th.

THE GRACE DOROTHY AND WILLIAM P. CARPENTER AWARD

Established in 2001 by the Hamilton Community Foundation. To be awarded to a student entering Level II in Mechanical Engineering who, in the judgment of the Department of Mechanical Engineering, demonstrates outstanding academic achievement. Preference will be given to a student who has graduated from a publicly funded secondary school in the Hamilton or Burlington area.
Value: \$1,500 (30284)

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 and 2RR3 (United States History).
Value: \$425 (40025)

THE NORMAN N. CASKEY MEMORIAL PRIZE

Established in 1983 by Mrs. Verna Caskey and Miss June Caskey in memory of husband and father. To be awarded to a student who has completed Music I or Level I and an additional 30 - 75 units of an Honours program in Music and who, in the judgment of the School of the Arts, has demonstrated musical excellence.
Value: \$150 (30115)

THE CGA ONT. AWARD FOR EXCELLENCE

Established in 1982 by the Certified General Accountants Association of Ontario. To be awarded to the graduating student who, in the judgment of the School of Business, has displayed outstanding achievement in accounting and has attained an average of at least 10.0 in COMMERCE 2AB3, 3AB3, 3AC3 and 4AA3.
Value: \$150 (50012)

**THE MARIA CHAN SCHOLARSHIPS FOR
INTERNATIONAL STUDIES IN BUSINESS**

Established in 1999 by Professor Luke Chan and his family in support of students in the School of Business who wish to pursue academic studies abroad. A variable number of scholarships to be awarded to students participating in one of McMaster's formal exchange programs who, in the judgment of the Faculty of Business, demonstrate notable academic achievement.
Value: \$1,000 each (30283)

THE CHANCELLOR'S GOLD MEDAL

Established in 1938. To be awarded to the student who has completed the penultimate year of any four or five-level program at the most recent spring review, and who ranks highest in scholarship, leadership and influence.
Value: Medal (30022)

**THE CHEMICAL INSTITUTE OF CANADA
(HAMILTON SECTION) PRIZES**

Established in 1947 by the Hamilton Section. Two prizes to be awarded to students who have completed Level I and an additional 29 - 36 units: (a) one to a student in an Honours program in Chemistry who, in the judgment of the Department, shows particular promise in Chemistry; and (b) one to a student in a program in Chemical Engineering who, in the judgment of the Department, shows particular promise in Chemical Engineering.
Value: \$150 each (30023)

THE CIM INTERNATIONAL OUTREACH TRAVEL AWARD

Established in 2006 by Michael P. Smith and CIM Limited. To be awarded to a student in the Bachelor of Health Sciences (Honours) program who will be taking HTH SCI 3H03 in the following summer or in the following Fall/Winter session, and who will be travelling and working in underdeveloped, disadvantaged areas outside of Canada. The student must demonstrate contributions to the betterment of life through special initiatives.
Value: \$1,000 (30316)

Travel Scholarship applications are due February 15th. A 500-word essay on the value of the experience in meeting the stated personal learning goals established by the student is required. Students should build into their learning goals a presentation to an external group after the travel is completed.

THE CITIZEN ACTION GROUP PRIZE *

Established in 1984 by the Citizen Action Group, Hamilton, to honour Professor Harry L. Penny, founding Director of the School of Social Work and Board Member of Citizen Action Group. To be awarded to the student in a program in Social Work who submits an essay or report based on the student's field work experience that best addresses the need for innovative or non-traditional social work practice.
Value: \$500 (40006)

**THE CITY OF HAMILTON ECONOMIC DEVELOPMENT
DEPARTMENT SCHOLARSHIPS**

Established in 1976. (a) Two scholarships to be awarded on the basis of Sessional Average to students entering Level II of a Commerce program; (b) Four scholarships to be awarded on the basis of Sessional Average: two to students who have completed Level I and an additional 30 - 45 units, and two to students who have completed Level I and an additional 60 - 75 units of a program in Commerce. Recipients must have obtained all their secondary school education in the Hamilton-Wentworth Region.
Value: \$775 each (six awards) (30064)

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 an additional 60 - 75 units of an Honours program in Social Sciences and attains the highest Sessional Average.
Value: \$1,950 (30068)

THE CLASS OF '37 TRAVEL SCHOLARSHIP IN ARTS AND SCIENCE

Established in 1989 by the Graduating Class of 1937 in celebration of their 50th anniversary and augmented by friends of the Arts and Science Program. To be awarded to a student who has completed Level I and an additional 30 - 72 units of an Honours program in the Arts and Science Program. Applicants should have demonstrated a lively interest in developing countries. The purpose of this award is to enable the winner to spend the summer, immediately following its receipt, working and/or studying in a developing country.
Value: \$1,300 (30175)

Travel Scholarship applications are due February 15th.

THE CLASS OF '43 GOLDEN ANNIVERSARY SCHOLARSHIP

Established by the Class of '43 in celebration of their 50th anniversary. To be awarded to the student who has completed Level I and at least an additional 60 units of an Honours program in Theatre & Film Studies who, in the judgment of the School of the Arts, has achieved notable academic standing and has made a significant contribution to theatre on campus.
Value: \$950 (30214)

THE CLASS OF '44 SCHOLARSHIP

Established by the Class of '44 in celebration of their 50th anniversary. To be awarded to the student entering the penultimate year of any program who has attained the highest Sessional Average.
Value: \$1,500 (30224)

THE CLASS OF '50 SCHOLARSHIP IN HONOURS ECONOMICS

Established in 1982 by members of the Class of 1950 who graduated in Honours Economics. To be awarded to the student who has completed at least Level II of an Honours program in Economics, and who, in the judgment of the Department of Economics, has attained a high Sessional Average and has demonstrated leadership in undergraduate extracurricular activities.
Value: \$700 (30027)

Students who wish to be considered for this award are encouraged to submit a resume to the Department of Economics by April 15th.

THE CLASS OF 1953 50TH ANNIVERSARY SCHOLARSHIP

Established by the Class of 1953 in honour of its 50th reunion. A variable number of scholarships to be awarded to students in Level II and above in a program in Arts and Science who, in the judgment of the Arts and Science Program, have attained high academic standing and demonstrated community involvement.

Value: \$1,500 (30264)

THE CLASS OF '92 SCIENCE LEGACY AWARD

Established by the 1992 graduating class of the Faculty of Science. To be awarded to a graduating full-time student who, in the judgment of the Faculty of Science, has demonstrated notable academic achievement; contributed to the program, and participated in extra-curricular activities during his/her time at McMaster.

Value: \$1,000 (50091)

THE CLASSICS PRIZE

Established in 1978 by Professor D.M. Shepherd. To be awarded to the student who has completed Level I and an additional 30 - 45 units of an Honours program in Classics and who, in the judgment of the Department of Classics, shows most promise.

Value: \$100 (30028)

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 graduand who, in the judgment of the Department of Materials Science and Engineering, has demonstrated outstanding achievement in independent research as exemplified by the senior thesis in MATLS 4K04.

Value: \$275 (50013)

THE COMPARATIVE LITERATURE PRIZE *

Established in 1988. To be awarded to a student in an Honours program in Comparative Literature who, in the judgment of the Comparative Literature Program, has achieved notable standing in Level II.

Value: \$250 (40008)

THE CONSUL GENERAL OF ITALY BOOK PRIZE IN ITALIAN *

Established in 2003 by the Istituto Italiano di Cultura as Cultural Section of the Consulate General of Italy. To be awarded to a student in an honours program in the Department of Linguistics and Languages who attains the highest grade in a Level I course in Italian.

Value: \$150 for books (40110)

THE ELIZABETH PETRA COOKE MEMORIAL SCHOLARSHIP

Established in 2006 in memory of Elizabeth Petra Cooke, B.Sc.N. (Class of '03). To be awarded to a student in a Post R.N. or Post R.P.N. program who, in the judgment of the School of Nursing, has demonstrated a commitment to the advancement of the nursing profession and/or to mentoring nurses as they further their education.

Value: \$1,000 (40120)

THE BEATRICE CORRIGAN MEMORIAL BOOK PRIZE

Established in 1980 in memory of Professor Beatrice Corrigan by her friends and colleagues. To be awarded to the student who has completed at least nine units beyond Level I and who, in the judgment of the Department of Linguistics and Languages, has achieved notable standing in Italian.

Value: \$125 (40004)

THE CRANSTON PRIZES *

Established in 1958 by William H. Cranston of Midland in honour of his parents, J. Herbert Cranston (Class of '05) and Eva Wilkins Cranston (Class of '07). Two prizes to be awarded for excellence in the study of Canadian literature: (a) one for the highest grade in ENGLISH 2G06, and (b) one for the highest grade in ENGLISH 2C03.

Value: \$175 each (40011)

THE CSEP/SCPE UNDERGRADUATE STUDENT AWARD

Established in 1993 by the Canadian Society for Exercise Physiology. To be awarded to the student from the Kinesiology program who, in the judgment of the Department of Kinesiology, shows high standing in KINESIOL 2C06 (Physiology of Exercise) and either KINESIOL 4C03 or 4CC3.

Value: Medal and Certificate (50068)

THE EDWIN MARWIN DALLEY MEMORIAL SCHOLARSHIPS

Established in 1965 by bequest of Edwin Marwin Dalley of Hamilton.

Value: \$800 each (30164)

THE DOUGLAS DAVIDSON SCHOLARSHIP IN GENETICS

Established in 2006 by the friends and colleagues of Dr. D. Davidson in recognition of his many years of contributions to research and undergraduate teaching. To be awarded to a student registered in Honours Biology (Genetics Specialization) who obtains the highest grade in BIOLOGY 2C03.

Value: \$400 (40119)

THE D.M. DAVIES PRIZE

Established in 1984 by friends, colleagues and former students in recognition of Professor Douglas Davies for his outstanding contribution to the Department of Biology during 34 years of service. To be awarded to a student who has completed Level I and at least an additional 60 units of an Honours program in Biology and who attains the highest average in at least 12 units of senior level courses in whole-animal biology, taken in one session.

Value: \$575 (40099)

THE DEAN'S MEDAL FOR EXCELLENCE IN THE HUMANITIES

Established in 2000 by Donald T. Betzner (Class of '52). Three prizes to be awarded to the graduating students who, in the judgment of the Faculty of Humanities, have demonstrated outstanding academic achievement

Value: \$5,000 (1st and a medal (50083))

\$3,000 (2nd and a medal (50093))

\$2,000 (3rd and a medal (50094))

THE DR. RUDOLF DE BUDA SCHOLARSHIP

Established in 1989 in memory of Professor de Buda by family, friends and colleagues. To be awarded to a student who has achieved high standing after completion of Level I and an additional 69 - 80 units of an Electrical or Computer Engineering program and who elects to do a fourth-year thesis or project on a topic related to the field of Information Theory, Coding or Digital Communications.

Value: \$1,900 (30041)

THE JOHN DEERE LIMITED SCHOLARSHIP

Established in 1992 by John Deere Limited. To be awarded to the student who has completed Level I and an additional 60 - 75 units of the Honours Commerce program who, in the judgment of the Faculty of Business, has demonstrated outstanding academic achievement in courses offered by the Human Resource/Labour Relations Area and has displayed leadership and self-motivation in extracurricular activities.

Value: \$2,000 (30207)

THE DeGROOTE SCHOOL OF BUSINESS**ALUMNI UNDERGRADUATE SCHOLARSHIP**

Established in 2004 through the generosity of the DeGroot School of Business alumni and friends. To be awarded to a student who has completed Level I in the Faculty of Business who, in the judgment of the Faculty of Business, has achieved academic excellence in COMMERCE 1E03, ECON 1B03 and 1BB3, and has demonstrated leadership ability through school activities, work and/or community involvement.

Value: \$800 (30309)

THE DELOITTE & TOUCHE SCHOLARSHIP

Established in 2000 by Deloitte & Touche. A variable number of scholarships to be awarded to students who have completed Level I and an additional 60 - 75 units of the Honours Commerce program who, in the judgment of the Faculty of Business, have achieved notable academic standing in COMMERCE 3AB3 and 3AC3 (taken in one session), and have demonstrated qualities of leadership at McMaster University or in the community.

Value: \$1,500 each (30268)

THE AUDREY DIEMERT MEMORIAL BOOK PRIZE

Established in 1991 by family, friends and colleagues in memory of Audrey Diemert. To be awarded to a part-time student who attains the highest standing in ENGLISH 2G06 or 2I06.

Value: \$100 for books (60005)

THE MARGERY E. DIXON MEMORIAL SCHOLARSHIP

Established in 2003 in loving memory of Margery E. Dixon (Class of '35) by Geraldine Phenix. To be awarded to a student who has completed Level II of an Honours English program and who attains the highest Sessional Average.

Value: \$2,000 (30301)

THE LAURA DODSON PRIZE

Established in 1985 by Laura Dodson (Class of '56). To be awarded to the student graduating from the Honours Arts and Science Program who has displayed outstanding achievement in both arts and science.

Value: \$200 (50031)

THE ROSEMARY DOUGLAS-MERCER MEMORIAL PRIZE

Established in 1989. To be awarded to a student who has completed Level I and an additional 30 - 45 units of an Honours program in French and who has attained the highest average in FRENCH 2BB3 and one of FRENCH 2J03 or 2JJ3.

Value: \$175 (30124)

THE DUBECK BIOCHEMISTRY AWARD

Established in 2004 by Dr. Michael Dubeck, B.Sc. (Class of '51) and M.Sc. (Class of '52). To be awarded to a student who has completed Level I and an additional 58 - 75 units of an Honours program in Biochemistry who, in the judgment of the Department of Biochemistry and Biomedical Sciences, has achieved notable academic standing and has an interest in pursuing an academic career in basic biochemical research.

Value: \$1,000 (30306)

THE DUBECK CHEMISTRY AWARD

Established in 2004 by Dr. Michael Dubeck, B.Sc. (Class of '51) and M.Sc. (Class of '52). To be awarded to a student who has completed Level I and an additional 58 - 75 units of an Honours program in Chemistry who, in the judgment of the Department of Chemistry, has achieved notable academic standing and has an interest in pursuing an academic career in basic chemical research.

Value: \$1,000 (30304)

THE HORACE A. DULMAGE PRIZE IN PHILOSOPHY

Established in 1976 in honour of Professor Horace A. Dulmage by his colleagues and friends upon the occasion of his retirement from McMaster University. To be awarded to the full-time student in Level II of an Honours program in Philosophy who attained the most notable standing in his or her Level I program.

Value: \$200 (30066)

THE JOAN JACKSON DUNBAR TRAVEL SCHOLARSHIP

Established in 1960 by Mayor Lloyd D. Jackson (Class of '09), LL.D (Class of '55) and Mrs. Jackson of Hamilton in memory of their daughter, Joan (Class of '40). To be awarded to a woman student who has completed Level I and an additional 60 - 75 units of an Honours program in English for excellence in the work of the program (with emphasis on English). The winner must have secured all her secondary school education in Canada. The award is to be used for study and travel in the United Kingdom and Continental Europe during the vacation before the final Fall/Winter session.

Value: \$3,675 (30177)

Travel Scholarship applications are due February 15th.

THE EDWARDS HALL RESIDENCE SCHOLARSHIP

Awarded to the student who resides in the residence with the highest Sessional Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session.

Value: \$750 (30156)

THE CLARA I. ELMAN SCHOLARSHIPS

Established in 2002 by Clara I. (Graham) Elman (Class of '46), faculty member of the School of Nursing from 1949 to 1953. A variable number of scholarships to be awarded to students who have completed Level II in a program in Nursing who, in the judgment of the School of Nursing, demonstrate academic excellence and a commitment to the patient-nurse relationship.

Value: \$1,000 each (30289)

THE HELEN EMERY SCHOLARSHIPS IN ENVIRONMENTAL SCIENCE

Established in 1990 by Miss Helen Emery of Barrie, Ontario. Two scholarships to be awarded to students in Level II, III, IV or V of a B.Sc. program in the School of Geography and Earth Sciences who, in the judgment of the School of Geography and Earth Sciences, demonstrate leadership and influence in addressing environmental matters. Recipients must have attained a Sessional Average of 9.5 or greater.

Value: \$1,650 each (30184)

THE MURRAY AND ELEANOR ENKIN MIDWIFERY AWARD

Established in 2005 by Dr. Murray Enkin and his wife, Eleanor Enkin to reflect their belief in the importance of midwifery within Canadian maternity care. One scholarship to be awarded to a graduating student in the Midwifery program who, in the judgment of the Midwifery program, exemplifies superior achievement in the humanitarian, professional and academic domains of midwifery practice.

Value: \$5000 (50098)

THE ENVIRONMENTAL ISSUES PRIZE*

Established in 1993 by the Regional Municipality of Hamilton-Wentworth in recognition of Metal Recovery Industries and Philip Environmental, Industrial Filter Fabrics Ltd., and Laidlaw Waste Systems. To be awarded to the student who attains the highest grade in GEO 4R06.

Value: \$100 (40070)

THE GABRIELE ERASMI TRAVEL SCHOLARSHIP TO ITALY

Established in 2003 by the Dante Alighieri Society of Hamilton, the Department of Linguistics and Languages, the Julian-Dalmatians of Hamilton, and friends, in honour of Dr. Gabriele Erasmi, distinguished Faculty member of the Department of Linguistics and Languages. To be awarded to an outstanding student

who has completed Level II of a Humanities program. The purpose of the scholarship is to assist with the expenses of travel and study in Italy for academic credit at McMaster University. The applicant must submit a plan of study for approval by the Department of Linguistics and Languages.

Value: \$900 (30292)

Travel Scholarship applications are due February 15th.

THE EUROPEAN HISTORY PRIZE

Established in 1986 by Professor Ezio Cappadocia, on the occasion of his retirement from the Department of History, in memory of his mentor, Professor Frank H. Underhill. To be awarded to a student graduating from an Honours program in History who, in the judgment of the Department of History, has displayed outstanding achievement in European history courses consistently throughout the degree program.

Value: \$100 (50017)

THE JOHN P. EVANS TRAVEL SCHOLARSHIP

Established in 1991 by many friends, colleagues, students and graduates of McMaster University as a tribute to John (Jack) P. Evans upon his retirement as Associate Vice-President, University Services and Secretary of the Board of Governors in recognition of his 25 years of outstanding contribution to the University Community. To be awarded to a student who has completed at least 30 units beyond Level I of an Honours program with notable academic standing and has demonstrated a scholarly interest in some aspect of Asian languages, history or cultures, with preference being given to a student wishing to study in China.

Value: \$1,500 (30193)

Travel Scholarship applications are due February 15th.

THE FACULTY OF SOCIAL SCIENCES INQUIRY AWARD

Established in 2000 by the Faculty of Social Sciences INQUIRY 1SS3 instructors, recipients of the President's Awards of Excellence in course design 2000-2001. To be awarded to the student who attains the highest standing in INQUIRY 1SS3.

Value: \$500 (40091)

THE FEDERATION OF CHINESE CANADIAN

PROFESSIONALS EDUCATION FOUNDATION SCHOLARSHIPS

Established in 1988 by the Foundation. Two scholarships to be awarded: (a) one to a student in a program in Arts and Science, and (b) one, on a rotating basis, to a student in a program in Chemistry, Mechanical Engineering, and Physics.

Value: \$1,000 each (30163)

THE BARBARA M. FERRIER SCHOLARSHIP IN ARTS AND SCIENCE

Established in 2000 by students in the Arts and Science Program, on the occasion of Dr. B.M. Ferrier's retirement. One scholarship to be awarded to a graduating student in a B.Arts Sc. (Honours) program who, in the judgment of the Arts and Science Program, has demonstrated outstanding achievement in both the Arts and Sciences as well as exceptional leadership and service to the University community.

Value: \$500 (50089)

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 steelcastings industry. To be awarded to the student who attains the highest grade in MATLS 3E04.

