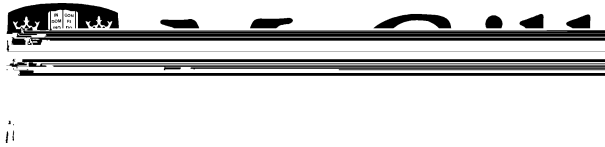




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# GRADUATE AND POSTDOCTORAL STUDIES CALENDAR 2004 - 2005

**McGill University:**  
[www.mcgill.ca](http://www.mcgill.ca)

**Graduate and Postdoctoral  
Studies Office**  
[www.mcgill.ca/gps](http://www.mcgill.ca/gps)

**Admission:**  
[mcgill.ca/applying/graduate](http://mcgill.ca/applying/graduate)

**Registration:**  
[mcgill.ca/minerva](http://mcgill.ca/minerva)

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845 Sherbrooke Street West  
Montreal, Quebec H3A2T5  
Canada

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The University reserves the right to make changes without prior notice to the information contained in this publication, including the alteration of various fees, schedules, conditions of admission and credit requirements, and the revision or cancellation of particular courses or programs.

All courses in this Calendar will be offered in 2003-04 unless otherwise indicated, e.g., a appears to the left of the course number. No description will appear after the title if the course is not given in the current year. Descriptions can usually be found in preceding Calendars.



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I would encourage you to both give and to take from this campus and university community: help shape the university by becoming involved in important academic committees; contribute your ideas in class and to your research teams; work hard, but stop long enough to use the new athletic facilities and relax and enjoy yourself at Thomson House; if needed, get support from our excellent counselling, mental health, and learning disability services; attend the numerous lectures by international scholars that take place at McGill each week; listen to beautiful music in Pollack Hall; and travel all over the world to conferences supported by our Alma Mater travel funds.

Along with the wonderful staff of the Graduate and Postdoctoral Studies Office, my office is here to help you. I welcome your comments and ideas for improving yours and others' graduate and postdoctoral experiences at McGill. Please feel free to contact me for further information on graduate and postdoctoral studies.

*Martha Crago, Ph.D.  
Dean, Graduate and Postdoctoral Studies*

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## **2 Graduate and Postdoctoral Studies Office**

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### **2.1 Location**

James Administration Building, Room 400  
845 Sherbrooke Street West  
Montreal, QC H3A 2T5  
Canada

Telephone: (514) 398-3990  
Fax: (514) 398-1626  
E-mail: [graduate.admissions@mcgill.ca](mailto:graduate.admissions@mcgill.ca)  
Website: [www.mcgill.ca/gps](http://www.mcgill.ca/gps)

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### **2.2 Administrative Officers**

Martha Crago; B.A., M.Sc.A., Ph.D.(McG.) **Dean (Graduate and Postdoctoral Studies) and**



Aug. 31, Tues. THES Registered students in 2003-

**NOTE**



DATE	ACTIVITY CODE	ACTIVITY
Oct. 18, Mon.	THES	Deadline for submission of Master's theses with Nomination of Examiners forms to GPSO (Thesis Office) for students expecting to graduate in February 2005. Meeting this deadline does not guarantee a Winter graduation.
Oct. 28, Thurs.	CONV	14:30 Fall Convocation.
<b>November 2004</b>		
Nov. 30, Tues.	LEC	Last day of lectures for courses that follow the Tuesday-Thursday class schedule.
<b>December 2004</b>		
Dec. 2, Thurs.	LEC	Unless the instructor has otherwise made up the contact time with the class, last day of lectures for courses that are taught in 3 hour Monday blocks.
Dec. 3, Fri.	LEC	Last day of lectures for course that follow the Monday-Wednesday-Friday class schedule.
Dec. 3, Fri. to Jan. 3, Mon.	REG	Winter Term registration period for new students. Individual faculties and departments set their own dates within this period.
Dec. 6, Mon. to Dec. 21, Tues.	EXAM	Examination period for Fall Term courses, and multi-term courses.
Dec. 15, Wed.	REG	Registration begins for winter term Continuing Education courses via Minerva.
Dec. 23, Thurs. to Jan. 2, Sun.	HOLIDAY	<b>CHRISTMAS AND NEW YEAR'S.</b> Administrative offices will be closed between December 23 and January 2 inclusive. Library hours available at Reference Desks. Refer also to McGill's Web page at <a href="http://www.library.mcgill.ca">www.library.mcgill.ca</a>
<b>January 2005</b>		
Jan. 1, Sat. & Jan. 2, Sun.	HOLIDAY	<b>NEW YEAR'S.</b> Administrative offices closed.
Jan. 3, Mon.	REG	Deadline for new students to register for Winter Term without a late registration fee for all faculties.
Jan. 4, Tues.	LEC	Winter Term lectures begin.
	NOTE	<b>The first Tuesday (January 4) will follow a Monday schedule.</b>
Jan. 4, Tues. to Jan. 16, Sun.	REG	Late registration for new students with \$100 late registration fee for all faculties (\$25 late registration fee for all Continuing Education students; \$40 for Special students).

DATE	ACTIVITY CODE	ACTIVITY
Jan. 5, Wed.	ORIENT	Faculty Orientation for new students in the Faculty of Agricultural and Environmental Sciences (5:30 -6:30 p.m.) Ceilidh Centennial Center.
Jan. 6, Thurs.	ORIENT	University Orientation for new graduate students (5:30 - 6:30 p.m., Ballroom in Thomson House).
Jan. 11, Tues.	ORIENT	University Orientation for new postdocs (5:30 - 6:30 p.m., Ballroom in Thomson House).
Jan. 16, Sun.	REG	Course Change (drop/add) deadline for Winter Term courses and Continuing Education Winter Term courses.
Jan. 16, Sun.	REG	Final Course Add/Drop deadline for Winter Term courses and N1/N2 courses in Graduate Studies. After this date students receive a mark of "W" (withdrawn).
Jan. 16, Sun.	W	Deadline for web withdrawing (grade of "W") from multi-term courses that started in September 2004 ( <b>with fee refund for Winter Term</b> ).
Jan. 22, Sat. to Jan. 28, Fri.	EVENT	Carnival Week at Macdonald Campus. Classes as usual.
Jan. 23, Sun.	W/W--	Deadline to web withdraw (grade of "W") from Winter Term courses with fee refund. <b>Returning students</b> - less \$100 minimum charge in the case of complete withdrawal for students not registered in the fall. <b>New students</b> - less deposit in case of complete withdrawal. (No withdrawals from Ed. intensive courses, or music ensembles and practical lessons.)
<b>February 2005</b>		
Feb. 7, Mon.	THES	Deadline to submit doctoral theses with Nomination of Examiners forms to GPSO (Thesis Office) for students expecting to convocate in Spring 2005. Meeting this deadline does not guarantee a Spring graduation.
Feb. 10, Thurs.	EVENT	Macdonald College Founder's Day. (Sir William C. Macdonald born Feb. 10, 1831; died June 9, 1917). Classes cancelled 10:00 a.m. to 1:00 p.m.
Feb. 13, Sun.	W	Deadline for web withdrawing (grade of "W") from Winter and Winter term Cont. Ed courses. No Refund.



**Prerequisites:**

M.Arch.I – McGill B.Sc.(Arch.) degree, or equivalent;  
M.Arch.II – an M.Arch.I or equivalent professional degree.  
See Architecture.

**Master of Arts Degree**

Programs leading to the degree of Master of Arts are offered in the following areas:

- Anthropology (Thesis and non-thesis)
  - Medical Anthropology (Thesis and non-thesis)
- Art History
- Classics (Thesis and non-thesis)
- Communications (Thesis and non-thesis)
- Economics (Thesis and non-thesis)
  - Social Statistics (Non-thesis)
- Education (Thesis and non-thesis)
- English (Thesis and non-thesis)
- French (Thesis and non-thesis)
- Geography
  - Social Statistics (Non-thesis)
  - Neotropical Environment
- German (Thesis and non-thesis)
- Hispanic Studies (Thesis and non-thesis)
- History (Thesis and Non-thesis)
  - History of Medicine (Non-thesis)
- Islamic Studies
- Italian (Thesis and non-thesis)
- Jewish Studies (Thesis and non-thesis)
- Kinesiology and Physical Education (Thesis and non-thesis)
- Linguistics (Non-thesis)
- Mathematics (Thesis and non-thesis)
- Music (Thesis and non-thesis)
- Philosophy
  - Bioethics
- Political Science (Thesis and non-thesis)
  - Social Statistics (Non-thesis)
- Psychology
- Religious Studies (Thesis and non-thesis)
  - Bioethics
- Russian
- Sociology (Thesis and non-thesis)
  - Medical Sociology (Thesis and non-thesis)
  - Social Statistics (Non-thesis)
  - Neotropical Environment

**Prerequisites:**

Bachelor of Arts in the subject selected for graduate work. See appropriate unit.

**Master of Business Administration Degree**

A program leading to the degree of Master of Business Administration (M.B.A.) is offered in the following concentrations:

- Accounting
- Entrepreneurial Studies
- Finance
- Information Systems
- International Business
- Management for Development
- Marketing
- Operations Management
- Strategic Management

**Prerequisites:**

An undergraduate degree from an approved university. See Management.

**Special programs:**

Joint M.B.A./M.D., Joint M.B.A./Law, Master of Manufacturing Management (see Management and Mechanical Engineering).

**Master's Degrees in Education**

Three types of Master's degrees are offered:

M.A. (thesis and non-thesis), M.Ed. (non-thesis) and M.Sc. (thesis and non-thesis).

The M.A. may be taken in the following areas:

- Counselling Psychology (Thesis and non-thesis)

- Culture and Values in Education (Thesis and non-thesis)
- Educational Psychology (Thesis and non-thesis)
- Educational Studies (Thesis and non-thesis)
- Kinesiology and Physical Education (Thesis and non-thesis)
- Second Language Education (Thesis and non-thesis)

The M.Ed. may be taken in the following area:

- Educational Psychology

The M.Sc. may be taken in the following area:

- Kinesiology and Physical Education (Thesis and non-thesis)

**Prerequisites:**

A Bachelor's degree with specialization related to the subject chosen for graduate work, plus a Permanent Quebec Teaching Diploma or its equivalent for some of the above degrees. See appropriate department.

**Master's Degree in Engineering**

Programs leading to the degree of Master of Engineering are offered in the following areas:

- Biomedical Engineering (Thesis)
- Chemical Engineering (Thesis and project)
  - Environmental Engineering (Project)
  - Petrochemicals, polymers and plastics (Project)
- Civil Engineering and Applied Mechanics (Thesis and project)
  - Rehabilitation of Urban Infrastructure (Project)
  - Environmental Engineering (Project)
- Electrical Engineering (Thesis and project)
  - Computational Science and Engineering (Thesis)
- Mechanical Engineering (Thesis and project)
  - Aerospace Engineering (Project)
  - Computational Science and Engineering (Thesis)
- Mining and Metallurgical Engineering (Thesis and project)
  - Environmental Engineering (Project)
  - Mining (Project)
  - Metals and Materials (Project)

**Other degrees:**

Master of Management (M.M.) is offered in Manufacturing Management (see Department of Mechanical Engineering and Faculty of Management).

Master of Science (M.Sc.) is offered in Chemical Engineering, Civil Engineering, Mechanical Engineering, and Mining and Metallurgy.

**Prerequisites:**

Bachelor of Engineering or equivalent, with specialization appropriate for the subject selected for graduate study. See appropriate department.

**Master's Degrees in Law**

The degree of Master of Laws is offered in:

- Law (Thesis and non-thesis)
  - Bioethics
  - Comparative Law (Thesis and non-thesis)
- Air and Space Law

The degree of Master of Civil Law is offered by the Institute of Comparative Law.

**Prerequisites:**

An acceptable degree in Law or equivalent qualifications. See Law.

**Master of Library and Information Studies Degree**

Comparative Engineering (Thesis and non-thesis)

Musicology (Thesis and non-thesis)  
 Music Education (Thesis and non-thesis)  
 Theory (Thesis and non-thesis)

The M.Mus. may be taken in:  
 Composition  
 Performance (various options)  
 Sound Recording

Applicants to the Performance program are required to pass auditions in their speciality.

Prerequisites:  
 Bachelor of Music or Bachelor of Arts with concentration in the area selected for graduate study. See Music.

#### Master's Degrees in Nursing

Two types of Master's degrees are offered: Master of Science (Applied) and Master of Science (with thesis). These two-year programs are designed to prepare clinicians and researchers for the expanding function of nursing within the health care delivery system.

Prerequisites:  
 Preparation in nursing comparable to the Bachelor's degree offered at McGill and accomplishment and development as a nurse. A current nursing registration is required. Non-nurses holding a bachelor's degree comparable to a B.Sc. or B.A. program offered at McGill may be admitted to a Qualifying Program. See Nursing.

#### Master's Degrees in Religious Studies

A program leading to the degree of Sanctae Theologiae Magister (S.T.M.) is given in the Faculty of Religious Studies. This degree is primarily for those who intend to enter the ministry of the Christian Church or another religious institution, or to proceed to teaching in schools. A Master of Arts program (thesis and non-thesis) is also available.

Prerequisites:  
 B.A. with specialization in religious studies or theology. See Religious Studies.