Value: \$120 (40067)

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 an additional 30 units of an Arts and Science program and who has demonstrated outstanding achievement in both arts and science.

Value: \$400 (30007)

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 Program and entering the final session of an Honours program in French who, in the judgment of the Department of French, has attained the highest level of accomplishment in knowledge of French language, literature and culture. The recipient must obtain a Cumulative Average of at least 8.0 and no failures in the review at the end of the Fall/Winter session immediately prior to entering the *Humanities Study Abroad Program*.

Value: \$1,000 (30054)

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. Fritze. To be awarded to the student who has completed Level I and an additional 30 - 45 units of an Honours Chemistry program with the highest Sessional Average.

Value: \$350 (30096)

THE MERRILL FRANCIS GAGE SCHOLARSHIPS

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 an additional 30 - 75 units of an Honours program in Music and who, in the judgment of the School of the Arts, has demonstrated excellence in performance on a keyboard or orchestral instrument.

Value: \$450 each (30110)

THE SAMUEL GELLER MEMORIAL BOOK PRIZE

Established in 1999 by Libby Geller in memory of her husband Samuel Geller (Class of '33). To be awarded to a student who has completed Level III of an Honours Program in History and who, in the judgment of the Department of History, has attained notable academic standing.

Value: \$425 for books (30261)

THE R. LOUIS GENTILCORE PRIZE

Established in 1989 by the family and friends of Professor R. Louis Gentilcore on the occasion of his retirement from the Department of Geography. To be awarded to a student in an Honours program in the School of Geography and Earth Sciences who, in the judgment of the School, has demonstrated exceptional achievement in historical-cultural geography.

Value: \$550 (40062)

THE GWEN GEORGE AWARD

Established in 1997 in loving memory of Gwen George by her family and friends. To be awarded to a student who has completed any Level I program who, in the judgment of a Selection Committee, has achieved notable academic standing and has demonstrated qualities of leadership and service to McMaster University and/or the Hamilton-Wentworth, surrounding or world communities. The scholarship is tenable for up to three years provided the recipient maintains a Cumulative Average of 8.0.

Value: \$4,500 (\$1,500 each year) (30240)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE GWEN GEORGE MEDAL

Established in 2001 in loving memory of Gwen George by her family. To be awarded to a part-time student who has completed at least Level I of any program and who, in the judgment of the McMaster Association of Part-time Students, 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.

Value: \$400 and a medal (60011)

Students who wish to be considered for this award must submit an application to the McMaster Association of Part-time Students by September 15th.

THE GERMAN EMBASSY BOOK PRIZE

To be awarded from time to time for in-course students for proficiency in Level II or III German.

Value: Book (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 an additional 58 - 75 units of Honours B.Sc. programs. Ordinarily, not more than one scholarship will be awarded in any one discipline.

Value: \$325 each (30079)

THE GILMOUR MEMORIAL PRIZE *

Established in 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 2GG3 or 2HH3.

Value: \$125 (40019)

THE GEORGE P. GILMOUR MEMORIAL SCHOLARSHIP

Established in 1987 by the Graduating Class of 1962 in honour of Dr. G.P. Gilmour (Class of '21), Chancellor of McMaster University from 1941 to 1950 and President and Vice-Chancellor from 1950 to 1961. To be awarded to a student who has completed Level I and an additional 60 -

75 units of an Honours program in the Arts and Science Program and who, in the judgment of the Arts and Science Program Admissions, Awards, and Review Committee, has demonstrated outstanding academic achievement and has made notable contribution to the campus or community by participation in extracurricular activities.

Value: \$325 (30058)

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 program who has attained the highest standing throughout the program.

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: \$975 (30034)

THE DAPHNE ETHERINGTON GRAHAM MEMORIAL SCHOLARSHIP IN HISTORY

Established in 1997 in memory of a former student and dedicated servant of the University, by her friends, family and Professor Emeritus R.P. Graham. To be awarded to the student, registered for a first degree after completing Level I, who attains the highest standing in 15 units of History, all taken in the same session, with an average of at least A-.

Value: \$1,000 (30231)

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 graduands, and who has completed the program primarily on a part-time basis. (50029)

THE GREEK COMMUNITY OF BURLINGTON AND DISTRICT SCHOLARSHIP

Established in 1983. To be awarded to the student who obtains the highest standing in GREEK 1Z03 and 1ZZ3

Value: \$250 (40020)

THE H.B. GREENING BOOK PRIZE

Established in 1969 by bequest of Gladys Powis Greening in memory of her husband, Herald Benjamin Greening. To be awarded to the student who has completed Level I and an additional 30 - 45 units of an Honours program in Music and who, in the judgment of the School of the Arts, has demonstrated excellence in music.

Value: \$100 for books (30062)

THE GROUP EIGHT ENGINEERING LIMITED L.F. EULL PRIZE

Established in 1980 by Group Eight Engineering Limited. To be awarded to the student in a program in Electrical Engineering who attains the highest average in ELEC ENG 3PI4.

Value: \$1,000 (30098)

THE GUPTA FAMILY INTERNATIONAL SCHOLARSHIPS

Established in 2005 by Kulbushan (Joe) Gupta and family. A variable number of scholarships to be awarded to international students who have completed Level I and an additional 29 - 40 units with the highest Sessional Averages.

Value: \$1,500 (30311)

THE ROBERT S. HAINES MEMORIAL SCHOLARSHIP

Established in 2002 by Margaret E. Haines in memory of her twin brother Robert Samuel Haines (Class of '44). To be awarded to a student graduating from an Honours program in Chemistry who attains the highest Cumulative Average.

Value: \$1,000 (50097)

THE AMELIA HALL GOLD MEDAL

Established in 1985 by members of the Class of '38 in recognition of Amelia Hall (Class of '38), D. Litt. (Class of '75), one of the great pioneers of Canadian theatre and a consummate actress, who performed on Canadian stage, screen, radio and television for 35 years. To be awarded to a graduating student who, in the judgment of the School of the Arts, has made a significant contribution to drama during the student's University career. (50003)

THE RUTH AND JACK HALL PRIZE

Established in 1983 by Jackie MacDonald in memory of her parents. To be awarded to a student who has completed Level I and an additional 60 - 75 units of an Honours program in Computer Science, or Level I and an additional 69 - 90 units of a program in Computer Engineering, and who attains the highest Sessional Average.

Value: \$225 (30131)

THE RONALD K. HAM MEMORIAL PRIZE

Established in 1971 in memory of Professor R.K. Ham by his friends and former colleagues. Awarded to the student who has completed Level I and at least an additional 60 units and who, in the judgment of the Department of Materials Science and Engineering, shows most promise as a materials scientist or engineer.

Value: \$125 (30128)

THE HAMILTON AND DISTRICT HEAVY

CONSTRUCTION ASSOCIATION SCHOLARSHIPS

Established in 2003 by the Hamilton and District Heavy Construction Association. A maximum of two scholarships to be awarded to students who, in the judgment of the Department of Civil Engineering, have demonstrated outstanding academic achievement and who have attained a grade of at least A- in CIV ENG 3M03.

Value: \$500 (30294)

THE BRUCE M. HAMILTON AWARD

Established in 1999 by Bruce M. Hamilton. To be awarded to a student graduating from a Commerce program who, in the judgment of the Faculty of Business, has made a significant contribution through extra-curricular activities to the benefit of McMaster University or the local community.

Value: \$500 (50081)

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 an additional 30 - 45 units of an Honours program in Chemistry and who attains the highest Cumulative Average.

Value: \$140 (30063)

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 an additional 60 - 75 units of a program in Commerce who, in the judgment of the Faculty of Business, has demonstrated outstanding academic achievement and involvement in the local community.

Value: \$1,275 (30227)

THE HAMILTON UTILITIES CORPORATION ENERGY CONSERVATION AND ALTERNATIVE ENERGY UNDERGRADUATE SCHOLARSHIP

Established in 2003 by the Hamilton Utilities Corporation to encourage excellence in research in the areas of energy conservation and alternative energy. To be awarded to a student who has completed at least Level I of any program who, in the judgment of the McMaster Institute of Energy Studies, has demonstrated excellence in research in energy conservation or alternative energy.

Value: \$1,000 (30303)

THE DONALD HART SCHOLARSHIP

Established in 1985 by Mrs. Pamela Hart and Joel Jordan in honour of Donald Neil Hart (Class of '70). To be awarded to a student who has completed Level I and an additional 30 - 45 units of a program in Commerce and who, in the judgment of the School of Business, has achieved high standing in the required Level II Commerce courses, taken in one session.

Value: \$400 (30037)

THE HAWKRIGG FAMILY SCHOLARSHIPS IN BUSINESS

Established in 1999 by the Hawkrigg Family. To be awarded to a student who, in the judgment of the Faculty of Business, has attained notable academic standing and demonstrated involvement in University or community activities, and outstanding athletic ability. This scholarship is tenable for up to three years provided the recipient maintains a Cumulative Average of 8.0.

Value: \$7,500 (\$2,500 each year) (30256)

THE HAWKRIGG FAMILY SCHOLARSHIPS IN KINESIOLOGY

Established in 1999 by the Hawkrigg Family. To be awarded to a student who, in the judgment of the Department of Kinesiology, has attained notable academic standing and demonstrated involvement in University or community activities and outstanding athletic ability. This scholarship is tenable for up to three years provided the recipient maintains a Cumulative Average of 8.0.

Value: \$7,500 (\$2,500 each year) (30255)

Students who wish to be considered for this award are encouraged to submit a resume to the Department of Kinesiology by April 15th.

THE HEDDEN HALL RESIDENCE SCHOLARSHIP

Awarded to the student who resides in the residence with the highest Sessional Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session.

Value: \$750 (30198)

THE HELLENIC PRIZE

Established in 1995 by the Greek communities of Hamilton and district and the Greek Community of Burlington and district. To be awarded to a student entering Level IV who has completed at least 12 units in subjects pertaining to Greek studies and who, in the judgment of the Faculty of Humanities, demonstrates outstanding academic achievement in Greek studies.

Value: \$1,000 (30226)

THE ANNA MARIE HIBBARD SCHOLARSHIP

Established in 1992 from the bequest of Anna Marie Hibbard. To be awarded to the student completing Level I who attains the highest Sessional Average. The recipient may not hold another scholarship of equal or greater value.

Value: \$1,550 (30208)

THE ROSE HILL SCHOLARSHIPS

Established in 1985 by the alumni, faculty and staff of the School of Physical Education and Athletics as a tribute to Professor Rose Hill, long-time teacher, coach and administrator in the School. Two scholarships to be awarded to students who have completed 60 units of the Kinesiology program and who, in the judgment of the Department of Kinesiology, best demonstrate the philosophy of physical education espoused by Professor Hill throughout her career, namely, excellence in scholarship and leadership and participation in sport, dance or fitness.

Value: \$1,200 each (30130)

Students who wish to be considered for this award are encouraged to submit a resume to the Department of Kinesiology by April 15th.

THE DR. SHIGEAKI HINOHARA SCHOLARSHIP

Established in 2003 by Dr. Shigeaki Hinohara and the School of Nursing. To be awarded every three years to a student who has completed Level I in the B.Sc.N. Program and who, in the judgment of the School of Nursing, has demonstrated outstanding academic achievement in health sciences and behavioural science courses. The scholarship is tenable for up to three years provided the recipient maintains a Cumulative Average of 9.5.

Value: \$2,400 (\$800 each year) (30293)

THE DR. THOMAS HOBLEY PRIZE

Established in 1936 by bequest of Mrs. A. McNee of Windsor. To be awarded to a woman student on the basis of the Sessional Average obtained in the penultimate level of a program in Economics or Political Science.

Value: \$300 (30042)

THE DR. HARRY LYMAN HOOKER SCHOLARSHIPS

Established in 1981, and resulting from the bequest of Dr. H.L. Hooker. Awarded for overall academic excellence (Sessional Average of at least 9.5) to students in undergraduate programs, with the exception of those in their graduating session and those retaining scholarships of \$1,000 or greater. Each year quotas are established for each Faculty and other academic units in proportion to the number of full-time undergraduate students who obtain a Sessional Average of 9.5 or greater.

Value: \$1,500 each (30043)

THE BERTRAM OSMER HOOPER SCHOLARSHIP

Established in 1957 by bequest of Isobel F. Hooper. To be awarded in Arts.

Value: \$250 (30161)

THE NINA LOUISE HOOPER SCHOLARSHIP

Established in 1959 by bequest of Bertram O. Hooper.

Value: \$500 (30200)

THE HUGHES SCHOLARSHIP

Established in 1993 by Heidi Dickens-Hughes in memory of her husband Peter Hughes (Class of '69). To be awarded to a student who has completed Level I and an additional 30 - 75 units of the Music Program who, in the judgment of the School of the Arts, has displayed outstanding achievement in Music Education.

Value: \$200 (40069)

THE HUMAN RIGHTS AWARD

Established in 1998 by the Theme School on International Justice and Human Rights. To be awarded to the student who attains the highest grade in POL SCI 3Y03 or 4D06.

Value: \$275 for books (40087)

THE HUMANITIES MEDALS FOR SPECIAL ACHIEVEMENT

Established by the University in 1982. Up to five medals to be awarded to graduating students in the Faculty of Humanities in recognition of outstanding achievement in scholarship and contributions to the cultural and intellectual life of the University including such areas as the creative and performing arts and faculty government.

Value: Medal (50026)

THE WILLIAM D.G. HUNTER PRIZE

Established in 1995 by family, friends and colleagues in memory of Professor William D.G. Hunter, member of the Department of Economics from 1951 to 1984. To be awarded to the student who achieved the highest standing in ECON 3LL3.

Value: \$500 (40080)

THE HURD MEDAL

Established in 1955 by Donald W. Hurd (Class of '49) in memory of his father, Dean William Burton Hurd and augmented in 2003 in his memory by his wife Alice Hurd. To be awarded to a student at graduation for distinguished achievement in an Honours program in which economics is a major field of study.

Value: Medal (50027)

THE PAUL HYPHER PRIZE

Established in 1988 in memory of Paul F. Hypher by his friends and classmates. To be awarded to the student in a program in Commerce who attains the highest standing in COMMERCE 2MA3.

Value: \$250 for books (40039)

THE INCO SCHOLARSHIP IN ENVIRONMENTAL SCIENCE

Established in 2000 by Inco Limited. To be awarded to a student entering Level III, IV (or Year V of a Co-op program) in the Honours Earth and Environmental Sciences program who, in the judgment of the School of Geography and Earth Sciences has achieved notable academic standing and demonstrated qualities of leadership at McMaster or in the community.

Value: \$2,000 (30275)

THE INCO SCHOLARSHIP IN MATERIALS ENGINEERING

Established in 2000 by Inco Limited. To be awarded to a student entering Level II of the Materials Engineering, Materials Engineering and Management or Materials Engineering and Society program who, in the judgment of the Department of Materials Science and Engineering has achieved notable academic standing and demonstrated qualities of leadership at McMaster or in the community.

Value: \$1,900 (30274)

THE INTERMETCO LIMITED SCHOLARSHIP

Established in 1977. To be awarded to the student who has completed Level I and an additional 66 - 90 units of a program in Mechanical Engineering and who, in the judgment of the Department of Mechanical Engineering, has attained notable standing.

Value: \$600 (30072)

THE INTER NATIONES (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 program who, in the judgment of an Awards Selection Committee of Undergraduate Council, has demonstrated notable academic achievement and has demonstrated leadership and influence in residence life.

Value: \$400 (30228)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE IODE MEMORIAL SCHOLARSHIP

Established in 2000 with funds from the Paardeburg Chapter and 67th University Battery Chapters of the IODE. To be awarded to a student enrolled in the Bachelor of Health Science program who has completed at least Level I and who, in the judgment of the Faculty of Health Sciences, has attained notable academic standing. Preference will be given to a student from a secondary school in Hamilton.

Value: \$500 (30285)

THE MUNICIPAL CHAPTER OF HAMILTON,**IODE, MURIEL E. SKELTON AWARD**

Established in 1944 by the Municipal Chapter of Hamilton, Imperial Order Daughters of the Empire. To be awarded to the student who attains the highest standing in a Level I History course.

Value: \$150 (40036)

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 program in the Department of Linguistics and Languages and who, in the judgment of the Department, has attained notable standing in at least six units of Italian courses above Level I. The recipient must have graduated from a secondary school in the Hamilton area.

Value: \$125 (30070)

THE IVEY SCHOLARSHIP

Established in 1971 by Professor and Mrs. G.S. French in memory of Mr. and Mrs. I.E. Ivey, the parents of Mrs. French. To be awarded to the student who has completed Level I and an additional 60 - 75 units of an Honours program in Music and who, in the judgment of the School of the Arts, has attained notable standing.

Value: \$125 (30074)

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 an additional 60 units of an Honours program in the Department of Mathematics and Statistics, who in the judgment of the department has demonstrated achievement in MATH 3A03 and 3X03 taken in the same session.

Value: \$425 (40021)

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 program in Commerce.

Value: \$200 (50008)

THE W. NORMAN JEEVES SCHOLARSHIP

Established in 1987 by the French Section, Department of Romance Languages, in honour of W. Norman Jeeves, Professor of French from 1965 to 1987. To be awarded to a graduand of an Honours program in French who, in the judgment of the Department of French, has demonstrated outstanding academic achievement in the French component of the program.

Value: \$475 (50052)

THE HERBERT M. JENKINS PRIZE

Established in 1990 as a tribute to Dr. Herbert M. Jenkins, first Director of the Arts and Science Program, by his many friends, colleagues and students on the occasion of his retirement from McMaster University. To be awarded to a student in an Arts and Science program whose work, in the judgment of the Arts and Science Program Awards and Review Committee, best reflects scholarship and the spirit of inquiry.

Value: \$150 (40096)

THE JENSEN MEDAL

Established in 1995 by friends and colleagues as a tribute to Dr. Doris E.N. Jensen in recognition of her contribution in developing Cooperative Education Programs in the Faculty of Science and her 31 years of service in the wider university community. To be awarded to a student graduating from the Honours Biology and Pharmacology (Co-op) Program who, in the judgment of the Committee of Instruction, demonstrates outstanding academic achievement and excellence in co-op placements. (50075)

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 an additional 90 - 130 units of a program in Engineering and Management. Award to be based on distinguished academic performance during the student's undergraduate career. Consideration will also be given to noteworthy contribution in extracurricular activities.

Value: \$800 and certificate (30002)

THE LAWRENCE AND KATHLEEN MARY JOHNSTON MEMORIAL PRIZE
Established in 1963. To be awarded to the student who has completed Level I and an additional 30 - 45 units of an Honours program in Religious Studies and who attains the highest Sessional Average.
Value: \$175 (30094)

THE ROBERT H. JOHNSTON UNDERGRADUATE SCHOLARSHIP IN HISTORY

Established in 2005 to honour Bob Johnston's contribution to undergraduate teaching in history. To be awarded to a student entering Level II of an Honours History program who, in the judgment of the Faculty of Humanities, has achieved the highest Sessional Average in a Level I program.
Value: \$750 (30318)

THE FRANK E. JONES PRIZE

Established in 1982 in honour of Professor F.E. Jones for his outstanding contributions to the Department of Sociology. To be awarded to the full-time student with the highest Cumulative Average in an Honours program in Sociology.
Value: \$100 (50020)

THE DR. JEAN JONES MEMORIAL SCHOLARSHIP *

Established in 2005 by family and friends in memory of Dr. Jean Jones. To be awarded to a full-time graduating student who attains the highest cumulative average in either the Bachelor of Arts/Bachelor of Social Work or Bachelor of Social Work post-degree program.
Value: \$800 (50099)

THE DR. RONALD V. JOYCE "AMAZING" GRACE AWARDS

Established in 2003 by Dr. Ronald V. Joyce '98 in honour of his mother, Grace Joyce. A variable number to be awarded to students in Level II or above of any program who, in the judgment of the selection committee, demonstrate a commitment to community service by volunteering during the academic year with children who have special needs. Preference will be given to those students who volunteer with underprivileged children.
Value: \$2,500 each (30295)
Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE DR. RONALD V. JOYCE AWARDS FOR ATHLETES

Established in 2003 by Dr. Ronald V. Joyce '98. A variable number to be awarded to students who have completed Level I of any program who, in the judgment of a selection committee, have demonstrated outstanding athletic ability as members of a McMaster varsity team which competes in the Canadian Interuniversity Sports (CIS). Students must meet the eligibility requirements of the CIS and Ontario University Athletics (OUA). Not open to students in their graduating year.
Value: \$2,500 each (40117)
Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th. Students should submit two reference letters, one academic letter and one non-academic letter from the coach of their varsity team.