#### Master of Science Degree

Programs leading to the degree of Master of Science are provided in the following areas:

Agricultural Economics  
 Anatomy and Cell Biology  
 Animal Science  
 Atmospheric and Oceanic Sciences  
     Computational Science and Engineering  
 Biochemistry  
     Chemical Biology  
 Biology  
     Neotropical Environment  
 Bioresource Engineering  
     Neotropical Environment  
 Chemical Engineering  
 Chemistry  
     Chemical Biology  
 Civil Engineering and Applied Mechanics  
 Communication Sciences and Disorders  
 Computer Science (Thesis and non-thesis)  
     Computational Science and Engineering  
 Dental Science  
     Oral and Maxillofacial Surgery  
 Earth and Planetary Sciences  
 Entomology  
 Epidemiology and Biostatistics (Thesis and non-thesis)  
 Food Science and Agricultural Chemistry  
 Geography  
     Neotropical Environment  
 Genetic Counselling (Non-thesis)  
 Human Genetics  
 Human Nutrition  
 Kinesiology and Physical Education (Thesis and non-thesis)  
 Mathematics (Thesis and non-thesis)

Computational Science and Engineering  
 Mechanical Engineering  
 Medical Radiation Physics  
 Medicine, Experimental  
     Bioethics  
 Microbiology and Immunology  
 Microbiology (Macdonald Campus)  
 Mining and Metallurgical Engineering  
 Neurological Sciences  
 Nursing  
 Otolaryngology  
 Parasitology  
 Pathology  
 Pharmacology and Therapeutics  
     Chemical Biology  
 Physics  
 Physiology  
 Plant Science  
     Neotropical Environment  
 Psychiatry  
 Psychology  
 Rehabilitation Science (Thesis and non-thesis)  
 Renewable Resources  
     Neotropical Environment  
 Surgery, Experimental

Prerequisites:  
 Bachelor of Science in the subject selected for graduate work. See appropriate unit.

#### Master of Science, Applied, Degree

This degree was designed to provide postgraduate training of a professional and vocational character, with less emphasis on theoretical knowledge and research than in Master of Science programs, but with no lower standards either for admission or completion of requirements. Two years of full-time study or equivalent are normally required with an emphasis on course work.

Programs are available in:

Animal Science  
 Bioresource Engineering  
     Neotropical Environment  
 Biotechnology  
 Chemistry  
 Communication Sciences and Disorders  
 Human Nutrition  
 Microbiology and Immunology  
 Nursing  
 Occupational Health Sciences  
 Pharmacology and Therapeutics  
 Plant Science  
 Rehabilitation Sciences

Prerequisites:  
 A Bachelor's degree in the subject selected for graduate work. See appropriate unit.

#### Master of Social Work Degree

The M.S.W. degree (thesis and non-thesis options) represents a second level of professional study in which students build competence in a chosen field of practice.

Prerequisites:  
 Bachelor's degree in Social Work including courses in statistics and social science research methods. See Social Work.

Special program:  
 Joint M.S.W./Law.

#### Master of Urban Planning Degree

The program requires a minimum of two years residence and a 3-month internship with a member of a recognized planning association.

Prerequisites:  
 Bachelor's degree in any one of the following: Anthropology, Architecture, Economics, Civil Engineering, Geography, Law, Management, Political Science, Social Work, Sociology or Urban







## 6.2 Graduate Record Examination and other Admission Tests

The Graduate Record Examination (GRE) (Educational Testing Service, Princeton, N.J. 08540) consists of a relatively advanced test in the candidates' specialty, and a general test of their attainments in the several basic fields of knowledge, for which no special preparation is required or recommended. It is offered at many centres, including Montreal, several times a year; the entire examination takes about eight hours, and there is a registration fee. Only some departments require applicants to write the GRE examination, but all applicants who have written either the general aptitude or the advanced test are advised to submit the scores along with their other admission material.

This credential is of special importance in the case of applicants whose education has been interrupted, or has not led directly towards graduate study in the subject selected. In such cases the department has the right to insist on a report from the Graduate Record Examination or some similar test. High standing in this examination will not by itself guarantee admission. The Miller Analogies Test may be used similarly. Some departments of the Faculty of Education also require the taking of various tests.

Applicants to graduate programs in Management must submit scores from the Graduate Management Admissions Test (GMAT).

## 6.3 Competency in English

Non-Canadian applicants to graduate studies whose mother tongue is not English and who have not completed an undergraduate degree from a recognized institution where English is the language of instruction must submit documented proof of competency in oral and written English. **Before acceptance**, appropriate exam results must be submitted directly from the TOEFL or IELTS Office. An institutional version of the TOEFL is not acceptable. Examples of appropriate exam results are: TOEFL (Test of English as a Foreign Language) with a minimum score of 550 (or 213 on computer-based test), or IELTS (International English Language Testing Systems) with a minimum overall band of 6.5. Permanent Residents may be required to submit a TOEFL score. Applications will not be considered if a TOEFL or IELTS test result is not available.

## 6.4 Admission Requirements

Applicants should be graduates of a university of recognized reputation and hold a Bachelor's degree equivalent to a McGill degree in a subject closely related to the one selected for graduate work. This implies that about one-third of all undergraduate courses should have been devoted to the subject itself and another third to cognate subjects.

The applicant must present evidence of academic achievement: a minimum standing equivalent to a Cumulative Grade Point Average (CGPA) of 3.0 out of a possible 4.0 or a CGPA of 3.2/4.0 for the last two full-time academic years. High grades are expected in courses considered by the department to be preparatory to the graduate program.

Some departments impose additional requirements and even though the applicant may appear to satisfy the general admission requirements, acceptance into a graduate degree program is not guaranteed by the department or the Graduate and Postdoctoral Studies Office.

## 6.5 Parallel Admission

This program is designed to assist academically qualified applicants, lacking the minimum English language requirement for graduate studies at McGill, to adjust to the learning, research and teaching environment of a major, research-based, North American university where the usual language of operation is English. The program will ensure that otherwise suitably qualified applicants for admission into graduate studies programs will develop the appropriate level of English-language competency and adjust to the

learning and living environment to be encountered in graduate studies at McGill within one calendar year of their admission to the program. Those students who fail to meet with these requirements will be asked to withdraw.

Students admissible to the program will have been screened by the staff of the graduate program into which they wish to be admitted, and recommended to the Graduate and Postdoctoral Studies Office. If the applicant is deemed by the GPSO to be admissible on purely academic grounds but has a TOEFL score below the entrance requirement of the graduate program, by no more than 27 points (paper-based scale) or 20 points (computer-based scale), he/she will be admitted to the Parallel Admission Program for a period not to exceed twelve (12) calendar months. In order to start his/her studies in the graduate program into which he/she had been admitted he/she would have to obtain the McGill Certificate of Proficiency in English according to the rules and regulations in force in the Department of Languages and Translation within the twelve-month period, or pass the TOEFL with a score meeting the admission requirement of the graduate program for which the student has applied.

**Any students who fails to meet the English-language requirement within one calendar year of admission to the Parallel Admission Program will be asked to withdraw.**

## 6.6 Admission to a Qualifying Program

Some applicants whose academic degrees and standing entitle them to serious consideration for admission to graduate studies, but who are considered inadequately prepared in the subject selected may be admitted to a Qualifying Program. The undergraduate-level courses to be taken in a Qualifying Program will be prescribed by the department concerned.

Qualifying students are registered in graduate studies, **but not as candidates for a degree**. Only one qualifying year (i.e., two full-time terms) is permitted.

In cases where a department recommends a change of registration from Qualifying Program to Master's Degree First Year **this change must be made prior to December 1st. Students must apply to the degree program.**

Successful completion of the work of the Qualifying Program does not automatically entitle the student to proceed towards a degree. Qualifying-year students must re-apply for admission to the program for which they seek qualification.

Students who are ineligible for a Qualifying Program may apply to the appropriate undergraduate faculty for admission as regular or special students, and seek admission to graduate studies at a later date. The normal admission requirements must be met and the usual procedures followed.

## 6.7 Admission to a Second Degree Program

A candidate with a given higher degree may apply for admission to a second degree program at the same level but **in a different subject**. The normal admission requirements must be met and all the usual procedures followed.

## 6.8 Admission to Two Degree Programs

Students may, with special permission granted by the Graduate and Postdoctoral Studies Office, be admitted to two degree programs or to two departments or faculties. Students are **never** permitted to pursue two **full-time** degree programs concurrently.

## 6.9 Admission to an *Ad Personam* Joint Program

*Ad Personam* joint graduate programs are restricted to Master's Thesis Option and Ph.D. programs. Students shall be admitted and registered by one department, to be known as the "first department". Approval for the joint program must be obtained from the Graduate and Postdoctoral Studies Office. The request shall be signed by the Chairs of both departments involved and shall explicitly list the conditions imposed by the second depart-



ment. The student shall undertake research under the joint supervision of both departments.

Students shall fulfil the degree requirements of the first department and shall complete all the requirements specified by the second department in the request for admission. This program is described in more detail in a document available from the GPSO.

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#### **6.10 Admission to an *Ad Hoc* Program (Thesis)**

*In exceptional cases*, admission to an *Ad Hoc* program (thesis) may be considered. Before the Graduate and Postdoctoral Studies Office will authorize the admission of a student into an *Ad Hoc* program, it must receive a favourable report from a departmental committee constituted to examine the program in question.

Candidates, through the supervisor designated by the department most closely related to their research field, must submit a research proposal, an outline of the course work needed including a Comprehensive Examination (for Doctoral programs) in the relevant field, and the list of four supervisory committee members.

Once the request has been approved, the candidate may register following all the regular procedures. Full description of the admission procedure is available from the GPSO.

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#### **6.11 Reinstatement and Admission of Fsm Admissist d inclu.26036233 Tc 0 Tw (Student-) Tj -61.25 -1 inclu.2 /F0 7.5 Tf 0.8**

Students. After completion of a maximum of 12 credits, an applicant **may not** continue as a Special Student.

If graduate Special Students subsequently become candidates for higher degrees, they may receive academic credit for relevant graduate courses taken as special students.

**Students who wish to take undergraduate courses only must apply as Special Students in the undergraduate faculty concerned, even if they already hold degrees.**

### 7.1.7 Visiting Students

Visiting Students are those students who are registered in a degree program at another university and who have obtained written permission from both universities to take a course(s) for credit towards that degree program. Students studying in the province of Quebec who are in this category are eligible for a transfer of credit if the required permission is obtained on Inter-University Transfer forms. These forms are available on-line at [www.mcgill.ca/students-information/transfers](http://www.mcgill.ca/students-information/transfers). McGill students registering for courses required for their degree program at other Quebec universities are required to pay for the course(s) at the home university. McGill University and Université de Montréal participate in an exchange (graduate) with the University of British Columbia and the University of Toronto.

As a rule, graduate students should not register for courses through Inter-university Transfers (IUT) during the last semester before graduation. There are considerable delays in receiving official transcripts which delay the degree audit process and graduation. If special departmental permission is given for such a course to be taken in the last semester, there will be no extension given for the grade submission deadline.

### 7.1.8 Visiting Research Students

Graduate students registered in a degree program at another university who wish to come to McGill to do **research only** may do so after acceptance by the GPSO. The department recommending admission must specify "**Visiting Research**" on the Decision Form. Visiting Research students are charged additional session fee rates and they may not register for courses. They must apply for admission every year.

### 7.1.9 Non-Resident Status

(may be granted to students in **residence terms only**)

1. Departments, with the approval of the Graduate and Postdoctoral Studies Office, may permit or require candidates to spend one session at another institution; it is understood that this session must be one of full-time work, and that the institution selected must be able to provide expert supervision and facilities for research appropriate to the candidate, in the field selected.

Permission to spend a required year of residence at another university must be obtained **before** the beginning of the session in which the student will be absent. A program of the work projected and particulars of the institution selected should be sent, accompanied by a letter from the Chair of the department, to the Director of the GPSO for approval. Permission is only granted to students who have already completed one full session at McGill.

The student will be required to register and pay the normal full-time McGill tuition fee less any tuition fee payable to the host institution. Other student-related fees are not levied and the ID card is not validated.

Students participating in a formal exchange program must register and pay full-time tuition including other student-related fees. The ID card is not validated.

2. Students who wish to take a leave from the University for a maximum period of one year **before returning to complete their residence requirements** should first obtain permission to do so both from their department and the GPSO.

The student **must register as a Non-Resident student**, and pay the non-resident fee. Student services fees are not levied and the ID card is not validated. Students can only be non-

resident for a maximum of one year. The non-resident fee is \$100 per term.

### 7.1.10 Leave of Absence Status

A leave of absence may be granted by the Graduate and Postdoctoral Studies Office for maternity or parenting reasons or for health reasons (see section 9.7 "Health and Parental/Familial Leave of Absence Policy"). Such a leave must be requested on a term by term basis and may be granted for a period of up to 52 weeks. Students must make a request for such a leave in writing to their department and submit a medical certificate. The department shall forward the request to the GPSO.

Students who have been granted such a leave will have to register for the term(s) in question and their registration will show as "leave of absence" on their record. No tuition fees will be charged for the duration of the authorized leave. Research supervisors are not obligated to remunerate students on leave.

### 7.1.11 Medical Residents

Residents and fellows on staff of teaching hospitals associated with the University are included in the Graduate and Postdoctoral Studies Office statistics.

### 7.1.12 McGill Staff as Graduate Students

Members of the teaching staff of the University up to and including the rank of lecturer may enrol as candidates for a degree, diploma or certificate. If their teaching duties are designated as full-time, they may only enrol as half-time students.

Professorial members of the academic staff may not enrol in graduate degree and diploma programs. This rule shall apply also to any persons who have been on the professorial staff within the previous 12 months, unless they resign completely from their positions at McGill.

Should persons registered in graduate studies be promoted to professorial rank, they may no longer remain graduate students, unless they resign or are granted leave of absence from their professorial appointments.

In certain exceptional cases, professorial members of the academic staff may apply to the Graduate and Postdoctoral Studies Council to enter graduate programs in academic units other than their own. The Council may grant permission if it is satisfied that the applicant's teaching unit and proposed unit for graduate study are sufficiently remote that conflict of interest situations will not arise. Permission must be granted before any courses are taken towards the proposed degree.

### 7.1.13 Quebec Inter-University Transfer Agreement (IUT)

The IUT Agreement permits concurrent registration at McGill and another Quebec institution.

Regular undergraduate and graduate degree, exchange, diploma or certificate candidates registered at McGill may, with the written permission of the Dean of their faculty or delegate, register at any university in the province of Quebec. These courses, subject to GPSO regulations, will be recognized by McGill for the purpose of the degree for which the student is registered up to the limit imposed by the residency requirements of the program.