THE JURY PRIZE

Established in 1941 by bequest of J.H. Jury of Bowmanville. To be awarded to the student who has completed Level I and an additional 30 - 45 units of the Honours History program and who attains the highest Sessional Average.
Value: \$1,500 (30093)

THE STANFORD N. KATAMBALA EARTH SCIENCES PRIZE

Established in 1965 by contributions from friends and associates of Stanford N. Katambala, a Year III Honours Geology student from Tanzania, killed in a mine accident in Northern Ontario in September 1964. To be awarded to a student who has completed Level I and an additional 60 - 75 units of the Honours Earth and Environmental Sciences program and who attains high standing.
Value: \$75 (30143)

THE ERNEST ROBERT MacKENZIE KAY SCHOLARSHIPS

Established in 1999 by Ernest Robert MacKenzie Kay. A variable number to be awarded to students in a program in Biology, Biochemistry or Chemistry who, in the judgment of the Faculty, show outstanding academic achievement. Preference will be given to students who plan to continue in the field of medical research.
Value: \$800 each (30254)

THE GERALD L. KEECH MEDAL

Established in 1994 by his friends and colleagues as a tribute to Gerald L. Keach in recognition of his outstanding contributions to McMaster University during his 33 years' service in Computer Science and computer services. To be awarded to the graduating student from a program in Computer Science who attains the highest Cumulative Average. (50069)

THE ROBERT ALAN KENNEDY SCHOLARSHIP

Established in 1998 by Robert Alan Kennedy. To be awarded to any student entering a Level II, III or IV program in the Faculty of Business who, in the judgment of the Faculty, demonstrates outstanding academic achievement.
Value: \$475 (30243)

THE MARY E. KEYES RESIDENCE SCHOLARSHIP

Awarded to the student with the highest Sessional Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session, who resides in the residence.
Value: \$750 (30299)

THE GEORGE P. AND LEATHA M. KEYS SCHOLARSHIPS

Established in 1982 by Mrs. Leatha Keys. Three scholarships to be awarded to students who, in the judgment of the Departments of Computing and Software, and of Mathematics and Statistics, have demonstrated outstanding achievement in Honours programs in those Departments: (a) one to a student who has completed Level I and an additional 30 - 75 units of the Computer Science program; (b) one to a student who has completed Level I and an additional 60 - 75 units of a program in Mathematics; and (c) one to a student who has completed Level I and an additional 60 - 75 units of a program in Mathematics and Statistics.
Value: \$500 each (30057)

THE KARL KINANEN ALUMNI PRIZE IN GERONTOLOGY

Established in 1992 by the Gerontology Alumni of McMaster University in recognition of Karl Kinanen for his leadership in the development of Gerontological Studies at the University. To be awarded to a student graduating from a program in Gerontology who, in the judgment of the Department of Health, Aging and Society, has demonstrated high academic achievement and leadership in community activities.
Value: \$50 (50064)

Students who wish to be considered for this award are encouraged to submit a resume to the Chair of the Department of Health, Aging and Society by April 15th.

THE KINESIOLOGY PRIZE

Established in 1982. To be awarded to the graduating student who, in the judgment of the Department of Kinesiology, has submitted an outstanding paper or project.
Value: \$100 (50058)

THE KINESIOLOGY PRIZES

Established in 1982. Two prizes to be awarded to students who have completed the courses in Level III of the Kinesiology program: (a) one to a student who, in the judgment of the Department of Kinesiology, has submitted an outstanding paper or project, and (b) one to the student who has attained the highest average in Kinesiology courses taken in Levels I, II and III.
Value: \$100 each (40041)

THE KIT MEMORIAL SCHOLARSHIP

Established in 1936 by the Hamilton Branch of the Canadian Women's Press Club (now the Media Club of Canada, Hamilton Branch) in memory of the brilliant journalist and writer, the first president of the Canadian Women's Press Club, Kathleen Blake Coleman, widely known on this continent as Kit. To be awarded to a woman student either on completion of Level I and at least an additional 30 units on the basis of journalistic ability or on completion of Level I and an additional 60 - 75 units of an Honours program in English on the basis of Sessional Average.
Value: \$200 (30095)

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 an additional 60 - 75 units of a program in Commerce. Preference will be given to students who plan to continue their studies after graduation with a practising firm of chartered accountants.
Value: \$350 (30146)

THE RUTH LANDES PRIZE

Established in 1982 in honour of Professor Ruth Landes for her outstanding contributions to the Department of Anthropology. To be awarded to the graduating full-time student in a three-Level program in Anthropology who, in the judgment of the Department of Anthropology, has demonstrated outstanding academic achievement.
Value: \$100 (50048)

Students who wish to be considered for this award are encouraged to submit a resume to the Department of Anthropology by April 15th.

THE 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 1Z03 and 1ZZ3

Value: \$150 (40031)

THE GARY LAUTENS MEMORIAL SCHOLARSHIP

Established in 1992 by family, friends and colleagues in memory of Gary Lautens (Class of '50), columnist and editor of the Toronto Star (1962-92), the Hamilton Spectator (1950-62) and the McMaster Silhouette (1948-50), remembered as a journalist with wit and insight. To be awarded to a student who has completed any Level I program who, in the judgment of a Selection Committee, has achieved notable academic standing and has demonstrated journalistic skills in the written media. The scholarship is tenable for up to two years provided the recipient maintains a Cumulative Average of 8.0. Students who wish to be considered for this award should consult the Office of Student Financial Aid & Scholarships.

Value: \$4,000 (\$2,000 each year) (30212)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th. 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: \$2,200 (30253)

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 program and who, in the judgment of the Department of Kinesiology, demonstrates excellence in scholarship, leadership and participation in sport, dance and fitness.

Value: \$700 (30109)

Students who wish to be considered for this award are encouraged to submit a resume to the Department of Kinesiology by April 15th.

THE SAM LAWRENCE PRIZE *

Established in 1957 by the East Hamilton Independent Labour Party C.C.F. Club in honour of Sam Lawrence. To be awarded to the student who, in the judgment of the Department of Economics, has demonstrated outstanding academic achievement in courses in labour economics.

Value: \$175 (40048)

THE JAMES B. LAWSON SCHOLARSHIP

Established in 1999 by a grateful student and friend of Professor Lawson. To be awarded to a student who has completed either GERMAN 1Z06 or 1BB3 in Level I or to a student who has completed GERMAN 2ZZ3 in Level II and who, in the judgment of the Department of Linguistics and Languages, has demonstrated progress and interest in German. Eligibility for this award is restricted to non-native speakers of German. The award may be used for travel and study in a German-speaking country and/or for other expenses associated with the student's German studies.

Value: \$150 (40090)

THE RAY LAWSON SCHOLARSHIPS

Established in 1975 by the Honourable Ray Lawson, O.B.E., D.C.L., D.Cn.L., LL.D., K.G.St.J., Lieutenant-Governor of Ontario from 1946 to 1952. Two scholarships to be awarded for the highest Sessional Averages in an Engineering and Management program: (a) one to a student who has completed Level I and an additional 70 - 90 units, and (b) one to a student who has completed Level I and at least an additional 109 units beyond Level I.

Value: \$275 each (30126)

THE SAKARKHANU K. LILA MEMORIAL SCHOLARSHIP *

Established in 2000 by the children and grandchildren of the late Sakarkhanu K. Lila, mother of ten. To be awarded to a full-time student who has completed Level II of the Midwifery Program and who, in the judgment of the Midwifery Program, has demonstrated academic excellence, leadership and social awareness. Preference will be given to students who have registered for or completed an overseas clinical placement in a developing country.

Value: \$1,000 (40093)

THE LINGUISTICS PRIZE

Established in 1988. To be awarded to a student in an Honours program in Modern Languages and Linguistics who, in the judgment of the Department of Linguistics and Languages, has achieved notable standing in Level II courses in Linguistics.

Value: \$250 (40032)

THE CLAUDE G. LISTER SCHOLARSHIP

Established in 1990 by bequest of Pauline Detwiler Lister in memory of her husband. To be awarded to a student in a program in the School of Business.

Value: \$625 (30199)

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 program in Political Science who, in the judgment of the Department of Political Science, has demonstrated outstanding academic achievement.

Value: \$750 (50032)

THE ALLAN LUDBROOK MEMORIAL SCHOLARSHIP

Established in 2004 by the family and friends of Allan Ludbrook ('04). To be awarded to a mature student enrolled in a Music program who, in the judgment of the School of the Arts, has attained notable standing.

Value: \$1,000 (40114)

THE MacGIBBON SCHOLARSHIP *

Established in 1970 by bequest of Professor Duncan A. MacGibbon (Class of '08). To be awarded to the student in a program in Economics who, in the judgment of the Department of Economics, stands highest in courses in economic history.

Value: \$475 (40034)

THE 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 enrolls in a Bachelor of Laws degree program in the academic session immediately following graduation. The student selected will have demonstrated high academic achievement and leadership in extracurricular activities.

Value: \$750 (50061)

Applications and the names of two referees should be submitted to the Office of Student Financial Aid & Scholarships by April 15th.

THE WILLIAM MacKENZIE MEMORIAL PRIZE *

Established in 1977 in memory of Professor William MacKenzie by his friends and colleagues. To be awarded to the student who, in the judgment of the Department of Economics, has demonstrated outstanding academic achievement in either ECON 3T03 (Economic Development: Agriculture and Population) or ECON 2F03 (Globalization and Economic Development) or, in exceptional circumstances, for work in a related area.

Value: \$425 (40053)

THE BETTY MacMILLAN PRIZE

Established in 1960 by her classmates in memory of Elizabeth Johnstone MacMillan (Class of '50). To be awarded to the student who has completed Level I and an additional 60 - 75 units in an Honours program in Sociology and who, in the judgment of the Department of Sociology, is the most promising student.

Value: \$150 (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 program in English who has attained the most notable standing in English throughout the degree program.

Value: \$200 (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: \$175 (50011)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE MAPS CENTENNIAL AWARD

Established in 1986 by the McMaster Association of Part-Time Students (MAPS). To be awarded to a part-time student who, in the judgment of MAPS, ranks highest in qualities of scholarship and leadership.

Value: \$500 and a medal (60010)

Students who wish to be considered for this award must submit an application to the McMaster Association of Part-time Students by September 15th.

THE MAPS GOLD MEDAL

Established in 1996 by the McMaster Association of Part-time Students. To be awarded to the graduating student completing studies primarily on a part-time basis and who attains the highest Cumulative Average. (50076)

THE LIANNE MARKS SCHOLARSHIP

Established by her family, in 1980 as a bursary and in 1985 as a scholarship, in honour of Lianne Marks, a student at McMaster University (1977-80). To be awarded to a student who has completed Level I and an additional 60 - 75 units of an Honours program in Sociology and who, in the judgment of the Department of Sociology, has demonstrated outstanding academic achievement and has made notable contribution to the campus or community by participation in activities other than sports. Value: \$800 (30100)

Students who wish to be considered for this award are encouraged to submit a resume to the Department of Sociology by April 15th.

THE ELEANOR DORNBUSH MARPLES PRIZE IN ART HISTORY *

Established in 1985 by Mrs. Barbara Niedermeier and her family in memory of her sister. To be awarded to a student who, in the judgment of the School of the Arts, has demonstrated outstanding achievement. Value: \$175 (40015)

THE ELEANOR DORNBUSH MARPLES PRIZE IN THEATRE & FILM STUDIES *

Established in 1987 by Vaughan W. Marples in memory of his wife. To be awarded to the student who attains the highest grade in THTR&FLM 2C03. Value: \$125 (40016)

THE RONALD E. MATERICK SCHOLARSHIPS

Established in 1987 by Ronald E. Materick (Class of '70). Four scholarships to be awarded to students who have completed at least Level II in a Civil Engineering program, who are continuing in an undergraduate Civil Engineering program and who, in the judgment of the Department of Civil Engineering, have attained notable academic standing. Preference, for two of the scholarships, is to be given to students in the penultimate year of a Civil Engineering program. Value: \$2,000 each (30127)

THE MATTHEWS HALL RESIDENCE SCHOLARSHIP

Awarded to the student who resides in the residence with the highest Sessional Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session. Value: \$750 (30157)

THE JOHN MAYBERRY SCHOLARSHIPS

Established in 1998 by John Mayberry. One scholarship to be awarded a student who has completed Level II or III of a program in Chemical Engineering, Mechanical Engineering or Materials Engineering who, in the judgment of the Faculty of Engineering, have demonstrated outstanding academic achievement. The recipients must attain a minimum Sessional Average of 9.5 at the most recent Fall/Winter session. Value: \$1,000 (30262)

THE CHARON BURKE MCCAIN MEMORIAL SCHOLARSHIP

Established in 2004 in memory of Charon Burke McCain by family, friends, colleagues and students. To be awarded to an Honours Arts and Science student who has completed Level III and who, in the judgment of the Arts and Science Program, has demonstrated exceptional qualities of leadership and service at McMaster University or in the community, as well as notable academic achievement. Value: \$500 (30305)

THE WILLIAM J. MCCALLION SCHOLARSHIPS

Established in 1984 in honour of Professor McCallion, B.A. (Class of '43), M.A. (Class of '46), first Dean of the School of Adult Education from 1970 to 1978, in recognition of his outstanding contribution to adult education and to the Department of Mathematical Sciences during 41 years of service. A variable number to be awarded to part-time students who have attained the highest Cumulative Average at the most recent review. Value: \$250 each (60004)

THE ESTHER MCCANDLESS MEMORIAL PRIZE

Established in 1984 by friends and colleagues in memory of Professor E.L. McCandless, a humanitarian and distinguished member of the Department of Biology from 1964 to 1983. To be awarded to a student who achieves an outstanding Cumulative Average in an Honours program in Biology. Value: \$300 (50016)

THE JOHN R. MCCARTHY SCHOLARSHIP

Established in 1987 by John R. McCarthy, 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 program in Arts and Science, Humanities, Science, or Social Sciences who enrolls in the Faculty of Education of an Ontario university in the academic session immediately following graduation. The student selected will have made a contribution to the life of the University by displaying leadership in student government or student affairs and leadership and sportsmanship in athletic endeavours. Value: \$700 (50030)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE H.W. MCCREADY PRIZE IN BRITISH HISTORY *

Established in 1981 in memory of Professor H.W. McCready, a member of the Department of History from 1943 to 1975, by former students, colleagues, and friends. To be awarded to the Level II student who, in the judgment of the Department of History, attains notable standing in HISTORY 2M03 or 2MM3. 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 Lee Wilson Smith. To be awarded to the student who has completed Level I and an additional 60 - 75 units of the Honours English and History program and who has the highest Sessional Average. Value: \$525 (30105)

THE R.C. MCIVOR MEDAL

Established by the Faculty of Social Sciences in 1982 in recognition of Professor R.C. McIvor, former Dean of the Faculty, for his outstanding contributions to the Faculty and the University during 35 years of service. To be awarded on the recommendation of the Faculty of Social Sciences to the full-time student in the graduating class who, on the basis of scholarship, is judged to be the outstanding member of the class of Social Sciences graduands. (50043)

THE MCKAY HALL RESIDENCE SCHOLARSHIP

Awarded to the student who resides in the residence with the highest Sessional Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session. Value: \$750 (30201)

THE A.G. MCKAY PRIZE IN CLASSICAL STUDIES

Established in 1990 by Professor Emeritus A.G. McKay. To be awarded to a graduating student from an Honours program in Classics who, in the judgment of the Department of Classics, has demonstrated outstanding academic achievement and leadership. Value: \$100 (50054)

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 an additional 60 - 75 units of an Honours Classics program and who, in the judgment of the Department of Classics, has attained high academic standing. Preference will be given to students from the Regional Municipality of Hamilton-Wentworth. Value: \$350 (30180)

THE JANET MCKNIGHT AWARD *

Established in 1994 by faculty, friends and students in memory of Janet McKnight, beloved colleague and teacher, a recognized expert in educational methodology and small-group, problem-based learning. To be awarded to a student entering Level IV of a program in Nursing who, in the judgment of the School of Nursing has demonstrated notable academic achievement and leadership in clinical and educational aspects of gerontology or, problem-based, self-directed learning in nursing education. Value: \$600 (40077)

THE A.B. MCLAY SCHOLARSHIP IN PHYSICS

Established in 1991 by C. Lucy McLay in memory of her late husband, A. Boyd McLay (Ph.D., F.R.S.C.), a member of the Department of Physics from 1930 to 1967. To be awarded to a student who has completed Level I and an additional 30 - 45 units of an Honours program in Physics and who, in the judgment of the Department of Physics and Astronomy, has attained notable standing. Value: \$500 (30186)

THE BOYD MCLAY SCHOLARSHIP IN PHYSICS

Established in 1977 to commemorate the contributions of Dr. A. Boyd McLay (Class of '22) to teaching and research in optics and spectroscopy at McMaster University from 1930 to 1967. To be awarded to a student who has completed Level I and an additional 60 - 75 units of an Honours program in Physics with a high Sessional Average. Value: \$575 (30011)

THE WALTER SCOTT MCLAY PRIZE

Established in 1938 in honour of Dean McLay, by his daughter, Mrs. R.R. McLaughlin (Marjorie McLay Class of '25) and further enlarged in 1950 by A.H. Wilson of Woodstock. To be awarded to the student who attains the highest Cumulative Average in an Honours program in English. Value: \$250 (50057)

THE McMASTER NURSING ALUMNI MEMORIAL PRIZE *

Established in 1984 and augmented in 2001 by the McMaster Nursing Alumni Branch to recognize graduates from the McMaster University School of Nursing. To be awarded to a student who in the judgment of the School of Nursing, has demonstrated leadership while participating in undergraduate activities.

Value: \$300 (50092)

THE McMASTER UNIVERSITY FUTURES FUND GRADUAND AWARD

Established in 2000. To be awarded to the child of a member of McMaster University's salaried pension plan who has demonstrated outstanding academic achievement. Recipient must obtain a Sessional Average of 9.5 or greater.

Value: \$1,000 (50084)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE McMASTER UNIVERSITY FUTURES FUND IN-COURSE AWARDS

Established in 2000. Four scholarships to be awarded to the children of members of the McMaster University salaried pension plan who have demonstrated outstanding academic achievement. Recipient must obtain a Sessional Average of 9.5 or greater.

Value: \$1,800 each (30270)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE McMASTER UNIVERSITY RETIREES ASSOCIATION PRIZE

Established in 1992 by the McMaster University Retirees Association. To be awarded to the part-time student enrolled in a program in Gerontology who attains the highest Cumulative Average.

Value: \$250 for books (60007)

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 an additional 30 units of a program in Gerontology and who attains the highest Sessional Average. The student must enrol in a program in Gerontology in the subsequent Fall/Winter session.

Value: \$1,000 (30187)

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 program in Chemistry who, in the judgment of the Department of Chemistry, has achieved notable academic standing. Preference will be given to students who demonstrate leadership, self-motivation, and practical aptitude appropriate for a future in the chemical industry.

Value: \$925 (30108)

THE SIMON McNALLY SCHOLARSHIP

Established in 1972 by S. McNally and Sons Limited, in honour of Simon McNally. One or two scholarships to be awarded to Canadian citizens who have completed Level I and an additional 37 - 50 units of a program in Civil Engineering. Awards are based on scholarship and evidence of practical engineering experience and background.