Students wishing to take advantage of this agreement should consult their Student Affairs Office for details, and are informed that this agreement is subject to the following conditions:

- The other universities concerned may, at their discretion, refuse the registration of a student for any of their courses.
- The obligation of the student to complete their faculty and program requirement.
- The student is responsible for ensuring that the McGill Class Schedule permits these courses to be taken without conflict.
- The universities concerned are not responsible for special arrangements in cases of examination or class schedule conflicts.
- Marks earned at the host university will not appear on McGill transcripts or be included in McGill grade point averages.

Students must initiate an on-line Inter-University Transfer (IUT) application to request the required authorizations. McGill students are advised to access the IUT application via the Web at [www.mcgill.ca/student-records/transfers](http://www.mcgill.ca/student-records/transfers). Students may also find additional information posted at their faculty Website.

**Note:** Once the IUT application is approved by both the home and host universities, the student remains responsible for registering in the same course for which they have obtained electronic approval. The method of registration of the host university will vary (e.g., web, in-person, phone etc.) The student is advised to initiate the electronic application allowing enough time to meet the host university's registration deadlines. Furthermore, the student is responsible for adhering to all registration deadlines of the host institution.

## 7.2 Registration

### 7.2.1 Registration for Fall and Winter Terms (including additional session and non-thesis extension students)

All returning and new graduate students must register on-line at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva), after completing a Minerva Course Selection Form and obtaining departmental approval.

Courses may be added until the end of the course change period without penalty.

#### Returning Students:

Returning students register via Minerva between Thursday, March 25 and Monday, August 2.

Students will be charged a late registration fee during the late registration period. **To avoid the late registration fee students must access [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) and register for REGNRCGR (the Registration Confirmation course) in both the Fall (CRN 3530) and Winter (CRN 3522) terms.**

Successful completion of registration is contingent upon acceptable academic standing in the previous session and payment of any previous outstanding fees and fines.

#### Newly-Admitted Students:

New students entering in September 2004 register on Minerva between Tuesday, August 3 and Wednesday, September 1.

Students will be charged a late registration fee during the late registration period. **To avoid the late registration fee students must access [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) and register for REGNRCGR (the Registration Confirmation course) in both the Fall (CRN 3530) and Winter (CRN 3522) terms.**

New students entering in January 2005 register by Minerva between Friday, December 3 and Monday, January 3.

Students will be charged a late registration fee during the late registration period. **To avoid the late registration fee students must access [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) and register for REGNRCGR (the Registration Confirmation course) in the Winter (CRN 3522) term.**

**Students** must register (and pay fees) annually up to and including the term of graduation. Outstanding tuition fees must be paid **before** graduation. A graduate student registered in the Winter term who graduates in February will have their Winter registration and fees cancelled at the end of February.

**Exception:** A registered student in 2003-04, who has completed the residency in a thesis program, and who meets the August 31 thesis submission deadline to the GPSO (Thesis Office), does not need to register for the 2004-05 academic year. The student should not expect to graduate in Fall 2004, but **must graduate by Fall 2005 graduation at the latest.** Otherwise the student must be reinstated and will be charged retroactive registration fees for all unregistered sessions/terms up to and including the term in which they graduate. Students who have already registered for the year must ask the Graduate and Postdoctoral Studies Office, IN WRITING, to delete their registration at the time of their theses submission.

If the thesis is submitted after August 31, and the student graduates in February of the next year, he/she must register for the Fall

term and pay fees. The last term of registration will show the graduation narrative, i.e., Fall for February graduation, Winter for May/June graduation and Summer for October Graduation. If the thesis is submitted after August 31, and the student graduates in May/June of the next year, he/she must register for Fall and Winter terms and pay fees.

### 7.2.2 termsgc (tuu 0 8-0.1141 Tgra15n a thesi350t term s ) 0.210 "1

GPSO before a student in this category will be permitted to register.

### 7.2.6 Time Limitation

Candidates for Master's degrees must complete the degree **within three years of initial registration**. If the degree is pursued on a less than full-time basis, it must be completed within five years of initial registration.

In exceptional cases, a student who wishes to submit a thesis, or to complete outstanding degree requirements, after withdrawal may do so only on the recommendation of the department concerned. A graduate application must be submitted by stated deadlines and re-admission fees will apply. The final decision rests with GPSO.

By annual registration, **all** doctoral candidates may maintain their connection with the University **for four years** after completing their residence requirements.

The object of these regulations is to encourage candidates to complete their theses and qualify for their degree without undue delay.

*Council of the FGSR - February 2, 1996*

### 7.2.7 Withdrawal from a Degree Program

Departments have the right to ask students to withdraw from the program if progress is not satisfactory, or if they have failed a course required for their program, or for lack of performance in research.

Any student who withdraws from the University **must complete a Withdrawal Form** available from the Graduate and Postdoctoral Studies Office. Fees will then be refunded according to the conditions outlined in section 7.5 "Change of Course" and in section 7.6 "Regulations Concerning Withdrawal".

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## 7.3 Course Information

### 7.3.1 Multi-term Courses

Most courses at McGill are single term (Fall or Winter or Summer) courses with final grades issued and any credits earned recorded at the end of that term. Single term courses are identified by a seven-character course number.

A unit may, however, decide that the material to be presented cannot be divided into single term courses or it is preferable that the work to be done is carried out over two, or three, terms. Under such circumstances, courses are identified by a two-character extension of the course number.

In some cases, the same course may be offered in various ways: as a single term and/or in one or more multi-term versions. The course content and credit weight is equivalent in all modes, the only difference being the scheduling, and students cannot obtain credit for more than one version.

**Courses with numbers ending in D1 and D2** are taught in two consecutive terms (most commonly Fall and Winter). Students must register for the same section of both the D1 and D2 components. When registering for a fall term D1 course the student will automatically be registered for the winter term D2 portion. No credit will be given unless both components (D1 and D2) are successfully completed in consecutive terms, e.g., Fall 2004 and Winter 2005.

**Courses with numbers ending in N1 and N2** are taught in two non-consecutive terms (Winter and Fall). Students must register for the same section of both the N1 and N2 components. No credit will be given unless both components (N1 and N2) are successfully completed within a twelve (12) month period.

**Courses with numbers ending in J1, J2 and J3** are taught over three consecutive terms. Students must register for the same section of all three components (J1, J2, J3). No credit will be given unless all three components are successfully completed.

### IMPORTANT CONDITIONS FOR MULTI-TERM COURSES

1. **Students must be registered for each component of the multi-term course. Students must ensure that they are registered in the same section in each term of the multi-term course.**
2. **Students must successfully complete each component in sequence as set out in the multi-term course. Credit is granted only at the end of the multi-term course; no credit is given for partial completion.**

### 7.3.2 Course Terminology

**Prerequisite:** Course A is prerequisite to course B if a satisfactory pass in course A is required for admission to course B.

**Corequisite:** Course A is corequisite to course B if course A must be taken concurrently with (or may have been taken prior to) course B.

**Credits:** The credit weight of each course is indicated in parentheses beside the course title. For D1 and D2 courses the credit weight is indicated after the course number.

### COURSE NOMENCLATURE IN PROGRAM DESCRIPTIONS:

**Required Course:** Courses absolutely required in a program. All students in that program must take this (these) course(s) unless they are granted exemption(s).