Value: \$650 each (30139)

THE JOHN D. McNIE 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: \$400 (40107)

Students who wish to be considered for this award must be registered with the Centre for Student Development, Disability Services. The application cover page can be downloaded from the Office of Student Financial Aid & Scholarships web site at <http://sfas.mcmaster.ca/downloadcentral.html>. Completed applications should be submitted to the Office of Student Financial Aid & Scholarships by April 15th.

THE PETER McPHATER MEMORIAL SCHOLARSHIP

Established in 1988 by Peter McPhater's friends in recognition of his art, craftsmanship and humanitarianism. To be awarded to a student who has completed Level I and an additional 60 - 75 units of a program in Honours Art or Honours Art History and who, in the judgment of the School of the Arts, is outstanding.

Value: \$450 (30119)

THE MEDICAL-SURGICAL EXCELLENCE IN CLINICAL NURSING AWARD

Established in 1998 by Professor Gerry Benson. To be awarded every two years to a student who has completed at least Level II of the Nursing Program who, in the judgment of the School of Nursing, demonstrates academic excellence in medical-surgical nursing. Students who wish to be considered for this award should consult the School of Nursing for terms and conditions.

Value: \$250 (40086)

THE AUDREY EVELYN MEPHAM AWARD IN GERONTOLOGY *

Established in 2001 by Gordon W. Mepham in loving memory of his wife Audrey Evelyn Mepham. To be awarded to a student graduating from an Honours program in Gerontology who, in the judgment of the Department of Health, Aging and Society, has demonstrated notable academic achievement. Preference will be given to a student who has completed a thesis or course paper on issues relating to Alzheimer's disease.

Value: \$1,200 (50090)

Students who wish to be considered for this award are encouraged to submit a resume to the Chair of the Department of Health, Aging and Society by April 15th.

THE MERRIAM SCHOOL OF MUSIC SCHOLARSHIP

Established in 2003 by the Merriam School of Music. To be awarded to an Honours Music student who has completed at least 60 units of work and who, in the judgment of the School of the Arts, has demonstrated good academic standing, excellent musicianship skills, a strong commitment to teaching and community service.

Value: \$1,000 (30298)

THE J.J. MILLER PRIZE

Established in 1984 by friends, colleagues and former students in recognition of Professor J.J. Miller for his outstanding contribution to the Department of Biology during 37 years of service. To be awarded to a student in an Honours Biology program with an outstanding Sessional Average and a minimum grade of A- in BIOLOGY 2EE3.

Value: \$575 (30077)

THE DR. F.A. MIRZA SCHOLARSHIP

Established in 1997 in memory of Farooque Mirza by family, friends and colleagues. To be awarded to a student enrolled in a Civil Engineering program who achieves the highest average in CIV ENG 2C04 and ENGINEER 2P04 taken in one session.

Value: \$250 (40100)

THE MMG-NEOSID CANADA LIMITED CERAMIC ENGINEERING PRIZE

Established in 1978 by MMG-Neosid Canada Limited. To be awarded to the student who has completed Level I and at least an additional 75 units of the Materials Engineering program and who attains the highest standing in MATLS 3B03.

Value: \$100 (40037)

THE MODERN LANGUAGES TRAVEL SCHOLARSHIP

Established in 1991 by the Department of Linguistics and Languages. To be awarded to a student who has completed at least 30 units beyond Level I in a program in Modern Languages and who, in the judgment of the Department of Linguistics and Languages, has attained notable academic standing. The purpose of the scholarship is to assist with travel expenses to study and travel abroad. Priority will be given to a student participating in the *Humanities Study Elsewhere Program*.

Value: \$925 (30188)

Travel Scholarship applications are due February 15th.

THE MOFFAT FAMILY PRIZES

Established in 1990 by Moffat Kinoshita Associates Inc. Two prizes to be awarded to: (a) the student who attains the highest grade in GEO 4HY3; and (b) the student who attains the highest grade in GEO 4HZ3.

Value: \$150 each (40060)

THE MOLSON SCHOLARSHIP IN ENVIRONMENTAL STUDIES

Established in 1992 by the Molson Companies Donations Fund. To be awarded to the student entering the final level of a program in Geography and Environmental Studies, Earth and Environmental Sciences or Engineering and Society, who attains the highest Sessional Average.

Value: \$1,100 (30213)

THE E.S. MOORE PRIZE

Established in 1956 by Elwood S. Moore, LL.D. (Class of '55). To be awarded to the student graduating in an Honours program in Geography who, in the judgment of the School of Geography and Earth Sciences, has attained the most notable standing in Geo.

Value: \$225 (50015)

THE JOHN F. MOORE PRIZE

Established in 1990 by the Steel Founders' Society of America in honour of John Moore's contributions to the Society over the past 25 years. To be awarded to the student who attains the highest grade in MATLS 4C03.
Value: \$125 (40061)

THE MICHAEL J. MORTON MEMORIAL BOOK PRIZE

Established in 1979 in memory of Dr. M.J. Morton. To be awarded to a student who has completed Level I and an additional 60 - 75 units in an Honours program in Chemistry and who, in the judgment of the Department of Chemistry, is outstanding in the field of inorganic chemistry.
Value: \$175 for books (30111)

THE ELIZABETH MOSGROVE SCHOLARSHIP

Established in 1959 by bequest of John W. Mosgrove in memory of his mother. To be awarded to descendants of members of Her Majesty's Canadian Armed Forces on the basis of Sessional Average.

Value: \$1,500 (30047)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE MOTOROLA SOFTWARE ENGINEERING SCHOLARSHIP

Established in 1999 by the Motorola Foundation. To be awarded to a student entering Level III in a Software Engineering program who, in the judgment of the Department of Computing and Software, has achieved notable academic standing, displayed strong communication skills, demonstrated leadership and involvement in extra-curricular activities.

Value: \$1,500 (30252)

THE MOULTON COLLEGE SCHOLARSHIPS

Established in 1957 from funds originally subscribed by the Alumnae of Moulton College during the years 1946 to 1949 for the expansion of Moulton College. Two scholarships to be awarded to the women students of Moulton Hall with the highest Sessional Averages: (a) one after completion of Level I and an additional 30 - 45 units, and (b) one after completion of Level I and an additional 60 - 75 units.

Value: \$1,000 each (30112)

THE MOULTON HALL RESIDENCE SCHOLARSHIP

Awarded to the student who resides in the residence with the highest Sessional Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session.

Value: \$750 (30239)

THE ANNE MURRAY SCHOLARSHIP

Established in 1985 in memory of Anne M. Murray (Class of '82) by her family. To be awarded to a student who has completed at least 30 units beyond Level I in a program in the Department of Linguistics and Languages and who, in the judgment of the Department, has attained notable standing in at least nine units of German courses above Level I.

Value: \$300 (30005)

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 program who, in the judgment of the Department of French, has shown a strong interest in computer skills as applied to the Humanities.

Value: \$250 (40101)

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 graduand, who, in the judgment of the Department of Materials Science and Engineering, has submitted an outstanding thesis or project in the area of Corrosion Science and Engineering. In the absence of a qualified candidate, the award will be made to the student who attains the highest standing in MATLS 4D03 (Corrosion).

Value: \$100 (50036)

THE P.L. NEWBIGGING PRIZES

Established in 1982 in recognition of Dr. Lynn Newbigging for his outstanding contributions to the Department of Psychology, Neuroscience and Behaviour. Four prizes to be awarded to students with the highest Cumulative Average: (a) one to a full-time student in the three-level B.A. program in Psychology; (b) one to a student in a B.A. program in Psychology who has completed the program primarily on a part-time basis; (c) one to a full-time student in the three-level B.Sc. program in Life Science with a concentration in Psychology; and (d) one to a student in a B.Sc. program in Life Science with a concentration in Psychology who has completed the program primarily on a part-time basis.

Value: \$100 each (50040)

THE P.L. NEWBIGGING SCHOLARSHIP

Established in 1994 by family, friends and colleagues in memory of Dr. P.L. Newbigging, founding Chair of the Department of Psychology, Neuroscience and Behaviour and member of the Faculty from 1955-1990, in recognition of his outstanding contributions to the Department and the University. To be awarded to the student entering Level II of an Honours program in Psychology who has attained the highest average in PSYCH 1A03 and 1AA3.

Value: \$375 (40072)

THE ALAN G. NEWCOMBE PRIZE IN PEACE STUDIES

Established in 1991 in memory of Dr. Alan G. Newcombe (1923-1991), who devoted 30 years to Peace Studies and was co-founder, with Dr. Hanna Newcombe, of the Canadian Peace Research and Education Association and the Peace Research Institute - Dundas. To be awarded to a student who, in the judgment of the Coordinating Council of the Centre for Peace Studies, demonstrates leadership in extracurricular endeavours and high academic achievement.

Value: \$300 (40064)

THE NIEMEIER SCHOLARSHIP

Established in 1938 and augmented in 1952 by Dr. O.W. Niemeier. To be awarded to the student who attains the highest Sessional Average at the completion of Level I and an additional 31 - 55 units of the Nursing program.

Value: \$1,100 (30114)

THE ROBERT NIXON SCHOLARSHIP

Established in 1991 by the Brant-Haldimand Liberal Association in honour of Dr. Robert Nixon (Class of '50, LL.D. '76). To be awarded to a student who, in the judgment of the Department of History, has demonstrated academic excellence and an active involvement in community life.

Value: \$575 (30203)

**THE NORTEL NETWORKS SCHOLARSHIPS
IN INFORMATION TECHNOLOGY**

Established in 1999 by Nortel Networks. Ten scholarships to be awarded to students entering a program in Electrical Engineering, Computer Engineering, Software Engineering, Engineering Physics or Computer Science.

Value: \$1,000 each (30257)

THE DERRY NOVAK SCHOLARSHIP

Established in 1984 by the Political Science alumni and colleagues in honour of Professor Derry Novak. To be awarded to the student in a program in Political Science who, in the judgment of the Department of Political Science, has achieved high standing in Level III courses in political theory or political philosophy.

Value: \$650 (40012)

THE FREDRIC P. OLSEN BOOK PRIZE

Established in 1974 in memory of Professor F.P. Olsen by his family, friends and former colleagues. To be awarded to a student who has completed Level I and an additional 60 - 75 units of an Honours program in Chemistry and who, in the judgment of the Department of Chemistry, shows particular promise as an experimental scientist.

Value: \$150 for books (30053)

THE ONTARIO ASSOCIATION OF SOCIAL WORKERS PRIZES

Established in 1986 and augmented in 1992 by the Hamilton Branch. Two prizes to be awarded to the graduating students, one first degree and one second degree, who successfully completes SOC WORK 4DD6 and attains the highest grade in SOC WORK 4D06 in the same session.

Value: \$125 each (50037)

**THE ONTARIO PROFESSIONAL ENGINEERS
FOUNDATION FOR EDUCATION GOLD MEDAL**

Established in 1961 by the Ontario Professional Engineers Foundation for Education. To be awarded to the graduand of a program in Engineering who attains the highest Cumulative Average. (50005)

**THE ONTARIO PROFESSIONAL ENGINEERS
FOUNDATION FOR EDUCATION IN-COURSE SCHOLARSHIPS**

Established in 1961 by the Ontario Professional Engineers Foundation for Education. Two scholarships to be awarded to students with the highest Sessional Average in the Faculty of Engineering: one to be awarded to a student after completion of Engineering I, and one to be awarded to a student after completion of Engineering I and 35 - 90 units.

Value: \$1,000 each (30006)

**THE ONTARIO PROFESSIONAL ENGINEERS
FOUNDATION FOR EDUCATION UNDERGRADUATE SCHOLARSHIPS**

Established in 1961 by the Ontario Professional Engineers Foundation for Education. Two scholarships to be awarded to students in the Faculty of Engineering who, in the judgment of the Faculty of Engineering, have demonstrated leadership and involvement in extracurricular activities and high academic achievement.

Value: \$1,000 each (40109)

380. UNDERGRADUATE AWARDS — IN-COURSE, GRADUAND, PART-TIME AND SECOND DEGREE

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 an additional 29 - 60 units who, in the judgment of the Selection Committee for Part-Time Awards, has made a significant contribution to the University life of part-time students.

Value: \$425 (40009)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

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 program in Classics who, in the judgment of the Department of Classics, demonstrates outstanding achievement in Greek or Latin.

Value: \$50 (30060)

THE F.W. PAULIN SCHOLARSHIP

Established in 1981 by the Canadian Engineering and Contracting Co. Limited in honour of its founder. To be awarded to a student who has completed Level I and an additional 73 - 85 units of the Civil Engineering program, or Level I and an additional 110 - 130 units of the Civil Engineering and Management program. Award is based on scholarship Sessional Average of at least 9.5 and evidence of leadership, self-motivation, and practical aptitude appropriate for a future in the construction industry.

Value: \$1,500 (30052)

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 I or 30-78 units of an Honours Music Program who, in the judgment of the School of the Arts, has attained notable academic standing and demonstrated excellence in keyboard performance.

Value: \$675 (30222)

THE HARRY L. PENNY PRIZE

Established in 1984 in recognition of Professor Harry L. Penny, founding Director of the School of Social Work, for his outstanding contribution to the School. To be awarded to the student with the highest Cumulative Average in a Social Work program.

Value: \$100 (50023)

THE PEVENSING SCHOLARSHIP

Established in 1987 by David C. Hannaford (Class of '64). To be awarded to a student who has completed Level I and an additional 60 - 75 units of an Honours program in Economics and who, in the judgment of the Department of Economics, has attained notable academic standing.

Value: \$600 (30120)

THE TONY PICKARD MEMORIAL SCHOLARSHIP

Established in 1973 by his wife and family, in honour of Captain Antony F. Pickard, O.B.E., C.D., R.C.N. (Ret'd).

Value: \$425 (30172)

THE PIONEER GROUP INC. GERONTOLOGY PRIZES

Established in 1988 by the Pioneer Group Limited. Two prizes to be awarded (a) one to a full-time student and (b) one to a part-time student, both of whom are graduating from a program in Gerontology who, in the judgment of the Department of Health, Aging and Society, have demonstrated high academic achievement and leadership in extracurricular activities.

Value: \$45 each (50021)

Students who wish to be considered for this award are encouraged to submit a resume to the Chair of the Department of Health, Aging and Society by April 15th.

THE PIONEER GROUP INC. PRIZE

Established in 1990. To be awarded to a student in a Gerontology program who, in the judgment of the Department of Health, Aging and Society, has achieved notable academic standing, and demonstrates practical aptitude for a career in health care of the elderly.

Value: \$400 (40058)

Students who wish to be considered for this award are encouraged to submit a resume to the Chair of the Department of Health, Aging and Society by April 15th.

THE PIONEER GROUP INC. PRIZES IN NURSING

Established in 1989 by the Pioneer Group Limited in conjunction with the R. Samuel McLaughlin Centre for Gerontological Health Research. Two prizes to be awarded to students graduating from the Nursing program who, in the judgment of the School of Nursing, have achieved notable standing and demonstrated practical aptitude for a career in the health care of the elderly.

Value: \$150 (50056)

THE PIONEER GROUP INC. SCHOLARSHIP

Established in 1988. To be awarded to students who have completed Level I and at least an additional 30 units of a program in Gerontology and who, in the judgment of the Department of Health, Aging and Society, have achieved high standing in 12 units of Gerontology courses (excluding GERONTOL 1A03) and who demonstrate leadership in the field of Gerontology.

Value: \$1,000 each (30121)

Students who wish to be considered for this award are encouraged to submit a resume to the Chair of the Department of Health, Aging and Society by April 15th.

THE PITCHER-RATFORD AWARDS

Established in 2000 by Bruce Ratford (Class of '71) and Elda Ratford (Pitcher) (Class of '71). Two scholarships (one to a male and one to a female) to be awarded to students who have completed Level III of an Honours Geography program and who, in the judgment of the School of Geography and Earth Sciences, have achieved notable academic standing and demonstrated qualities of leadership at McMaster or in the community.

Value: \$500 each (30273)

THE BRIAN POCKNELL MEMORIAL SCHOLARSHIP

Established in 2004 in memory of Brian Pocknell. To be awarded to an undergraduate student who has completed Level II in a French program and, in the judgment of the Department of French, has achieved notable academic standing.

Value: \$500 (30302)

THE POLITICAL SCIENCE HONOURS ESSAY PRIZE

Established in 1982. To be awarded to the student who in the judgment of the Department of Political Science, has demonstrated outstanding academic achievement in POL SCI 4Z06

Value: \$100 (50059)

THE POLITICAL SCIENCE PRIZE

Established in 1982. To be awarded to a graduating student who has completed a program in Political Science primarily on a part-time basis and who, in the judgment of the Department of Political Science, has demonstrated outstanding academic achievement.

Value: \$200 (50042)

THE BILL PRESTWICH SCHOLARSHIP

IN MEDICAL AND HEALTH PHYSICS

Established in 2003 by friends, colleagues and students in recognition of Bill Prestwich and his career as a teacher and researcher. To be awarded to a student entering Level II of the Medical and Health Physics program with the highest Sessional Average in any Level I program.

Value: \$500 (30300)

THE PRICEWATERHOUSECOOPERS SCHOLARSHIPS

Established in 2000 by PricewaterhouseCoopers. Two scholarships to be awarded to students entering Level III of the Honours Commerce program enrolled in COMMERCE 3AB3 and 3AC3 who, in the judgment of the School of Business, have achieved notable academic standing in COMMERCE 2AA3 and 2AB3, and demonstrated qualities of leadership at McMaster or in the community.

Value: \$2,500 each (30271)

THE PROVOST'S HONOUR ROLL MEDAL *

Established in 2005. To be awarded to students named to the Provost's Honour Roll.

Value: Medal (30314)

THE PSYCHOLOGY SOCIETY PRIZES

Established in 1985 by the Psychology Society and the Faculty and Alumni of the Department of Psychology, Neuroscience and Behaviour. Three prizes to be awarded to students who have completed Level I and an additional 60 - 75 units with the highest Sessional Average: (a) one in the Honours Psychology B.A. program; (b) one in the Honours Psychology B.Sc. program; and (c) one in a combined Honours program in Psychology.

Value: \$70 each (30123)

THE DR. JOHN A. PYLYPIUK SCHOLARSHIP

Established in 1967 in memory of Dr. John A. Pylypiuk and in recognition of Canada's Centennial Year. To be awarded to the student who has completed Level II of an Honours program in History with the highest Sessional Average and who in that session achieves a grade of at least A- in HISTORY 2T03 and 2TT3.

Value: \$700 (30039)

THE RAND MEMORIAL PRIZE OF CLASS '98

Established by the Class of 1898 in Arts, on the occasion of the 25th anniversary of graduation, 1923, in memory of Chancellor Theodore Harding Rand, to encourage original literary work. To be awarded to the student who has completed Level I and an additional 60 - 75 units and who, in the judgment of the Department of English and Cultural Studies, has made the most notable original contribution to student publications.
Value: \$250 (40045)

THE LLOYD REEDS PRIZES

Established in 1983 in recognition of Dr. Lloyd G. Reeds for his outstanding contributions to the Department of Geography during 35 years of service. Four prizes to be awarded: (a) one to the student who attains the highest Cumulative Average in an Honours B.A. program in Geography; (b) one to the student who attains the highest Cumulative Average in an Honours B.Sc. program in Earth and Environmental Sciences; (c) one to the student who attains the highest Cumulative Average in a three-level B.A. program in Geography or B.Sc. program in Geoscience with a concentration in Geo; and (d) one to the student who, in the judgment of the School of Geography and Earth Sciences, has demonstrated outstanding achievement in GEO 4R06.
Value: \$100 each (50033)

THE SHARON REEVES SCHOLARSHIP

Established in 1987 by Kevin W. Reeves (Class of '80) in memory of his wife, Sharon (Class of '79). To be awarded to a student entering Level III or IV of an Honours program in Music (Education) and who, in the judgment of the School of the Arts, has attained notable standing.
Value: \$425 (30135)

THE RELIGIOUS STUDIES PRIZES

Established in 1982. Two prizes to be awarded to students who attain the highest Cumulative Average in a three- or four-level program in Religious Studies: (a) one to a student who has completed the program on a full-time basis, and (b) one to a student who has completed the program primarily on a part-time basis.
Value: \$100 each (50045)

THE RETIRED TEACHERS OF ONTARIO HAMILTON/HALDIMAND DISTRICT PRIZE IN GERONTOLOGY

Established in 1987 by the Superannuated Teachers of Ontario, District 13. To be awarded to the student who attains the highest standing in GERONTOL 1A03.
Value: \$200 (40047)

THE ELLA JULIA REYNOLDS SCHOLARSHIPS

Established in 1984 by bequest of Ella Julia Reynolds of Hamilton. Two scholarships to be awarded on the basis of scholarship and character to students who have completed Level I and an additional 30 - 75 units of the Honours English or the Honours English and History programs with a Sessional Average of at least 9.5. The recipients must not be holders of another scholarship.
Value: \$1,000 each (30044)

THE GLADYS RICHARDS SCHOLARSHIP

Established in 2002 by bequest of Gladys Richards. Two scholarships to be awarded to students who have completed at least Level II of a single Honours program in English or a Combined Honours English and History program who, in the judgment of the Departments, have demonstrated outstanding academic achievement. Students may not hold another scholarship of equal or greater value.
Value: \$2,000 each (30288)

THE JACK RICHARDSON MEMORIAL SCHOLARSHIP

Established in 2002 in memory of Jack Richardson by family, friends and colleagues. To be awarded to a part-time student who has completed at least Level II in an Honours Sociology program and who attains the highest Cumulative Average at the most recent review.
Value: \$400 (60013)

THE HERBERT A. RICKER SCHOLARSHIPS

Established in 1982 by bequest of Mrs. Edna Elizabeth Ross Reeves of Hamilton in memory of her husband, Herbert A. Ricker. Four scholarships to be awarded on the basis of scholarship (Sessional Average of at least 9.5) and character to: (a) two to students who have completed Engineering I, or Level I and an additional 35 - 90 units of a program in Engineering, and (b) two to students who have completed Science I or Level I and an additional 30 - 75 units of a program in Science.
Value: \$2,000 each (30065)

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 an additional 60 - 75 units of an Honours program in Geography and who, in the judgment of the School of Geography and Earth Sciences, has attained high academic standing.
Value: \$325 (30129)

THE ABRAHAM ROSENBERG MEMORIAL PRIZE

Established in 1986 by bequest of Abraham I. Rosenberg (Class of '34) of Hamilton and Kitchener. To be awarded to the graduating student who attains the highest Cumulative Average in the Honours Philosophy program.
Value: \$225 (50095)

THE MORRIS AND SARAH ROSENHEAD MEMORIAL PRIZE

Established in 1988 by bequest of Sarah Rosenhead of Hamilton. To be awarded to the student who attains the highest standing in ENGLISH 1A03 and 1AA3
Value: \$125 (40033)

THE ROTARY CLUB OF HAMILTON SCHOLARSHIP

Established in 1989.
Value: \$575 (30168)

THE ELLEN BOUCHARD RYAN SCHOLARSHIP*

Established in 2000 by the McMaster Centre for Gerontological Studies, and supported by family, in recognition of Dr. Ellen Bouchard Ryan's outstanding contribution to the field of aging. To be awarded to a student who, in the judgment of the Department of Health, Aging and Society, has demonstrated high academic achievement and leadership in ages-related community activities.
Value: \$400 (40092)

Students who wish to be considered for this award are encouraged to submit a resume to the Chair of the Department of Health, Aging and Society by April 15th.

THE 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 an additional 60 - 75 units of any Honours Classics or Honours History program, including at least 12 units of Ancient History and Archaeology, and who, in the judgment of 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)

Travel Scholarship applications are due February 15th.

THE E. TOGO SALMON PRIZE IN HISTORY

Established in 1973 by friends and colleagues of Professor E.T. Salmon on his retirement, in recognition of his outstanding contribution to the Department of History. To be awarded to the student who has completed Level I and an additional 60 - 75 units and who, in the judgment of the Department of History, attains notable standing in an Honours program in History.
Value: \$175 for books (30045)

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 an additional 30 - 45 units of a program in History who, in the judgment of the Department of History, attains notable academic standing in at least nine units of History courses.
Value: \$150 for books (40075)

THE HILDA SAVAGE MEMORIAL SCHOLARSHIP

Established in 1960 by bequest of Bertha Savage.
Value: \$500 (30166)

THE LARRY SAYERS PRIZE IN EAST ASIAN HISTORY*

Established in 1983 in memory of Larry P. Sayers (Class of '82) by his friends. To be awarded to the student who, in the judgment of the Department of History, has demonstrated outstanding achievement in at least six units of courses work in East Asian history.
Value: \$275 (40030)

THE DR. SINA SAZGAR MEMORIAL SCHOLARSHIP

Established in 1999 in memory of Dr. Sina Sazgar, Hon. B.Sc. (Class of '93), a young, exceptionally gifted and caring medical doctor who tragically passed away on October 26, 1993. To be awarded to a student enrolled in an Honours Bachelor of Science program who, in the judgment of the Faculty of Science, has demonstrated outstanding academic performance.
Value: \$1,000 (30263)

THE FEDOR SCHNEIDER SCHOLARSHIP IN ITALIAN

Established in 2004 by bequest of Mary Anna Schneider. To be awarded to a student entering Level III of an Honours Italian or Honours Linguistics program with a concentration in Italian and who, in the judgment of the Department of Linguistics and Languages, has achieved notable academic standing. Open to non-native speakers of Italian only.

Value: \$750 (30310)

THE SCHOOL OF THE ARTS SCHOLARSHIP IN MUSIC

Established in 1993 by the Department of Music which later became part of the School of the Arts. To be awarded to a student who, in the judgment of the School of the Arts, has demonstrated academic excellence in Music.

Value: \$950 (30216)

THE SCIENCE ALUMNI SCHOLARSHIPS

Established in 2001 by the Faculty of Science through the generosity of its alumni and friends. A variable number of scholarships to be awarded to students entering a Level III program in Science who, in the judgment of the Faculty of Science, have demonstrated outstanding academic achievement and leadership.

Value: \$500 each (30278)

THE SHEILA SCOTT SCHOLARSHIP FOR BRANDON HALL

Awarded to the student who resides in the residence with the highest Sessional Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session.

Value: \$750 (30202)

THE SHEILA SCOTT SCHOLARSHIP IN ENGLISH

Established in 1983 by graduates of McMaster University and friends in honour of Sheila Scott, Dean of Women from 1965 to 1982, in recognition of her outstanding contribution to the University community during 25 years of service. To be awarded to the student who has completed Level I and an additional 60 - 75 units of the Honours English program, and who attains the highest Sessional Average.

Value: \$475 (30136)

THE SHEILA SCOTT SCHOLARSHIP FOR WALLINGFORD HALL

Awarded to the student who resides in the residence with the highest Sessional Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session.

Value: \$750 (30158)

THE LARRY SEFTON SCHOLARSHIPS *

Established in 1985 by the Hamilton Steelworkers Area Council in memory of Larry Sefton, area supervisor (1946-53) and director of District 6 (1953-73) of the United Steelworkers of America, to recognize his commitment to education, to working people, to unions and to the City of Hamilton. Three scholarships to be awarded to students in the Labour Studies program who, in the judgment of the Committee of Instruction for Labour Studies, have achieved notable standing in any level.

Value: \$500 each (40097)

THE GRACE SENRA-FONTES MEMORIAL PRIZE *

Established in 1989 by the graduating class (Class of '88) in association with the McMaster University Nursing Society and the McMaster Nursing Alumni Executive in memory of Grace Senra-Fontes (Class of '88) of Toronto. To be awarded to a student in Level III or IV of the Nursing program and who, in the judgment of the School of Nursing, best demonstrates excellence in scholarship and leadership, and has served as a valuable role model for those qualities deemed important to success in a nursing career. Preference will be given to students enrolled in Level IV of the Nursing Program.

Value: \$250 (40103)

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 1AA3.

Value: \$120 for books (40059)

THE ALBERT SHALOM TRAVEL SCHOLARSHIP

Established in 1994 by family, friends and colleagues in memory of Albert Shalom, Professor of Philosophy at McMaster University from 1966 to 1991. To be awarded to a student who is enrolled in a program in Philosophy, and has, in the judgment of the Department of Philosophy, attained notable standing. Preference will be given to a student travelling and studying abroad during the summer before the final Fall/Winter session, but the scholarship could also be used to fund the final year of study at McMaster.

Value: \$725 (30225)

Travel Scholarship applications are due February 15th.

THE LOUIS J. SHEIN SCHOLARSHIP

Established in 1990 by family and friends in memory of Dr. L.J. Shein, founding chair of the Russian Studies program and faculty member from 1958 to 1980. To be awarded to a student who, in the judgment of the Department of Linguistics and Languages, has achieved notable standing in a Russian language course.

Value: \$375 (30189)

THE SHELL CANADA PRIZES IN ENGINEERING AND MANAGEMENT

Established in 1983. Three prizes to be awarded to students graduating from an Engineering and Management program. Awards will be based on scholarship and on the quality of and creativity shown in written communication.

Value: \$300 each (50049)

THE SHELL CANADA SCHOLARSHIPS IN ENGINEERING AND MANAGEMENT

Established in 1983. Three scholarships to be awarded to students who have completed Level I and at least an additional 110 units of a program in Engineering and Management. Awards will be based on scholarship and on the quality of and creativity shown in written and oral reports.

Value: \$1,100 each (30137)

THE SHENSTONE PRIZE

Established in 1903 by J.N. Shenstone of Toronto, and continued by members of his family. To be awarded to the student who has completed Science I and who attains the highest average in any four of the Level I courses in Chemistry, Physics and Biology.

Value: \$200 (30138)

THE GERALD AND VERA SIMPSON MEMORIAL SCHOLARSHIP

Established in 1957 by the children in memory of their parents. To be awarded to the student who has completed Level I and an additional 30 - 45 units of the Honours Physics program with the highest Sessional Average.

Value: \$450 (30059)

THE RICHARD SLOBODIN PRIZE

Established in 1982 in honour of Professor Richard Slobodin for his outstanding contributions to the Department of Anthropology. To be awarded to the graduating full-time student in an Honours Anthropology program who, in the judgment of the Department, has demonstrated outstanding academic achievement.

Value: \$100 (50046)

Students who wish to be considered for this award are encouraged to submit a resume to the Department of Anthropology by April 15th.

THE PATRICIA L. SMYE MEMORIAL PRIZES

Established in 1972 by the Patricia Smye Memorial Fund Committee. Two scholarships to be awarded to students who have completed Level I and an additional 30 - 45 units and who attain the highest Sessional Average: (a) one in the three-level English program and (b) one in the three-level Psychology B.A. program.

Value: \$375 each (30118)

THE SOCIAL WORK PRIZE

Established in 1982. To be awarded to the student who attains the highest grade in SOC WORK 2A06.

Value: \$100 (40050)

THE SOCIETY OF CHEMICAL INDUSTRY MERIT AWARDS

Established in 1961. Three plaques to be awarded: (a) one to a Chemical Engineering graduand, (b) one to an Honours Biochemistry or Honours Biochemistry and Chemistry graduand, and (c) one to an Honours Chemistry graduand, who have attained the highest Cumulative Average (at least 9.5) and have completed the program in the normal number of years.

Value: Plaque (50060)

THE SOCIOLOGY PRIZES

Established in 1982. Two prizes to be awarded to students with the highest Cumulative Averages: (a) one to a student who has completed the three-level program in Sociology on a full-time basis; and (b) one to a student who has completed a program in Sociology primarily on a part-time basis.

Value: \$100 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)

The recipient of this award is eligible to receive additional aid through the corresponding Supplementary Bursary Aid Fund if he/she demonstrates financial need. Please see the section on *Supplementary Bursary Aid for Award Recipients* in the *Student Financial Aid* section of this Calendar.

THE SONS OF ITALY OF ONTARIO SCHOLARSHIP

Established in 1971 by the Order Sons of Italy of Ontario. To be awarded to a student who has completed at least 30 units beyond Level I in a program in the Department of Linguistics and Languages 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)

THE SOUTH ONTARIO ECONOMIC DEVELOPMENT COUNCIL SCHOLARSHIPS

Established in 1973 by the South Ontario (formerly Niagara) Economic Development Council. Two scholarships to be awarded, normally one in each of the B.A. and B.Sc. programs, to the students who have completed Level I and an additional 60 - 75 units of the Honours Geography program and who elect GEO 4R06 in their graduating session. Awards are based on scholarship and interest in undertaking studies relating to regional development and regional planning in the Niagara Peninsula.

Value: \$2,000 each (30142)

THE ROBERT SOWERBY MEMORIAL SCHOLARSHIP

Established in 2002 by family, friends and colleagues, in memory of Dr. R. Sowerby, a professor of Mechanical Engineering. To be awarded to a student enrolled in the Bachelor of Technology program who, in the judgment of the Department of Mechanical Engineering, has demonstrated notable academic achievement.

Value: \$500 (40108)

THE MARNIE SPEARS SCHOLARSHIP

Established in 1993 by many friends, colleagues and alumni of McMaster University as a tribute to Marnie Spears (Class of '69), Executive Director, Development and Public Relations from 1986-93 and dedicated alumna who served as President of the McMaster Alumni Council in 1980, in recognition of her outstanding contribution to the University. To be awarded to the student who has completed Level I and at least an additional 30 units of an Honours program with notable academic standing and who, in the judgment of a Selection Committee, has demonstrated leadership in public, community or University alumni relations.

Value: \$1,150 (30217)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE SPORT COACHING PRIZE

Established in 2003 by Pauline McCullagh, a former faculty member of the School of Physical Education, Athletics and Recreation. To be awarded to a Level III or IV Kinesiology student who, in the judgment of the Department of Kinesiology, attains notable standing in one of KINESIOL 3M03, 4EE3 or 4N03 and has demonstrated excellence in sport coaching.

Value: \$500 (40112)

Students who wish to be considered for this award should pick up an application form from the Department of Kinesiology by April 1.

THE S.L. SQUIRE SCHOLARSHIPS

Established in 1938 by bequest of S.L. Squire of Toronto. Four awards to be made to students in any Level I program who attain the highest standing in any two of MATH 1AA3, 1B03, 1H03, 1NN3, and in other tests provided for this scholarship by the Department of Mathematics and Statistics.

Value: \$425 each (30132)

THE STANTEC CONSULTING LTD. ENGINEERING SCHOLARSHIP

Established in 2005 by Stantec Consulting Ltd. (Hamilton office). To be awarded to a student who has completed Level I with the highest Sessional Average and who is entering a Level II program in Civil Engineering.

Value: \$2,500 (30315)

THE CLARENCE L. STARR PRIZE

Established in 1946 in memory of Dr. C.L. Starr, M.D., LL.D., F.A.S.S., Professor of Surgery at the University of Toronto, and an honorary alumnus of McMaster University (LL.D. 1922). To be awarded to the student who has completed Nursing I and who attains the highest Sessional Average.

Value: \$150 (30025)

THE ANNE STEIN MEMORIAL PRIZE *

Established in 1981. To be awarded to the part-time student who successfully completes SOC WORK 3D06 and attains the highest grade in SOC WORK 3D06 in the same session.

Value: \$125 (60001)

THE ANNE STEIN MEMORIAL PRIZE

Established in 1971 by friends and colleagues of Anne Stein. To be awarded to the student who successfully completes SOC WORK 3D06 and attains the highest grade in SOC WORK 3D06 in the same session.

Value: \$125 (40003)

THE LEONA ALLERSTON RYAN AND GORDON HENRY STEVENS MEMORIAL SCHOLARSHIP

Established in 1995 by Elaine Keillor in memory of Leona and Gordon Stevens. To be awarded to a student who has completed Level I and an additional 30 - 75 units of an Honours program in Music or Art who, in the judgment of the School of the Arts, has demonstrated outstanding achievement.

Value: \$525 (30229)

THE MABEL STOAKLEY SCHOLARSHIP

Established in 1956 by the Young Women's Canadian Club of Toronto (now the Career Women's Canadian Club of Toronto). To be awarded to a woman student who has completed Level I and an additional 30 - 45 units of any program and who gives evidence of outstanding academic achievement and leadership.

Value: \$425 for books (30103)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE STOBO SCHOLARSHIP

Established in 1957 by bequest of William Q. Stobo.

Value: \$325 (30170)

THE MARIE L. STOCK SCHOLARSHIP

Established in 1987 by the French Section of the Department of Romance Languages in honour of Marie L. Stock, Professor Emeritus of French, and Chair of the Department of Romance Languages from 1962 to 1965. To be awarded to the student who has completed Level I and an additional 60 - 75 units of an Honours program in French and who, in the judgment of the Department of French, has achieved notable academic standing.

Value: \$450 (30104)

THE MARK JOHN STOJCIC SCHOLARSHIPS

Established in 1997 by bequest of Mark John Stojic. Two scholarships to be awarded to students who have completed Level III of a Materials Science and Engineering program who, in the judgment of the Department of Materials Science and Engineering, demonstrate outstanding academic achievement.

Value: \$1,800 each (30242)

THE SWISS MINISTER TO CANADA BOOK PRIZES

Established in 1950. To be awarded from time to time to in-course students for proficiency in French, German, or Italian.

Value: Book (40051)

THE JUANITA LEBARRE SYMINGTON SCHOLARSHIP

Established in 1981 by The Women's Art Association of Hamilton in memory of Juanita LeBarre Symington. To be awarded to the student entering the graduating session of the Honours Art program with the highest Sessional Average. The recipient must be from the Hamilton-Wentworth Region.

Value: \$750 (30092)

THE DR. ANDREW SZENDROVITS MEMORIAL SCHOLARSHIP

Established in 1999 by family, friends and colleagues in memory of Dr. Andrew Szendrovits, a former professor of Production and Management Science since 1962 and Dean of the Faculty of Business from 1979 to 1984 at McMaster University. To be awarded to the student enrolled in a Commerce program who achieves the highest average in the operations/management science courses (COMMERCE 3QC3 and 3QA3) taken in the same session.

Value: \$450 (30265)

THE KENNETH W. TAYLOR BOOK PRIZE *

Established in 1976 by his children in memory of Dr. Kenneth W. Taylor (Class of '21), LL.D. (Class of '50). To be awarded to the student who, in the judgment of the Department of Economics, has demonstrated outstanding academic achievement in courses within the areas of monetary economics and financial institutions, and of public finance.

Value: \$100 for books (40029)

THE THEATRE & FILM STUDIES BOOK PRIZE

Established in 1974 by Professor Ronald W. Vince. To be awarded to the student who attains the highest standing in THTR&FLM 1A03 and 1B03

Value: Book (40014)

THE HUGH R. THOMPSON MEMORIAL PRIZE

Established in 1960 in memory of Dr. Hugh R. Thompson. To be awarded to the student who has completed Level I and an additional 30 - 45 units of an Honours program in the School of Geography and Earth Sciences with the highest Sessional Average.