**Complementary Course:** Courses selected from a restricted list, a particular subject area, or a discipline. In some programs, students must include a number of these in order to meet program requirements.

**Note: Complementary courses are not electives.** The difference between Complementary courses and Required courses is that Complementary courses offer an element of choice, however small that choice may be. Students may choose from the two (or more) courses specified within Complementary Course segment(s) of a program description, but ONLY from those.

**Elective course:** courses chosen freely (sometimes with advice and approval of the Graduate Program Director and GPSO).

### 7.3.3 Class Schedule and Course Catalog

Students should consult Class Schedule when preparing to register ([www.mcgill.ca/courses](http://www.mcgill.ca/courses)). Here they will find up to date information including days and times when courses are offered, class locations, names of instructors, and course pre-requisites. Class Schedule only displays courses that are being offered in the term selected.

For a complete listing of all McGill courses, even if they are not offered in a given year or term, students may consult the Course Catalog at [www.mcgill.ca/courses](http://www.mcgill.ca/courses). Searches are conducted by term and provide information such as full course descriptions, course pre-requisites and registration requirements.

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## 7.4 Summer Studies

Registration regulations may change for Summer 2005. Students should consult their department in the middle of March.

Graduate courses are available in some subject areas during the summer and the *Summer Studies Calendar* should be consulted for a complete listing of undergraduate and graduate level courses.

Students doing graduate work in Education are strongly advised to enrol in summer studies and many programs can only be completed by participation in summer studies.

Registration for courses for graduate students takes place via Minerva for the Summer session. It is the responsibility of the student to register for courses within the deadlines, after completing a Minerva Course Selection Form and obtaining departmental approval.

Students in thesis programs, who pay fees on a per term basis and who have already paid full-time tuition fees during the preceding year are not required to pay for required courses taken in the summer. Students in non-thesis programs will be charged fees for





three occasions during the year: February, May and October. Transcripts of successful candidates will indicate a "degree awarded" notation along with the date on which the degree, diploma or certificate was granted and this is the official date of graduation. Students can verify their transcripts for this information three times a year as follows:

- Late February, if Term of graduation is Fall (degree granted February, Convocation in June)
- Early June, if Term of graduation is Winter (Convocation in June)
- Late October, if Term of graduation is Summer (Convocation in November)

Convocation ceremonies are held in June and November at which time the degree, diploma or certificate is conferred by the Chancellor of the University.

For more information regarding the Convocation ceremonies please refer to [www.mcgill.ca/secretariat/convocations](http://www.mcgill.ca/secretariat/convocations).

#### **7.11.1 Dean's Honour List**

Only graduate students who have completed their program within the University's time limitation for their program are considered for the Dean's Honour List designation.

The criteria for inclusion in the Dean's Honour List is as follows:

##### **Master's Thesis Candidates:**

Truly outstanding student recommended by the department.

##### **Doctoral Thesis Candidates:**

Truly outstanding student recommended by the Oral Defense Committee.

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#### **7.12 Access to Records**

Statements of account and all other correspondence are sent directly to students who retain full control as to who has access to

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In the case of a variation in the spelling of the name among these documents, the University will use the name on the document that appears first on the above list.

**Note:** This is the name that will appear on the student's diploma or certificate on graduation, and on the student's transcript.

### 7.18 Verification of Name

Students should verify the accuracy of their name on McGill's student records via Minerva and make any necessary corrections to formatting, e.g., upper/lower case letters, accents and spacing.

Students **cannot change the name** on their record via Minerva. Requests for such changes must be made by presenting official documents (see section 7.17 "Legal Name") in person at the Admissions, Recruitment and Registrar's Office.

### 7.19 E-mail Communication

E-mail is one of the official means of communication between McGill University and its students. All students are assigned a Uniform E-mail Address (UEA). They should view and verify their UEA on Minerva, under the Personal Information menu. As with all official University communications, it is the student's responsibility to ensure that time-critical e-mail is accessed, read, and acted upon in a timely fashion. If a student chooses to forward University e-mail to another e-mail mailbox, it is that student's responsibility to ensure that the alternate account is viable.

It is a violation for any user of official McGill e-mail addresses to impersonate a University officer, a member of the faculty, staff or student body, in line with the McGill University "Code of Computer User Conduct" and relevant federal and provincial legislation.

More information about e-mail procedures is available at [www.mcgill.ca/email-policy](http://www.mcgill.ca/email-policy). E-mail support is provided by ICS Customer Support. Please refer to see section 11.2 "Computing Facilities".

### 7.20 Updating Personal Information

It is important that all students keep their official records up to date, especially their mailing or student billing address as these are used by the University year round. If all addresses on file are invalid or incomplete, a student's mail will be held. Once the addresses are updated, future mail will be sent.

Students should update their addresses and/or telephone number using Minerva.

Students who are away from campus and do not have access to the Internet may make the changes by writing to the Student Affairs Office or to the Admissions, Recruitment and Registrar's Office. A written request must include the student's signature.

Changes requiring verification of official documents, e.g., change of name or citizenship or correction of birth date, must be reported to the Admissions, Recruitment and Registrar's Office as soon as possible. Such changes can only be made in person.

## 8 Student Services and Information

### 8.1 Fellowships, Awards and Assistantships

Graduate and Postdoctoral Studies Office  
(Fellowships and Awards Section)  
James Administration Building, Room 400  
845 Sherbrooke Street West  
Montreal, Quebec H3A 2T5

Telephone: (514) 398-3990

Fax: (514) 398-2626

E-mail: [graduate.fellowships@mcgill.ca](mailto:graduate.fellowships@mcgill.ca)

Website: [www.mcgill.ca/gps](http://www.mcgill.ca/gps) (under Funding: Fellowships and Awards)

The Fellowships and Awards Section of the Graduate and Postdoctoral Studies Office provides information on many sources of support for Canadian and non-Canadian students, both new to McGill and continuing. Further information on these and other sources of funding can be found various publications on the Fellowships and Awards web pages. The Graduate Fellowships and Awards Calendar lists all internal awards as well as numerous external awards. "Making Ends Meet" is a guide to successful strategies for funding graduate studies. The Tomlinson Fellowships are awarded to the most outstanding applicants at the following levels: Master's programs in disciplines housed in the Faculty of Science, doctoral programs in any discipline, and postdoctoral research in any discipline.

Applications for Tomlinson Postdoctoral Fellowships must reach the proposed academic department by the first Monday in November – please consult the Website for application guidelines and forms.

Tomlinson Master's and Doctoral Fellowships, as well as other entrance fellowships are awarded on the basis of the application for admission, upon nomination by academic departments – please contact the proposed academic department directly for further information. To be considered for a Tomlinson Master's or Doctoral Fellowship, the application for admission must reach the proposed academic department by the first Monday in January (some departments impose an earlier deadline).

The GPSO also administers Major Fellowships for students who are currently enrolled in a McGill graduate program for subsequent years of studies. Competition deadlines are in the early fall prior to the funding period (e.g., Fall 2004 for funding in 2005-06) – please consult the Website for application guidelines and forms.

Differential fee waivers for International students provide eligible non-Canadian graduate students with waivers of the international tuition fee supplement. There are no application forms for differential fee waivers, since these are awarded on the basis of departmental nominations made to the Fellowships and Awards Section. Eligible students should contact their McGill department.

Research Assistantships, Teaching Assistantships and stipends from professors' research grants are handled by individual academic departments at McGill. All assistantship and stipend inquiries should be directed to departments.

### 8.2 Student Financial Assistance

#### Citizens and Permanent Residents of Canada

Need-based student financial aid programs are offered by the Federal/provincial governments. Applications should be submitted directly to the province (or territory) of residence. Application forms are available from the governmental authorities as well as the Student Aid Office. Information on governmental student aid and links to sites can be found on McGill's Financial Aid Website at [www.mcgill.ca/stuserv/aid/aid.htm](http://www.mcgill.ca/stuserv/aid/aid.htm).

#### Citizens and Permanent Residents of the United States

Stafford Loans (subsidized and unsubsidized) and parental loans (PLUS) are available for studies at McGill. Students must submit a FAFSA application to have their financial need assessed. FAFSA may be completed on the web at [www.fafsa.ed.gov](http://www.fafsa.ed.gov). The resulting SAR and a Master Promissory Note (Stafford Application) are submitted to the Student Aid Office. Students may contact the Office for information on alternative loan programs and should also check with banks and other lending organizations in the U.S.

More information can be found on McGill's Financial Aid Website at [www.mcgill.ca/stuserv/aid/aid.htm](http://www.mcgill.ca/stuserv/aid/aid.htm).

#### McGill Financial Aid

The Student Aid Office also administers the University's need-based financial aid program, which includes short term loans to cover emergency situations, limited bursary assistance, and a Work Study program. All applicants for aid must first apply for the maximum government assistance for which they may be eligible. Applications should be directed to:

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**Mental Health Service:** a psychiatric clinic which offers easily accessible treatment for mental health problems.

vate homes throughout Montreal. The lists are updated daily and are available to all students with a valid McGill ID number. The Website also contains information on renting in Montreal and on Quebec lease laws, as well as links to other useful sites.

Phones and computers are available at the Off-Campus Housing Office to assist students in their housing search. The office is located in the Student Housing Office, 3641 University Street, Montreal, QC H3A 2B3.

Telephone: (514) 398-6010

Fax: (514) 398-2305

E-mail: [offcampus.housing@mcgill.ca](mailto:offcampus.housing@mcgill.ca)

Website: [www.mcgill.ca/offcampus](http://www.mcgill.ca/offcampus)

The Off-Campus Housing Service is available on Macdonald Campus from June 1 to August 31. That office is located in Centennial Centre, Room CCI-124.

Telephone: (514) 398-7992

Fax: (514) 398-7610

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## 9 Graduate Studies Guidelines and Policies

### 9.1 Guidelines for Academic Units on Graduate Student Advising and Supervision

The general guidelines suggested below are meant to encourage units to examine their graduate programs and to specify their own policies and procedures. These guidelines are directed primarily towards thesis programs but will, in part, be appropriate for non-thesis programs as well.

Each academic unit should have explicitly stated policies and procedures regarding the advising and supervising of graduate students, as well as established means for informing students of procedures and deadlines (e.g., orientation sessions, handbooks) and mechanisms for addressing complaints. Academic units should ensure that their policies and procedures are consistent with the Charter of Students' Rights. For their part, graduate students are responsible for informing themselves of these policies and procedures.

#### 1. Assignment of Advisors, Supervisors and Committees

- i. Each unit should designate a member (or members) of the academic staff (usually the graduate program director) to monitor the progress of students throughout the graduate program, by the

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sessions, handbooks, etc.), as well as mechanisms for addressing complaints. Academic units should ensure that their policies, procedures and privileges are consistent with these guidelines and the Charter of Students' Rights. For their part Postdocs are responsible for informing themselves of policies, procedures, and privileges.

**1. Definition and Status**

- i. Postdoctoral status will be recognized by the University in accordance with Quebec provincial regulations. Persons may only be registered with postdoctoral status for a period of up to five years from the date they were awarded a Ph.D. or equivalent degree. Time allocated to familial or health leave (as defined in the GPSO Calendar, General Information section 9.7 "Health and Parental/Familial Leave of Absence Policy") is added to this period of time. Leaves for other reasons, including vacation leave, do not extend the term. Postdocs must do research under the supervision of one or more McGill professors, including Adjunct Professors. They are expected to be engaged primarily in research with minimal teaching or other responsibilities.

**2. Registration**

- i. Postdocs must be registered annually with the University through the Graduate and Postdoctoral Studies Office. Registration will require an original or notarized copy of the Ph.D. diploma. Registration will be limited to persons who fulfil the definition above and for whom there is an assurance of appropriate payment and where the unit can provide assurance of the necessary resources to permit postdoctoral education.
- ii. Upon registration, the Postdoc will be provided with a University identity card issued by the Registrar's Office.

**3. Appointment, Pay, Agreement of Conditions**

- i. Upon registration, all Postdocs must be appointed regardless of whether their payment comes from a McGill account. Their appointments may not exceed their registration status.
- ii. In order to be registered as a Postdoc, an individual must be assured of financial support, other than from personal means, during his/her stay in the University equivalent at the time of appointment to at least 90% of the lesser of either the federal or the provincial research council postdoctoral fellowship pertinent to his/her discipline. There are no provisions for paid family leave unless this is stipulated in the regulations of a funding agency outside the University.
- iii. At the outset of a postdoctoral appointment, a written Letter of Agreement for Postdoctoral Education should be drawn up and signed by the Postdoc, the supervisor, and the department head or delegate (see sample Letter of Agreement on the Web at [www.mcgill.ca/gps/postdoc](http://www.mcgill.ca/gps/postdoc)). This should stipulate, for example, the purpose of the postdoctoral appointment (research and the advancement of knowledge), the duration of the fellowship/stipend, the modality of pay, the work space, travel funds, and expectations and compensation for teaching and student research supervision. Leaves from postdoctoral education must comply with the Graduate and Postdoctoral Studies Policies for Vacation, Parental/Familial, and Health Leave (Graduate and Postdoctoral Studies General Information section 9.4 "Vacation Policy for Graduate Students and Postdocs" and section 9.7 "Health and Parental/Familial Leave of Absence Policy"). Any breach of these conditions may result in grievance procedures or the termination of the postdoctoral appointment.
- iv. Postdocs with full responsibility for teaching a course should be compensated over and above their fellowship at the standard rate paid to lecturers by their department.
- v. The amount of research, teaching, or other tasks that Postdocs engage in over and above postdoctoral activities should conform to the regulations for Postdocs specified by the Canadian research council of their discipline. This applies to all Postdocs, including those whose funding does not come from the Canadian research councils.