Value: \$250 (30069)

THE DR. R.A. THOMPSON PRIZE IN MATHEMATICS

Established in 1954 by bequest of Dr. William Bethune, in memory of R.A. Thompson, B.A., LL.D., Principal of Central Collegiate Institute, Hamilton, from 1897-1919, in recognition of his contribution to education in Hamilton. To be awarded to the student who has completed Level I and an additional 60 - 75 units of an Honours program in Mathematics and/or Statistics, who attains a high Sessional Average.
Value: \$300 (30040)

THE MICHAEL THOMSON MEMORIAL BOOK PRIZES

Established in 1975 by the members of the Departments of German and Russian in memory of Michael Thomson, Supervisor of the McMaster University language laboratories from 1961 to 1975. Two prizes to be awarded: (a) one to the student who attains the highest standing in GERMAN 1Z06 and (b) one to the student who attains the highest standing in RUSSIAN 3AA3.
Value: \$50 each for books (40035)

THE TINNEMAN 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 Program who, in the judgment of the Department of Mechanical Engineering, has achieved notable academic standing and demonstrated qualities of leadership at McMaster or in the community.
Value: \$2,800 (30279)

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 program and who, in the judgment of the Department of Philosophy, has demonstrated leadership and influence in scholarly activities related to the field of philosophy.
Value: \$500 (30190)

THE CORELENE HELEN TOSTEVIN SCHOLARSHIPS

Established in 1998 by bequest of Corelene Tostevin. Five awards to be granted to students who are registered in a Post-RN degree program and who, in the judgment of the School of Nursing, have demonstrated notable academic achievement.
Value: \$250 each (40083)

THE JOHN TOTH MEMORIAL PRIZE *

Established in 1983 in memory of John Toth by his friends. To be awarded to the student who attains the highest average in any six units of Level III or IV Latin courses.
Value: \$50 (40028)

THE JOHN H. TRUEMAN PRIZE

Established in 1989 as a tribute to Professor John H. Trueman by his many friends, colleagues and students on the occasion of his retirement from McMaster University. To be awarded to the graduating student who demonstrates the most outstanding ability in medieval history.
Value: \$250 (50067)

THE JOHN H. TRUEMAN SCHOLARSHIP *

Established in 1989 as a tribute to Professor John H. Trueman by his many friends, colleagues and students on the occasion of his retirement from McMaster University. To be awarded to the student who has completed Level I and who, in the judgment of the Department of History, has achieved notable academic standing in medieval history.
Value: \$250 (40104)

THE THOMAS TRUMAN MEMORIAL PRIZE

Established in 1992 by friends and colleagues in memory of Professor Thomas Truman, a member of the Department of Political Science from 1966 to 1990. To be awarded to the student entering the final level of an Honours program in Political Science who, in the judgment of the Department of Political Science, has achieved notable academic standing in at least nine units of Comparative Politics courses.
Value: \$75 (40068)

THE UNIVERSITY ACHIEVEMENT AWARDS

Established in 2006. Awarded for overall academic excellence to part-time students in undergraduate programs. Each year, quotas are established in proportion to the number of part-time undergraduate students who obtain a Cumulative Average of 8.0 or greater and who are named to the Deans' Honour List.
Value: \$800 (40118)

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 (SENATE) 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. (60003)

THE VALLEY CITY MANUFACTURING CO. LTD. SCHOLARSHIPS

Established in 1991 by the Valley City Manufacturing Co. Ltd. of Dundas, Ontario. Two scholarships to be awarded to the students enrolled in an Honours B.Sc. program: one to the student entering Level II and one to the student entering Level III who attain the highest Sessional Average. Recipients may not hold another scholarship of equal or greater value.
Value: \$1,575 each (30205)

THE VAREY SCHOLARSHIP

Established in 1978 by J.C. Varey, Dundas, in memory of Albert E. Varey. To be awarded to a student in an Honours Program in Classics who, in the judgment of the Department of Classics has achieved notable academic standing.

Value: \$275 (30151)

THE JIM WADDINGTON PRIZE IN PHYSICS AND ASTRONOMY

Established in 2004 by friends, colleagues and students in recognition of Jim Waddington and his career as a teacher and researcher. To be awarded to a student entering Level II of an Honours program in the Department of Physics and Astronomy who has attained the highest grade in PHYSICS 1BA3.

Value: \$500 (30312)

THE HARRY WAISGLASS BOOK PRIZE

Established in 1988 in honour of Harry Waisglass, the first Director of the Labour Studies Education Program at McMaster. To be awarded to a student graduating from a program in Labour Studies who, in the judgment of the Committee of Instruction for Labour Studies, has demonstrated outstanding achievement.

Value: \$50 for books (50024)

THE MELINDA WAPSHAW ACHIEVEMENT AWARD *

Established in 1993 by the Labour Studies Student Association and the Labour Studies Program. To be awarded to a student who has completed Level I and an additional 60 - 75 units of an Honours Program in Labour Studies and who, in the judgment of the Committee of Instruction, demonstrates outstanding achievement.

Value: \$175 (40074)

THE F.W. WATERS SCHOLARSHIP IN PHILOSOPHY

Established in 1990 by the former students, colleagues and friends of Dr. F.W. Waters, Professor from 1935 to 1959. To be awarded to the student entering Level IV of an Honours Program in Philosophy who, in the judgment of the Department of Philosophy, shows the most academic promise.

Value: \$750 (30197)

THE F.W. WATERS SCHOLARSHIP IN

PHILOSOPHY FOR PART-TIME STUDENTS

Established in 1998 by former students, colleagues and friends of Dr. F. W. Waters, Professor from 1935 to 1959. To be awarded to a part-time student in a Philosophy program who, in the judgment of the Department of Philosophy, has demonstrated outstanding academic achievement. No student will be eligible to receive this award more than once.

Value: \$250 (60008)

THE RALPH WEEKES SCHOLARSHIP *

Established in 1994 by the Investors Group Financial Services to recognize the accomplishments of Ralph Weekes (Class of '73). To be awarded to a student enrolled in a program in Economics who, in the judgment of the Department of Economics, has attained notable standing. Preference to be given to a student pursuing studies on a part-time basis.

Value: \$800 (40073)

THE WEISZ FAMILY FOUNDATION SCHOLARSHIP

Established in 1982. To be awarded to the student who has completed Level I and an additional 60 - 75 units of the Honours Commerce program and who attains the highest Sessional Average (at least 9.5).

Value: \$1,500 (30152)

THE HOWARD P. WHIDDEN SCHOLARSHIP

Established in 1941 by the Honourable Jacob Nicol (Class of '00) of Sherbrooke, Québec, in honour of Chancellor Howard P. Whidden, with a view to fostering relations of friendship and understanding between French-speaking and English-speaking Canadians. To be awarded to a student who has completed six units of French and who shows ability and promise in the use of the French language. The recipient will study at a Quebec university during the summer.

Value: \$800 (30176)

Travel Scholarship applications are due February 15th.

THE WHIDDEN HALL RESIDENCE SCHOLARSHIP

Awarded to the student who resides in the residence with the highest Sessional Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session.

Value: \$750 (30159)

THE R.M. WILES MEMORIAL BOOK PRIZE *

Established in 1975 in memory of Professor Roy McKeen Wiles by his friends and colleagues. To be awarded to the student who, in the judgment of the Department of English and Cultural Studies, has written the best essay on a topic relating to English literature of the period 1660-1800.

Value: \$250 for books (40044)

THE T. RUSSELL WILKINS MEMORIAL SCHOLARSHIPS

Established in 1963 by bequest of Mrs. T. Russell Wilkins (B.A. '18 Brandon, M.A. '32), daughter of former Chancellor Howard P. Whidden, in memory of her husband, Dr. T. Russell Wilkins (Class of '11). Two scholarships to be awarded to students entering the penultimate level of an Honours program in Arts and Science, Health Sciences or Science who have demonstrated outstanding academic achievement. In addition, the students should demonstrate a lively interest in the humanities and in the human and social implications of scientific developments. The purpose of the scholarship is to enable the winners to spend the summer before the final Fall/Winter session in travel and study outside Canada.

Value: \$4,600 each (30178)

Travel Scholarship applications are due February 15th.

THE MARJORIE AND CHARLES WILKINSON SCHOLARSHIP

Established in 1991 by the family in honour of Marjorie Wilkinson, author of many books and addresses on religion, and co-founder of the Hamilton Lay School of Theology at McMaster in 1966, and Charles Wilkinson, religion editor and writer for the Hamilton Spectator from 1963-1985. To be awarded to the student who has completed at least 30 units beyond Level I of an Honours program in Religious Studies and who, in the judgment of the Department of Religious Studies, has attained notable academic standing in courses in Christian thought.

Value: \$450 (30191)

THE THOMAS E. WILLEY SCHOLARSHIP

Established in memory of Dr. Thomas E. Willey in 1996 by his family, colleagues and friends. To be awarded to an undergraduate student who, in the judgment of the History and the Linguistics and Languages departments, has demonstrated excellence in German studies.

Value: \$375 (40082)

THE EMANUEL WILLIAMS SCHOLARSHIP IN PHYSICS

Established in 1948 by Arabel M. Williams of Port Colborne as a memorial to her brother. To be awarded to the student who has completed Level I and an additional 30 - 45 units of an Honours program in Physics with the highest Sessional Average.

Value: \$1,200 (30049)

THE DAVID WINCH MEMORIAL SCHOLARSHIP

Established in 2003 in memory of Professor David Winch by his family, friends and colleagues. To be awarded to a part-time student in the Faculty of Social Sciences who has completed at least Level II and who, in the judgment of the Faculty, has demonstrated notable academic achievement.

Value: \$425 (60012)

THE WOMEN'S ART ASSOCIATION SCHOLARSHIPS

Established in 1969. Two scholarships to be awarded: (a) one to a student entering Level II and (b) one to a student who has completed Level I and an additional 30 - 45 units of a program in Honours Art or Honours Art History with the highest Sessional Average. The recipients must be from the Hamilton-Wentworth Region.

Value: \$750 each (30153)

THE WOODSTOCK HALL RESIDENCE SCHOLARSHIP

Awarded to the student who resides in the residence with the highest Sessional Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session.

Value: \$750 (30160)

THE IVOR WYNNE MEMORIAL PRIZE

Established in 1971 in memory of Ivor Wynne, Dean of Students. To be awarded to a student who has completed Level III of the Kinesiology program and who attained the highest Cumulative Average.

Value: \$250 (30075)

THE MARGUERITE Z. YATES SCHOLARSHIP

Established in 1960 by bequest of Mrs. W.H. Yates of Hamilton.

Value: \$225 (30167)

THE YATES SCHOLARSHIPS

Established in 1963 by bequest of William Henry Yates of Hamilton.

Value: \$800 each (30171)

THE GLADYS A. YOUNG SCHOLARSHIP

Established in 1991 by T.G. Harvey in honour of his wife, Gladys B.Sc., (Class of '37), M.Sc., (Class of '38), one of a group of researchers who commenced radio astronomy research with the National Research Council of Canada. To be awarded to the student who has completed Level I and an additional 30 - 65 units of an Honours program in Mathematics or Physics with the highest Sessional Average. The recipient must not hold another scholarship of equal or greater value.

Value: \$1,600 (30206)

THE LILLIAN AND MANUEL ZACK SCHOLARSHIP

Established in 1984 by Lillian and Manuel Zack (Class of '40) of Hamilton. To be awarded to a student who has completed Level I and an additional 70 - 85 units of a program in Nursing and who, in the judgment of the School of Nursing, has demonstrated achievement, initiative, and commitment to gerontological nursing through clinical practice, term papers, research interest, or community activities and who pursues these interests in Level IV.

Value: \$1,800 (30101)

ACADEMIC GRANTS FOR FULL-TIME, IN-COURSE STUDENTS

THE MARGARET ELIZABETH BURKE MEMORIAL ACADEMIC GRANT

Established in 2005 by Dr. Dennis Burke in memory of his wife, Margaret. To be awarded to a student who has completed Level I in the B.Sc.N. program and who, in the judgment of the School of Nursing, has attained the highest grade in the required Level I Anatomy/Physiology courses and demonstrates financial need.

Value: \$2,900 (85004)

THE WILLIAM F. CAMPBELL ACADEMIC GRANT

Established in 2005 by Margaret Campbell, M.Sc. (Class of '72) and David F. Campbell Taylor in memory of their father William F. Campbell, B.A. (Class of '36) of Ottawa. To be awarded to students entering Level II in the Faculty of Engineering and the Faculty of Science who have completed Level I with high Sessional Averages and demonstrate financial need. Tenable in Levels III and IV provided that the recipients remain registered in their Faculty and maintain a minimum Sessional Average of 9.5. These awards will be divided equally between the Faculty of Engineering and the Faculty of Science.

Value: \$6,000 (\$2,000 each year) (85010)

THE HATCH ACADEMIC GRANT IN ENGINEERING

Established in 2005 by Hatch to celebrate their 50th anniversary and their success in providing engineering expertise to clients around the world. Two grants to be awarded to students in a program in Civil, Chemical, Materials or Mechanical Engineering who have a high Sessional Average and demonstrate financial need: a) one after the completion of Level I and an additional 33-45 units, and b) one after the completion of Level I and an additional 58-82 units.

Value: \$1,000 each (85001)

THE JACK HOWETT ACADEMIC GRANT

Established in 2005 by the Organization of CANDU Industries in honour of Jack Howett, a founding member of OCI. To be awarded to a student who has completed Level I and an additional 74 - 79 units of an Engineering Physics program specializing in the Nuclear Engineering and Energy Systems Stream with a high Sessional Average, and who demonstrates financial need.

Value: \$500 (85002)

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THE KNEALE BROTHERS '37 ACADEMIC GRANT

Established in 2006 by brothers Verne and Graham Kneale (Class of '37) in honour of their family's belief in higher education. To be awarded to a student registered in the Faculty of Social Sciences or the Faculty of Humanities who has completed Level I and an additional 30-45 units, attains a high Sessional Average, and who demonstrates financial need.
Value: \$2,000 (85011)

THE THELMA LAZAROWICH ACADEMIC GRANT

Established in 2005 by Michael Lypka, B. Com. (Class of '80) in memory of his grandmother. To be awarded to a student entering Business I in a full-time program of study in the DeGroote School of Business who has a high final admission average and demonstrates financial need. Award is tenable for up to four years provided the recipient maintains a minimum Sessional Average of 9.5.
Value: \$5,000 (85012)

THE TAYLOR LEIBOW ACADEMIC GRANT

Established in 2006 by Taylor Leibow LLP, a Hamilton-based firm established in 1947. To be awarded to a student who has completed Level II or III of the Bachelor of Commerce program, attains a high Sessional Average and demonstrates financial need.
Value: \$800 (85014)

THE ELEANOR MORRIS ACADEMIC GRANT

Established in 2005 by Sandra Morris, B.A. (Class of '82) in memory of her mother, Eleanor Morris. To be awarded to a student in the B.Sc.N. program in the School of Nursing who has completed Level I with a high Sessional Average and demonstrates financial need.
Value: \$800 (85006)

THE MANSON OLSON ACADEMIC GRANT

Established in 2005 by Marguerite Olson (Class of '50) in honour of her father Gordon Manson (Class of '38), her brother John Manson (Class of '56) and her husband Theodore Olson (Class of '51). To be awarded to a student in the Faculty of Science who has attained a high Sessional Average and demonstrates financial need.
Value: \$800 (85003)

THE POLLOCK FAMILY ACADEMIC GRANT

Established in 2006 by Dr. Ken Pollock, Dr. Gary Pollock, Dr. Mark Pollock and Dr. Ted Pollock. To be awarded to a student in the Faculty of Engineering who has completed Level I, attained a high Sessional Average and demonstrates financial need.
Value: \$800 (85005)

UNDERGRADUATE AWARDS AND ACADEMIC GRANTS BY FACULTY

Legend

AWARD AND GRANT CATEGORY

- B In-Course (Full-time) Awards
- C Part-time Awards
- D Specific Achievement Awards
- E Graduated Awards
- F Second Degree Awards
- G Academic Grants

AWARD TYPE

- J Judgmentally Awarded
- M Mathematically Awarded

Please look at the listings in relevant Faculties if you are in a combined program.

Faculty/Program/ Department	Award Type	Application Required	Award Category	Value	Name of Scholarship
ARTS AND SCIENCE					
	J	Yes	B	\$1,000	The Arts and Science Program Experiential Learning Travel Scholarship
	J	No	D	\$75	The Arts and Science Program Book Award
	J	No	B	\$500	The Charon Burke McCain Memorial Scholarship
	J	No	B	\$1,500	The Class of 1953 50th Anniversary Scholarship
	J	No	E	\$200	The Laura Dodson Prize
	M	No	B	\$1,000	The Federation of Chinese Canadian Professionals Education Foundation Scholarships
	J	No	E	\$500	The Barbara M. Ferrier Scholarship in Arts and Science
	J	No	B	\$400	The Barbara Francis Scholarship
	J	No	B	\$325	The George P. Gilmour Memorial Scholarship
	J	No	D	\$150	The Herbert M. Jenkins Prize
	J	Yes	E	\$700	The John R. McCarthy Scholarship
BUSINESS					
Commerce	J	Yes	B	\$850	The Accenture Inc. Scholarship
	J	No	E	Gold Medal	The E.H. Ambrose Gold Medal
	J	No	B	\$200	The Scott Bartlett Memorial Prize
	J	No	E	\$1,000 and Medal	The Basu Medal
	M	No	B	\$1,400	The M. Banker Bates Scholarship
	J	No	E	\$150	The CGA Ont. Award For Excellence
	M	No	B	\$775	The City of Hamilton Economic Development Department Scholarships
	J	No	B	\$2,000	The John Deere Limited Scholarship
	J	No	B	\$800	The DeGroote School of Business Alumni Undergraduate Scholarships
	J	No	B	\$1,500	The Deloitte & Touche Scholarship
	J	No	E	\$500	The Bruce M. Hamilton Award
	J	No	B	\$1,275	The Hamilton Port Authority Scholarship
	J	No	B	\$400	The Donald Hart Scholarship
	J	No	B	\$2,500	The Hawkrigg Family Scholarship in Business
	M	No	D	\$250 for books	The Paul Hypher Prize
	J	No	E	\$200	The Burton R. James Memorial Prize
	J	No	B	\$475	The Robert Alan Kennedy Scholarship

Faculty/Program/ Department	Award Type	Application Required	Award Category	Value	Name of Scholarship
	J	No	B	\$350	The KPMG Scholarship
	M	No	G	\$800	The Taylor Leibow Academic Grant
	M	No	B	\$625	The Claude C. Lister Scholarship
	J	No	B	\$2,500	The PricewaterhouseCoopers Scholarships
	M	No	B	\$450	The Dr. Andrew Szendrovits Memorial Scholarship
	M	No	B	\$1,500	The Weisz Family Foundation Scholarship
ENGINEERING					
Faculty Wide	J	Yes	B	\$850	The Accenture Inc. Scholarship
	M	No	B	\$2,000	The Audcomp Computer Systems Scholarship
	J	No	B	\$2,500	The Atomic Energy of Canada Limited Scholarship
	M	No	G	\$2,000/year	The William F. Campbell Academic Grant
	M	No	B	\$300	The Canadian Federation of University Women (Hamilton) Past President's Prize
	M	No	D	\$120	The Neil Forsyth Prize
	M	No	D	\$125	The John F. Moore Prize
	M	No	E	Gold Medal	The Ontario Professional Engineers Foundation for Education Gold Medal
	M	No	B	\$1,000	The Ontario Professional Engineers Foundation for Education In-Course Scholarships
	J	No	B	\$1,000	The Ontario Professional Engineers Foundation for Education Undergraduate Scholarships
Chemical Engineering	J	No	B	\$2,000	The Herbert A. Ricker Scholarship
	J	No	B	\$1,000	The Air Liquide Canada Inc. Scholarship
	M	No	B	\$50, Medal and Certificate	The Canadian Society for Chemical Engineering Prize
	M	No	B	\$500	The Canadian Society for Chemical Engineering (CSCHE) Scholarship
	J	No	B	\$150	The Chemical Institute of Canada (Hamilton Section) Prize
Civil Engineering	J	No	B	\$1,000	The John Mayberry Scholarships
	M	No	E	Plaque	The Society of Chemical Industry Merit Awards
	J	No	B	\$300	The ACI (Ontario Chapter) Scholarship
	M	No	B	\$200	The A.H. Atkinson Prize
	J	No	D	\$2,000	The Canadian Institute of Steel Construction (CISC) Award
	J	No	B	Plaque	The Canadian Society of Civil Engineers (Hamilton Section) Prize
	J	No	B	\$500	The Hamilton and District Heavy Construction Association Scholarships
	M	No	G	\$1,000	The Hatch Academic Grant in Engineering
	J	No	B	\$1,000	The Ronald E. Materick Scholarships
	J	No	B	\$650	The Simon McNally Scholarship
Computer Engineering	M	No	D	\$250	The Dr. F.A. Mirza Scholarship
	J	No	B	\$1,500	The F.W. Paulin Scholarship
	M	No	G	\$800	The Pollock Family Academic Grant
	M	No	B	\$2,500	The Stantec Consulting Ltd. Engineering Scholarship
	J	No	B	\$1,900	The Dr. Rudolf de Buda Scholarship
	M	No	B	\$225	The Ruth and Jack Hall Prize
	J	No	B	\$1,000	The Nortel Networks Scholarships in Information Technology
	J	No	B	\$1,900	The Dr. Rudolf de Buda Scholarship
	M	No	B	\$1,000	The Group Eight Engineering Limited L.F. Eull Prize
	J	No	B	\$1,000	The Nortel Networks Scholarships in Information Technology
Electrical Engineering	J	No	B	\$1,900	The Dr. Rudolf de Buda Scholarship
	M	No	B	\$1,000	The Group Eight Engineering Limited L.F. Eull Prize
	J	No	B	\$1,000	The Nortel Networks Scholarships in Information Technology
	J	No	B	\$800 and Certificate	The A.I. Johnson Scholarship
	M	No	B	\$275	The Ray Lawson Scholarships
Engineering and Management	J	No	E	\$300	The Shell Canada Prizes in Engineering and Management
	J	No	B	\$1,100	The Shell Canada Scholarships in Engineering and Management
	M	No	B	\$1,100	The Molson Scholarship in Environmental Studies
	M	No	G	\$500	The Jack Howett Academic Grant
	J	No	B	\$1,000	The Nortel Networks Scholarships in Information Technology
Engineering Physics	M	No	B	\$1,700	The Crispin Calvo Scholarship
	M	No	G	\$1,000	The Hatch Academic Grant in Engineering
	J	No	B	\$1,900	The Inco Scholarship in Materials Engineering
	J	No	E	\$100	The National Association of Corrosion Engineers Prize
	M	No	D	\$50	The MMG-Neosid Canada Limited Ceramic Engineering Prize
Materials Engineering	J	No	B	\$1,800	The Mark John Stojic Scholarships
	J	No	B	\$1,000	The Air Liquide Canada Inc. Scholarship
	J	No	E	\$275	The Denton Coates Memorial Scholarship
	J	No	B	\$125	The Ronald K. Ham Memorial Prize
	J	No	B	\$1,900	The Inco Scholarship in Materials Engineering
Materials Science and Engineering	J	No	B	\$1,000	The John Mayberry Scholarships

388 UNDERGRADUATE AWARDS — AWARDS AND ACADEMIC GRANTS BY FACULTY

Faculty/Program/ Department	Award Type	Application Required	Award Category	Value	Name of Scholarship
Mechanical Engineering	J	No	B	\$1,000	The Air Liquide Canada Inc. Scholarship
	J	No	B	\$1,500	The Grace Dorothy and William P. Carpenter Award
	M	No	B	\$1,000	The Federation of Chinese Canadian Professionals Education Foundation Scholarships
	M	No	G	\$1,000	The Hatch Academic Grant in Engineering
	J	No	B	\$600	The Internetco Limited Scholarship
	J	No	E	Trophy	The Iroquois Trophy
	J	No	B	\$1,000	The John Mayberry Scholarships
	J	No	D	\$500	The Robert Sowerby Memorial Scholarship
	J	No	B	\$2,800	The Tinnerman Palnut Engineered Products Scholarship in Mechanical Engineering
Software Engineering	J	No	B	\$3,400	The CAE Scholarships in Computing and Software Engineering
	J	No	B	\$800	The Motorola Software Engineering Scholarship
	J	No	B	\$1,000	The Nortel Networks Scholarships in Information Technology
HEALTH SCIENCES					
Faculty Wide	J	No	B	\$500	The IODE Memorial Scholarship
	J	Yes	B	\$4,600	The T. Russell Wilkins Memorial Scholarship
Anatomy	J	No	C	\$1,000 and Medal	The Anatomy Prize
Health Sciences	J	Yes	B	\$1,000	The CIM International Outreach Travel Award
Midwifery	J	No	E	\$5,000	The Murray and Eleanor Enkin Midwifery Award
	J	No	F	\$1,000	The Sakarkhanu K. Lila Memorial Scholarship
Nursing	J	No	B	\$3,150	The Henrietta Alderson Scholarship
	J	No	G	\$2,900	The Margaret Elizabeth Burke Memorial Academic Grant
	J	No	D	\$1,000	The Elizabeth Petra Cooke Memorial Scholarship
	J	No	B	\$1,000	The Clara I. Elman Scholarships
	J	No	B	\$2,400	The Dr. Shigeaki Hinohara Scholarship
	J	No	D	\$600	The Janet McKnight Award
	J	No	E	\$300	The McMaster Nursing Alumni Memorial Prize
	J	No	D	\$250	The Medical-Surgical Excellence in Clinical Nursing Award
	M	No	G	\$800	The Eleanor Morris Academic Grant
	M	No	B	\$1,100	The Niemeier Scholarship
	J	No	E	\$150	The Pioneer Group Inc. Prizes in Nursing
	J	No	D	\$250	The Grace Senra-Fontes Memorial Prize
	M	No	B	\$150	The Clarence L. Starr Prize
	J	No	D	\$250	The Corelene Helen Tostevin Scholarships
	J	No	B	\$1,800	The Lillian and Manuel Zack Scholarship
HUMANITIES					
Faculty Wide	J	No	E	\$5,000 and Medal	The Dean's Medal for Excellence in the Humanities
				\$3,000 and Medal	
				\$2,000 and Medal	
	J	No	E	Medal	The Humanities Medals for Special Achievement
	M	No	G	\$2,000	The Kneale Brothers '37 Academic Grant
	J	Yes	E	\$700	The John R. McCarthy Scholarship
Art	J	No	B	\$450	The Peter McPhater Memorial Scholarship
	J	No	B	\$525	The Leona Allerston Ryan and Gordon Henry Stevens Memorial Scholarship
	M	No	B	\$750	The Juanita LeBarre Symington Scholarship
	M	No	B	\$750	The Women's Art Association Scholarships
Art History	J	No	D	\$175	The Eleanor Dornbush Marples Prize in Art History
	J	No	B	\$450	The Peter McPhater Memorial Scholarship
	M	No	B	\$750	The Women's Art Association Scholarships
Classics	M	No	B	\$500	The Brian Blakey Memorial Scholarship
	J	No	B	\$100	The Classics Prize
	M	No	D	\$250	The Greek Community of Burlington and District Scholarship
	J	No	B	\$1,000	The Hellenic Prize
	J	No	D	\$150	The Latin Prize
	J	No	E	\$100	The A.G. McKay Prize in Classical Studies
	J	No	B	\$350	The Alexander Gordon McKay Scholarship
	J	No	B	\$50	The Gladys Ballantyne Parker Prize
	M	No	D	\$50	The John Toth Memorial Prize
	J	No	B	\$275	The Varey Scholarship
Comparative Literature	J	No	D	\$250	The Comparative Literature Prize
English	M	No	D	\$425	The Maqbool Aziz Memorial Scholarship
	J	No	B	\$500	The Laura Baldwin Scholarship
	M	No	B	\$500	The Brian Blakey Memorial Scholarship
	J	No	D	\$200	The Canadian Federation of University Women (Hamilton) Ruby Brown Book Prize

Faculty/Program/ Department	Award Type	Application Required	Award Category	Value	Name of Scholarship
French	M	No	D	\$175	The Cranston Prizes
	M	No	C	\$100 for Books	The Audrey Diemert Memorial Book Prize
	M	No	B	\$2,000	The Margery E. Dixon Memorial Scholarship
	J	No	B	\$975	The Daphne Etherington Graham Memorial Scholarship in English
	J	No	B	\$200	The Kit Memorial Scholarship
	J	No	E	\$200	The Agnes and John MacNeill Memorial Prize
	M	No	B	\$525	The McGregor-Smith-Burr Memorial Scholarship
	M	No	E	\$250	The Walter Scott McLay Prize
	J	No	D	\$250	The Rand Memorial Prize of Class '98
	J	No	B	\$1,000	The Ella Julia Reynolds Scholarships
	J	No	B	\$2,000	The Gladys Richards Scholarship
	M	No	C	\$125	The Morris and Sarah Rosenhead Memorial Prize
	M	No	B	\$475	The Sheila Scott Scholarship in English
	M	No	B	\$375	The Patricia L. Smye Memorial Prizes
	J	No	D	\$250 for Books	The R.M. Wiles Memorial Book Prize
	M	No	B	\$500	The Brian Blakey Memorial Scholarship
	M	No	B	\$175	The Rosemary Douglas-Mercer Memorial Prize
	J	No	B	\$1,000	The Harold and Gertrude Freeman Scholarship in French
	J	No	D	Book Prize	The French Government Book Prizes
	J	No	E	\$475	The W. Norman Jeeves Scholarship
History	J	No	B	\$2,200	The E. Doris Lawrence Scholarship
	J	No	D	\$250	The Elaine Nardocchio Memorial Scholarship Fund
	J	No	B	\$500	The Brian Pocknell Memorial Scholarship
	J	No	B	\$450	The Marie L. Stock Scholarship
	J	No	D	Book Prize	The Swiss Minister to Canada Book Prizes
	J	No	E	\$150	The William and Lida Barns Memorial Prize in History
	J	No	E	\$85 for Books	The Marion Bates Book Prize
	J	No	E	Medal	The Ezio Cappadocia Medal
	J	No	D	\$425	The James Robertson Carruthers Memorial Prize
	J	No	E	\$100	The European History Prize
	J	No	B	\$425 for Books	The Samuel Geller Memorial Book Prize
	J	No	B	\$1,000	The Daphne Etherington Graham Memorial Scholarship in History
	J	No	B	\$750	The Robert H. Johnston Undergraduate Scholarship in History
	M	No	B	\$1,500	The Jury Prize
	J	No	D	\$100	The H.W. McCreedy Prize in British History
	M	No	B	\$525	The McGregor-Smith-Burr Memorial Scholarship
	M	No	D	\$150	The Municipal Chapter of Hamilton, IODE, Muriel E. Skelton Award
	J	No	B	\$575	The Robert Nixon Scholarship
	M	No	B	\$700	The Dr. John A. Pylypiuk Scholarship
Linguistics and Languages	J	No	B	\$1,000	The Ella Julia Reynolds Scholarships
	J	No	B	\$2,000	The Gladys Richards Scholarship
	J	No	B	\$175 for Books	The E. Togo Salmon Prize in History
	J	No	D	\$150 for Books	The Noel Sandusky Memorial Prize
	J	No	D	\$275	The Larry Sayers Prize in East Asian History
	J	No	E	\$250	The John H. Trueman Prize
	J	No	D	\$250	The John H. Trueman Scholarship
	J	No	D	\$375	The Thomas E. Willey Scholarship
	J	No	E	Book Prize	The Ambassador of Spain Book Prize
	M	No	B	\$500	The Brian Blakey Memorial Scholarship
	J	No	D	\$125	The Beatrice Corrigan Memorial Book Prize
	M	No	D	\$150	The Consul General of Italy Book Prize in Italian
	J	Yes	B	\$900	The Gabriele Erasmi Travel Scholarship to Italy
	J	No	D	Book Prize	The German Embassy Book Prize
	J	No	D	Book Prize	The Inter Nationes (Bonn) Book Prize
	J	No	B	\$125	The ITCA Community Involvement Prize
	J	No	D	\$150	The James B. Lawson Scholarship
	J	No	D	\$250	The Linguistics Prize
	J	No	B	\$300	The Anne Murray Scholarship
	J	No	B	\$750	The Fedor Schneider Scholarship in Italian
Multimedia	J	No	B	\$375	The Louis J. Shein Scholarship
	J	No	B	\$500	The Sons of Italy of Ontario Scholarship
	J	No	C	Book Prize	The Swiss Minister to Canada Book Prizes
	M	No	C	\$50 for Books	The Michael Thomson Memorial Book Prizes
	J	No	D	\$375	The Thomas E. Willey Scholarship
	J	No	B	\$1,000	The Bank of Montreal Humanities Multimedia Scholarships

390 UNDERGRADUATE AWARDS — AWARDS AND ACADEMIC GRANTS BY FACULTY

Faculty/Program/Department	Award Type	Application Required	Award Category	Value	Name of Scholarship
Music	J	No	B	\$450	The Louise E. Bettger Scholarships in Music
	J	No	B	\$1,050	The Hilda Dorothy Borman Scholarship
	J	No	B	\$1,500	The Joan Francis Bowling Scholarships
	J	No	B	\$200	The Ella Halstead Campbell Prize
	J	No	B	\$150	The Norman N. Caskey Memorial Prize
	J	No	B	\$450	The Merrill Francis Gage Scholarships
	J	No	B	\$100 for Books	The H.B. Greening Book Prize
	J	No	D	\$200	The Hughes Scholarship
	J	No	B	\$125	The Ivey Scholarship
	J	No	D	\$1,000	The Allan Ludbrook Memorial Scholarship
	J	No	B	\$1,000	The Merriam School of Music Scholarship
	J	No	B	\$675	The Irene Pearce Scholarship
	J	No	B	\$425	The Sharon Reeves Scholarship
	J	No	B	\$525	The Leona Allerston Ryan and Gordon Henry Stevens Memorial Scholarship
	J	No	B	\$950	The School of the Arts Scholarship in Music
Peace Studies	J	No	D	\$300	The Alan G. Newcombe Prize in Peace Studies
Philosophy	J	No	B	\$475	The Brien Scholarship in Philosophy
	J	No	B	\$1,000	The Ten Broeke-Bensen Memorial Scholarship
	J	No	B	\$200	The Horace A. Dulmage Prize in Philosophy
	M	No	D	\$225	The Abraham Rosenberg Memorial Prize
	J	No	B	\$500	The Graham Ronald Toop Scholarship
	J	No	B	\$750	The F.W. Waters Scholarship in Philosophy
	J	No	C	\$250	The F.W. Waters Scholarship in Philosophy for Part-Time Students
Theatre & Film Studies	M	No	B	\$500	The Brian Blakey Memorial Scholarship
	J	No	B	\$950	The Class of '43 Golden Anniversary Scholarship
	J	No	E	Gold Medal	The Amelia Hall Gold Medal
	M	No	D	\$125	The Eleanor Dombush Marples Prize in Theatre & Film Studies
	M	No	D	Book Prize	The Theatre & Film Studies Book Prize
Women's Studies	J	No	E	\$175	The Canadian Federation of University Women (Hamilton) Memorial Prize
SCIENCE					
Faculty Wide	J	Yes	B	\$850	The Accenture Inc. Scholarship
	J	No	E	Ring	The Burke Memorial Ring
	M	No	G	\$2,000/year	The William F. Campbell Academic Grant
	J	No	E	\$1,000	The Class of '92 Science Legacy Award
	M	No	B	\$325	The J.L.W. Gill Prizes
	J	No	D	\$150	The James B. Lawson Scholarship
	J	Yes	E	\$700	The John R. McCarthy Scholarship
	M	No	G	\$800	The Manson Olson Academic Grant
	J	No	B	\$2,000	The Herbert A. Ricker Scholarships
	J	No	B	\$1,000	The Dr. Sina Sazgar Memorial Scholarship
	J	No	B	\$500	The Science Alumni Scholarships
	M	No	B	\$1,575	The Valley City Manufacturing Co. Ltd. Scholarships
	M	No	B	\$350	The Beauty Counselors of Canada Scholarship
Biochemistry	J	No	B	Medal and Certificate	The Canadian Society for Chemistry Prizes
	J	No	B	\$1,000	The Dubeck Biochemistry Award
	J	No	B	\$800	The Ernest Robert MacKenzie Kay Scholarships
	M	No	E	Plaque	The Society of Chemical Industry Merit Awards
	J	No	D	Book	The Biology Achievement Award
Biology	J	No	E	\$200	The Abe Black Memorial Prizes
	M	No	D	\$400	The Douglas Davidson Scholarship in Genetics
	J	No	D	\$575	The D.M. Davies Prize
	J	No	B	\$800	The Ernest Robert MacKenzie Kay Scholarships
	M	No	E	\$300	The Esther McCandless Memorial Prize
	J	No	B	\$575	The J.J. Miller Prize
	J	No	B	\$200	The Shenstone Prize
	J	No	E	Medal	The Jensen Medal
Biology and Pharmacology Co-op	J	No	E	Medal	The Jensen Medal
Chemistry	M	No	B	\$350	The Beauty Counselors of Canada Scholarship
	M	No	B	\$1,700	The Crispin Calvo Scholarships
	M	No	B	Medal and Certificate	The Canadian Society for Chemistry Prizes
	J	No	B	\$150	The Chemical Institute of Canada (Hamilton Section) Prize
	J	No	B	\$1,000	The Dubeck Chemistry Award
	M	No	B	\$1,000	The Federation of Chinese Canadian Professionals Education Foundation Scholarships

Faculty/Program/ Department	Award Type	Application Required	Award Category	Value	Name of Scholarship
Computer Science	M	No	B	\$350	The Klaus Fritze Memorial Prize
	M	No	E	\$1,000	The Robert S. Haines Memorial Scholarship
	M	No	B	\$140	The Hamilton Chemical Association Prize
	J	No	B	\$800	The Ernest Robert MacKenzie Kay Scholarships
	J	No	B	\$925	The Donald G. McNabb Scholarship
	J	No	B	\$175 for Books	The Michael J. Morton Memorial Book Prize
	J	No	B	\$150 for Books	The Fredric P. Olsen Book Prize
	J	No	B	\$200	The Shenstone Prize
	M	No	B	\$450	The Gerald and Verna Simpson Memorial Scholarship
	M	No	E	Plaque	The Society of Chemical Industry Merit Awards
	M	No	E	\$350 and Medal	The Binkley Medal
	M	No	B	\$225	The Ruth and Jack Hall Prize
	M	No	E	Medal	The Gerald L. Keech Medal
	J	No	B	\$500	The George P. and Leatha M. Keys Scholarships
	J	No	B	\$1,000	The Nortel Networks Scholarships in Information Technology
Geography and Earth Sciences	J	No	E	\$220 for Books	The Cameron D. Allen Book Prize
	M	No	D	\$300	The Alumni Canadian Geography Prize
	J	No	B	\$75	The Herbert S. Armstrong Memorial Fund
	M	No	B	\$1,500	The Murray Ball Scholarships in Geology
	J	Yes	B	\$2,000	The J.P. Bickell Foundation Mining Scholarships
	J	No	E	\$100 for Books	The Leone Betty Blackwell Memorial Book Prize
	J	No	B	\$1,650	The Helen Emery Scholarships in Environmental Science
	M	No	D	\$100	The Environmental Issues Prize
	J	No	D	\$550	The R. Louis Gentilcore Prize
	J	No	B	\$2,000	The Inco Scholarship in Environmental Science
	J	No	B	\$75	The Stanford N. Katambaia Earth Sciences Prize
	M	No	D	\$150	The Moffat Family Prizes
	M	No	B	\$1,100	The Molson Scholarship in Environmental Studies
	J	No	B	\$500	The Pitcher-Ratford Awards
	M	No	E	\$100	The Lloyd Reeds Prizes
Life Science	J	No	B	\$325	The Rosart Properties Inc. Scholarship
	J	No	B	\$2,000	The South Ontario Economic Development Council Scholarships
	M	No	B	\$250	The Hugh R. Thompson Memorial Prize
	J	No	E	\$200	The Abe Black Memorial Prizes
	M	No	E	\$100	The P.L. Newbigging Prizes
Materials Science	M	No	D	\$120	The Neil Forsyth Prize
Mathematics and/or Statistics	M	No	B	\$1,100	The W.K. Allan Memorial Scholarship
	M	No	B	\$375	The J. Douglas Bankier Memorial Scholarship
	M	No	B	\$600/year	The Dr. and Mrs. F.R. Britton Scholarship in Mathematics
	J	No	D	\$425	The H.L. Jackson Memorial Scholarship
	J	No	B	\$500	The George P. and Leatha M. Keys Scholarships
Medical and Health Physics	J	No	B	\$425	The S.L. Squire Scholarships
	M	No	B	\$300	The Dr. R.A. Thompson Prize in Mathematics
	M	No	B	\$1,600	The Gladys A. Young Scholarship
	M	No	B	\$500	The Bill Prestwich Scholarship in Medical and Health Physics
	M	No	B	\$1,100	The W.K. Allan Memorial Scholarship
	M	No	B	\$1,000	The Federation of Chinese Canadian Professionals Education Foundation Scholarships
	J	No	B	\$500	The A.B. McLay Scholarship in Physics
	J	No	B	\$575	The Boyd McLay Scholarship in Physics
	J	No	B	\$200	The Shenstone Prize
	M	No	B	\$450	The Gerald and Verna Simpson Memorial Scholarship
Physics	M	No	E	Plaque	The Society of Chemical Industry Merit Awards
	M	No	B	\$500	The Jim Waddington Prize in Physics and Astronomy
	M	No	B	\$1,200	The Emanuel Williams Scholarship in Physics
	M	No	B	\$1,600	The Gladys A. Young Scholarship
	J	No	C	\$600	The Abe Black Memorial Prize
	J	No	B	\$500	The George P. and Leatha M. Keys Scholarships
	M	No	E	\$100	The P.L. Newbigging Prizes
	M	No	D	\$375	The P.L. Newbigging Scholarship
	M	No	B	\$70	The Psychology Society Prizes
	M	No	B	\$375	The Patricia L. Smye Memorial Prizes
SOCIAL SCIENCES					
Faculty Wide	M	No	B	\$1,950	The Hugh Clark Scholarship
	J	No	E	Medal	The J.E.L. Graham Medal
	M	No	C	\$500	The Faculty of Social Sciences Inquiry Award
	M	No	G	\$2,000	The Kneale Brothers '37 Academic Grant

392 UNDERGRADUATE AWARDS — AWARDS AND ACADEMIC GRANTS BY FACULTY

Faculty/Program/ Department	Award Type	Application Required	Award Category	Value	Name of Scholarship
Faculty Wide	J	Yes	E	\$700	The John R. McCarthy Scholarship
	J	No	E	Medal	The R.C. McIvor Medal
	J	No	C	\$425	The David Winch Memorial Scholarship
Anthropology	J	No	E	\$100	The Anthropology Prize
	J	No	E	\$100	The Ruth Landes Prize
	J	No	E	\$100	The Richard Slobodin Prize
Economics	J	No	B	\$700	The Class of '50 Scholarship in Honours Economics
	M	No	B	\$300	The Dr. Thomas Hobley Prize
	M	No	D	\$500	The William D.G. Hunter Prize
	J	No	E	Medal	The Hurd Medal
	J	No	D	\$175	The Sam Lawrence Prize
	J	No	D	\$475	The MacGibbon Scholarship
	J	No	D	\$425	The William MacKenzie Memorial Prize
	J	No	B	\$600	The Pevensing Scholarship
	J	No	D	\$100	The Kenneth W. Taylor Book Prize
	J	No	D	\$800	The Ralph Weekes Scholarship
Geography and Earth Sciences	J	No	E	\$220 for Books	The Cameron D. Allen Book Prize
	M	No	D	\$300	The Alumni Canadian Geography Prize
	J	No	B	\$75	The Herbert S. Armstrong Memorial Fund
	M	No	B	\$1,500	The Murray Ball Scholarships in Geology
	M	No	E	\$100 for Books	The Leone Betty Blackwell Memorial Book Prize
	J	No	B	\$1,650	The Helen Emery Scholarships in Environmental Science
	M	No	D	\$75	The Environmental Issues Prize
	J	No	D	\$550	The R. Louis Gentilcore Prize
	J	Yes	B	\$2,000	The J.P. Bickell Foundation Mining Scholarships
	J	No	B	\$75	The Stanford N. Katambala Earth Sciences Prize
	M	No	D	\$150	The Moffat Family Prizes
	M	No	B	\$1,100	The Molson Scholarship in Environmental Studies
	J	No	E	\$225	The E.S. Moore Prize
	J	No	E	\$100	The Lloyd Reeds Prizes
	J	No	B	\$325	The Rosart Properties Inc. Scholarship
	J	No	B	\$2,000	The South Ontario Economic Development Council Scholarships
	M	No	B	\$250	The Hugh R. Thompson Memorial Prize
Gerontology	J	Yes	D	\$450	The Barbara and Ronald Bayne Gerontology Internship Award
	J	No	E	\$100	The Gerontology Prizes
	J	No	F	\$50	The Karl Kinanen Alumni Prize in Gerontology
	M	No	C	\$250 for Books	The McMaster University Retirees Association Prize
	M	No	B	\$1,000	The McMaster University Retirees Association Scholarship
	J	No	E	\$1,200	The Audrey Evelyn Mephram Award in Gerontology
	J	No	E	\$45	The Pioneer Group Inc. Gerontology Prize
	J	No	D	\$400	The Pioneer Group Inc. Prize
	J	No	B	\$1,000	The Pioneer Group Inc. Scholarship
	M	No	C	\$200	The Retired Teachers of Ontario Hamilton/Haldimand District Prize in Gerontology
	J	No	D, F	\$400	The Ellen Bouchard Ryan Scholarship
Kinesiology	J	No	B	\$1,500/year	The Betty Taylor Campbell Scholarship
	J	No	B	\$400	The Nancy Car Memorial Scholarship in Kinesiology
	J	No	E	Medal and Certificate	The CSEP/SCPE Undergraduate Student Award
	J	No	B	\$2,500	The Hawkrigg Family Scholarships in Kinesiology
	J	No	B	\$1,200	The Rose Hill Scholarship
	J	No	E	\$100	The Kinesiology Prize
	J	No	D	\$100	The Kinesiology Prizes
	J	No	B	\$700	The Megan Lawrence Scholarship
	J	Yes	D	\$500	The Sport Coaching Prize
	J	No	B	\$250	The Ivor Wynne Memorial Prize
	J	No	D	\$500	The Larry Sefton Scholarships
Labour Studies	J	No	E	\$50 for Books	The Harry Waisglass Book Prize
	J	No	D	\$175	The Melinda Wapshaw Achievement Award
Political Science	J	No	D	\$300	The Canadian Institute of International Affairs Prize
	M	No	B	\$300	The Dr. Thomas Hobley Prize
	M	No	D	\$275 for Books	The Human Rights Award
	J	No	E	\$750	The Feliks Litkowski Memorial Prize in Political Science
	J	No	D	\$650	The Derry Novak Scholarship
	J	No	E	\$200	The Political Science Prize
	J	No	E	\$100	The Political Science Honours Essay Prize
	J	No	D	\$75	The Thomas Truman Memorial Prize

Faculty/Program/ Department	Award Type	Application Required	Award Category	Value	Name of Scholarship
Psychology	M	No	E	\$200	The Abe Black Memorial Prizes
	M	No	E	\$100	The P.L. Newbigging Prizes
	M	No	D	\$375	The P.L. Newbigging Scholarship
	M	No	B	\$70	The Psychology Society Prizes
	M	No	B	\$375	The Patricia L. Smye Memorial Prizes
Religious Studies	M	No	D	\$125	The Gilmour Memorial Prize
	M	No	B	\$175	The Lawrence and Kathleen Mary Johnston Memorial Prize
	M	No	E	\$100	The Religious Studies Prizes
	J	No	B	\$450	The Marjorie and Charles Wilkinson Scholarship
Social Work	J	No	D	\$500	The Citizen Action Group Prize
	M	No	E	\$800	The Dr. Jean Jones Memorial Scholarship
	M	No	E, F	\$125	The Ontario Association of Social Workers Prize
	M	No	E	\$100	The Harry L. Penny Prize
	M	No	D	\$100	The Social Work Prize
	M	No	C, D	\$125	The Anne Stein Memorial Prize
Sociology	M	No	E	\$100	The Frank E. Jones Prize
	J	No	B	\$150	The Betty MacMillan Prize
	J	No	B	\$800	The Lianne Marks Scholarship
	M	No	C	\$400	The Jack Richardson Memorial Scholarship
	M	No	E	\$100	The Sociology Prizes
TRAVEL SCHOLARSHIPS					
University Wide	J	Yes	B	\$2,200	The Beale-Lincoln-Hall Travel Scholarship
	J	Yes	B	\$1,500	The John P. Evans Travel Scholarship
	J	Yes	B	\$800	The Howard P. Whidden Scholarship
Arts and Science	J	Yes	B	\$1,300	The Class of '37 Travel Scholarship in Arts and Science
	J	Yes	B	\$4,600	The T. Russell Wilkins Memorial Scholarship
Business	J	Yes	B	\$1,000	The Maria Chan Scholarships for International Studies in Business
Health Sciences	J	Yes	B	\$1,000	The CIM International Outreach Travel Award
Humanities	J	Yes	B	\$5,500	The A.G. Alexander Scholarships
	J	Yes	B	\$3,675	The Joan Jackson Dunbar Travel Scholarship
	J	Yes	B	\$900	The Gabriele Erasmi Travel Scholarship to Italy
	J	Yes	B	\$925	The Modern Languages Travel Scholarship
	J	Yes	B	\$2,000	The E.T. Salmon Scholarship
Science	J	Yes	B	\$725	The Albert Shalom Travel Scholarship
	J	Yes	B	\$4,600	The T. Russell Wilkins Memorial Scholarships
UNIVERSITY WIDE SCHOLARSHIPS					
University Wide	J	Yes	D	\$800	The Achievement Awards of Excellence
	M	No	C	\$375	The Alumni Association Scholarship
	M	No	B	\$200 for books	The Edgar R. Ashall Scholarship
	M	No	B	\$750	The Bates Residence Scholarship
	M	No	B	\$1,500	The Bentall Scholarships
	J	No	B	\$1,500	The Joan Francis Bowling Scholarships
	J	Yes	B	\$300	The Josephine Staples Brien Scholarship
	M	No	B	\$1,500	The Canadian Federation of University Women (Hamilton) Scholarship
	J	No	B	Medal	The Chancellor's Gold Medal
	M	No	B	\$1,500	The Class of '44 Scholarship
	M	No	B	\$800	The Edwin Marwin Dalley Memorial Scholarships
	M	No	B	\$750	The Edwards Hall Residence Scholarship
	M	No	E	Medal	The Governor General's Academic Medal
	J	Yes	B	\$1,500	The Gwen George Award
	J	Yes	C	\$400 and Medal	The Gwen George Medal
	M	No	B	\$1,500	The Gupta Family International Scholarships
	M	No	B	\$800	The Hamilton Industrial Scholarships
	J	No	B	\$1,000	The Hamilton Utilities Corporation Energy Conservation and Alternative Energy Undergraduate Scholarship
	M	No	B	\$750	The Hedden Hall Residence Scholarship
	M	No	B	\$1,500	The Dr. Harry Lyman Hooker Scholarships
	M	No	B	\$1,550	The Anna Marie Hibbard Scholarship
	M	No	B	\$250	The Bertram Osmer Hooper Scholarship
	M	No	B	\$500	The Nina Louise Hooper Scholarship
	J	Yes	B	\$400	The Inter-Residence Council Scholarship
	J	Yes	B	\$2,500	The Dr. Ronald V. Joyce "Amazing" Grace Awards
	J	Yes	D	\$2,500	The Dr. Ronald V. Joyce Awards for Athletes
	M	No	B	\$750	The Mary E. Keyes Residence Scholarship
	J	Yes	B	\$1,375/year	The Gary Lautens Memorial Scholarship
	J	Yes	D	\$500 and Medal	The MAPS Centennial Award
	M	No	E	Medal	The MAPS Gold Medal

Faculty/Program/ Department	Award Type	Application Required	Award Category	Value	Name of Scholarship
University Wide	J	Yes	E	\$750	The Bert MacKinnon Memorial Scholarship
	J	Yes	E	\$175	The Catherine MacNeill Prize
	M	No	B	\$750	The Matthews Hall Residence Scholarship
	M	No	C	\$250	The William J. McCallion Scholarships
	M	No	B	\$750	The McKay Hall Residence Scholarship
	J	Yes	E	\$1,000	The McMaster University Futures Fund Award
	J	Yes	B	\$1,800	The McMaster University Futures Fund in-Course Awards
	J	Yes	D	\$400	The John D. McNie Achievement Award of Excellence
	J	Yes	B	\$1,500	The Elizabeth Mosgrove Scholarship
	M	No	B	\$1,000	The Moulton College Scholarships
	M	No	B	\$750	The Moulton Hall Residence Scholarship
	J	Yes	C	\$425	The Connie O'Shaughnessy Memorial Prize
	M	No	B	\$425	The Tony Pickard Memorial Scholarship
	M	No	A	Medal	The Provost's Honour Roll Medal
	M	No	C	\$125	The Morris and Sarah Rosenhead Memorial Prize
	M	No	B	\$575	The Rotary Club of Hamilton Scholarship
	M	No	B	\$500	The Hilda Savage Memorial Scholarship
	M	No	B	\$750	The Sheila Scott Scholarship for Brandon Hall
	M	No	B	\$750	The Sheila Scott Scholarship for Wallingford Hall
	J	No	D	\$120 for Books	The Margaret A. Service Book Prize
	M	No	B	\$800	The Somerville Scholarships
	M	Yes	B	\$1,150	The Marnie Spears Scholarship
	J	Yes	B	\$425 for Books	The Mabel Stoakley Scholarship
	M	No	B	\$325	The Stobo Scholarship
	M	No	D	\$800	The University Achievement Awards
	J	No	D	\$150	The University Prizes for Special Achievement
	M	No	C	\$250	The University Scholarships
	M	No	B	\$800	The University (Senate) Scholarships
	M	No	B	\$750	The Whidden Hall Residence Scholarship
	M	No	B	\$750	The Woodstock Hall Residence Scholarship
	M	No	B	\$225	The Marguerite Yates Scholarship
	M	No	B	\$800	The Yates Scholarship
	M	No	B	\$1,600	The Gladys A. Young Scholarship

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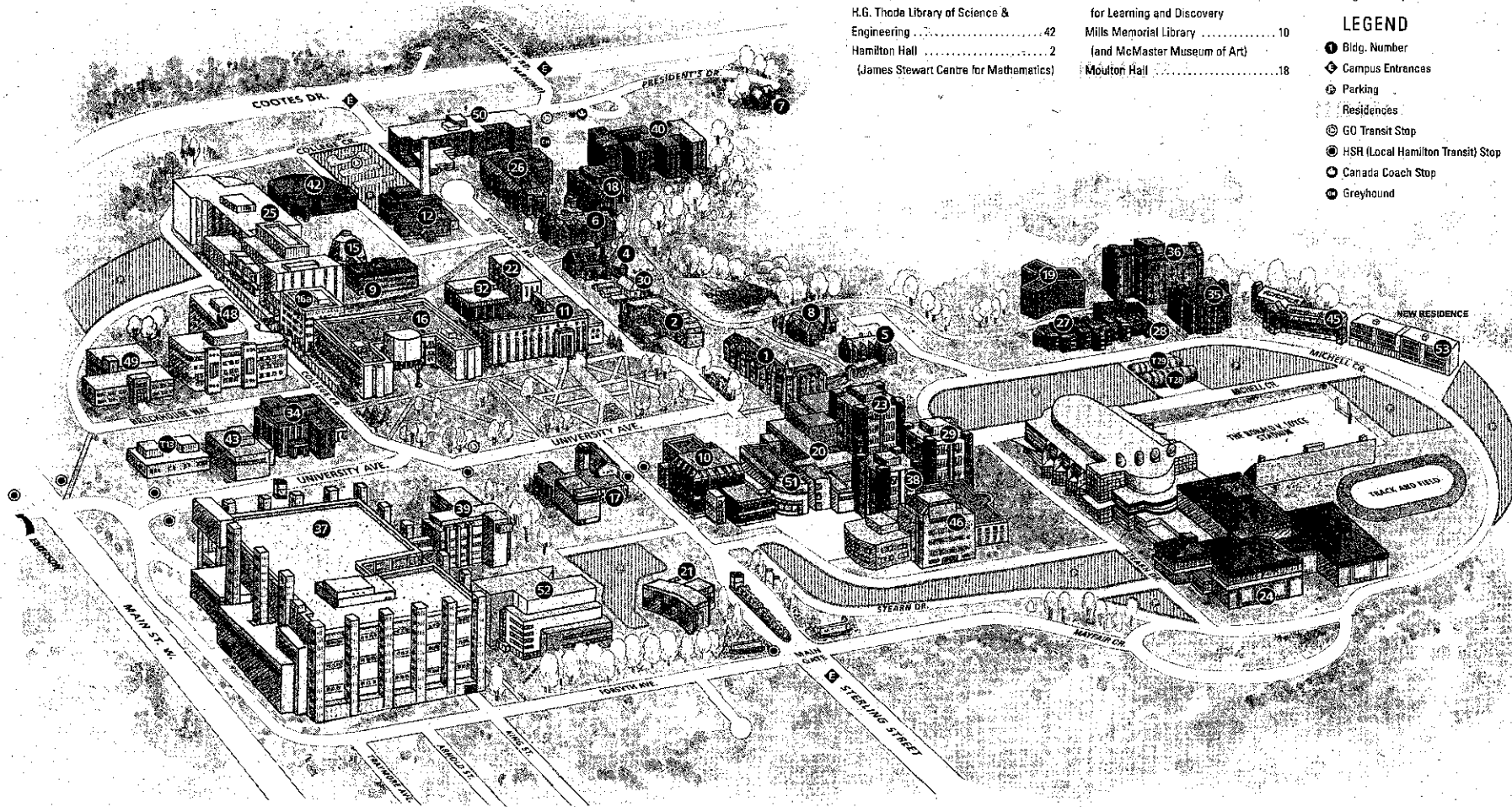
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Chester New Hall	23	John Hodgins Engineering Annex ..	16a	Togo Salmon Hall	29
Commons Bldg.	28	Kenneth Taylor Hall	38	University Hall	1
Communications Research Lab	43	Les Prince Hall	53	Wallingford Hall	6
DeGroote School of Business	46	Life Sciences Bldg.	39	Wentworth House	21
Divinity College	17	Mary E. Keyes Residence	50	Whidden Hall	19
Edwards Hall	5	Mathews Hall	25	Woodstock Hall	35
E.T. Clarke Centre	12	McKay Hall	27	Building T-Thirteen	T13
General Sciences Bldg.	22	McMaster University Student Centre ..	51	Building T-Twenty-eight	T28
Gilmour Hall	20	Michael G. DeGroote Centre	52	Building T-Twenty-nine	T29
H.G. Thode Library of Science & ..		for Learning and Discovery			
Engineering	42	Mills Memorial Library	10		
Hamilton Hall	2	(and McMaster Museum of Art) ..			
(James Stewart Centre for Mathematics)		Moulton Hall	18		

LEGEND

- ① Bldg. Number
- ➡ Campus Entrances
- Ⓟ Parking
- Residences
- Ⓢ GO Transit Stop
- Ⓜ HSR (Local Hamilton Transit) Stop
- Ⓢ Canada Coach Stop
- Ⓢ Greyhound



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