**4. Privileges**

- i. Postdocs have the same pertinent rights as the ones granted to McGill students in the *Handbook of Student Rights and Responsibilities* (see also the 5-0.165 ibilities2751 ndin2.5 Tf 108ted funR

- to refer Postdocs to the appropriate University policies and personnel for the resolution of conflict that may arise between a Postdoc and supervisor.
- v. Some examples of the responsibilities of the supervisor are:
- to uphold and transmit to his/her Postdocs the highest professional standards of research and/or scholarship;
  - to provide research guidance;
  - to meet regularly with his/her Postdocs;
  - to provide feedback on research submitted by the Postdocs;
  - to clarify expectations regarding intellectual property rights in accordance with the University's policy;
  - to provide mentorship for career development;
  - to prepare, sign, and adhere to a Letter of Agreement for Postdoctoral Education.
- vi. Some examples of responsibilities of Postdocs are:
- to inform themselves of and adhere to the University's policies and/or regulations for Postdocs for leaves, for research, and for student conduct as outlined in the *Handbook of Student Rights and Responsibilities* and the General Information, Regulations and Research Guidelines booklet of the Graduate and Postdoctoral Studies Office;
  - to present themselves for registration;
  - to sign and adhere to their Letter of Agreement for Postdoctoral Education;
  - to communicate regularly with their supervisor;
  - to inform their supervisor of their absences.
- vii. Some examples of the responsibilities of the University are:
- to register Postdocs;
  - to provide an appeal mechanism in cases of conflict;
  - to help eligible non-resident (immigration status) Postdocs obtain the Quebec Certificate of Eligibility for income tax purposes;
  - to provide documented policies and procedures to Postdocs;
  - to provide Postdocs with the necessary contacts for language courses, housing, immigration, daycare, schooling, and health care information.

*Approved by Senate April 2000.*

#### **9.4 Vacation Policy for Graduate Students and Postdocs**

Graduate students and Postdocs should normally be entitled to vacation leave equivalent to university holidays and an additional total of fifteen (15) working days in the year. Funded students and Postdocs with fellowships and research grant stipends taking additional vacation leave may have their funding reduced accordingly.

*Council of FGSR April 23, 1999.*

#### **9.5 Ph.D. Comprehensives Policy**

##### **Preamble**

The majority of doctoral programs at McGill require candidates to pass a comprehensive examination or set of examinations or equivalent, such as qualifying examinations, preliminary examinations, candidacy paper, comprehensive evaluation, thesis proposal, etc. The Calendar of the Graduate and Postdoctoral Studies Office (GPSO) includes the following statement:

A comprehensive examination or its equivalent is usually held near the end of Ph.D. 2. The results of this examination determine whether or not students will be permitted to continue in their programs. The methods adopted for examination and evaluation and the areas to be examined are specified by departmental regulations and approved by the Dean of Graduate and Postdoctoral Studies. It is the responsibility of students to inform themselves of these details at the commencement of their programs.

It is recognized that expectations for the Ph.D. comprehensive will vary according to the needs of the discipline. It is important to make it clear to doctoral candidates what the expectations and

procedures are for their Ph.D. comprehensive, and to maintain consistency within a given program.

##### **General Policy**

1. At the beginning of the relevant academic year, units must provide doctoral students with a written description of the Ph.D. comprehensive, covering the following issues: objectives and content, format, timing, assessment, grading and reporting, failures. (See below for details.)
2. All units that have a Ph.D. comprehensive must adopt an administrative course number for it, usually XXXX701. One of the following forms of grading must be adopted and used consistently within the program: Pass/Fail or letter grades. ("Mixed" modes of grading are not permitted, i.e., some students within a program reported on a Pass/Fail basis and others by means of letter grades.)

##### **Specific Issues**

###### **Objectives and Content**

Units must specify the objectives of the Ph.D. comprehensive.

Objectives may include assessing any of the following (or a combination), with a view to determining important to 0.2475 rTD 0.2834 Tcneesm





reread is received. No fee will be charged if there is a change upwards in the letter grade for the course.

3. Administration of the reread is handled by the Graduate and Postdoctoral Studies Office, not by the department. The Office will contact the department to obtain the work to be reread, a list of potential readers, and details of the marking. All communication with the second reader is conducted by the GPSO.

The second reader is given the original assignment, with marginalia, corrections, summary comments and mark intact, as well as any notes from the instructor pertinent to the general nature of the course or the assignment and grading schemes, etc.

4. The student's and the instructor's names are blanked out to reduce the possibility of prejudice and to help meet the requirement of the Charter of Students' Rights that the review be impartial. The rereader's name will not be made known to the student or instructor at any time; the student's name will not be made known to the rereader at any time.
5. The second reader should support his or her assessment with a brief memorandum to the Graduate and Postdoctoral Studies Office. As a result of the reread process, the grade may become **higher or lower or remain unchanged**. The grade submitted by the second reader shall replace the original grade. The reread grade cannot be challenged.

In the case of requests for rereads of group work, all members of the group must sign the request, indicating that they agree to the reread. In the event that members of the group are not in agreement, the written request should indicate which students are requesting the reread and which students do not wish for a reread. In such cases, the outcome of the reread (whether positive or negative) will affect only the students in favour of the reread. Neither the reread grade nor the decision to opt in or out of the reread can be challenged.

6. The new grade resulting from the review will be communicated to the student in a letter from the Graduate and Postdoctoral Studies Office, with a copy to the academic unit.

*Prepared by the Committee on Graduate Programs, Supervision and Teaching*

*Approved by Council of the Faculty of Graduate Studies and Research, May 12th 1995*

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## **9.7 Health and Parental/Familial Leave of Absence Policy**

A leave of absence may be granted by the Graduate and Postdoctoral Studies Office for maternity or parenting (interpreted accord-







ernment assistance for full-time studies by June 30 will be entitled  
to an exemption of interest and late payment charges effective





sons who are entitled to co-authorship, and none who are inappropriate;

- the submitting author should send each co-author a draft copy of the manuscript and should make a reasonable attempt to obtain consent to co-authorship, including the order of names; and
- other contributions should be indicated in a footnote or an "Acknowledgements" section, in accordance with the standards of the discipline and the publisher.

(iii) Ownership of copyright:

In the absence of an agreement between the researchers, the allocation of copyright is governed by university policy and the law.

*(b) Student-Professor Collaborations*



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and research training which contributes to the student's academic program.

- 2) As a general rule, paid work should not be considered eligible for credit towards an undergraduate course. In some departments, different arrangements have traditionally been held; in such departments open discussion should ensure that one policy is applied uniformly throughout the department and disseminated to students.
- 3) When a graduate student is assigned a salary or partial support by the investigator (e.g. from an operating grant or similar fund controlled by the investigator) a clear agreement should be made as to the duties expected of the student in conjunction with the investigator's own research project vis-à-vis the work contributing to the student's thesis.

#### **Secrecy**

- 1) When a student begins working with an investigator who may be funded in whole or in part by contracts, consulting agreements or grants from outside agencies, a clear agreement should be made at the outset as to the accessibility of research findings for publication.  
McGill's Research Policy prohibits staff researchers from engaging in research which may not subsequently be communicated to the scientific community through the normal channels of meetings and publications. Although exceptions to this rule are occasionally permitted by the Vice-Principal (Research), research projects assigned to students should be unrestricted and subject to the usual processes of thesis production and examination.
- 2) If at any time, during the program, the student's own research discoveries or those of other group members lead to a need for limitation on free communication, there should be full discussion by the whole group in concert with the administrative supervisor of the department, institute or faculty, of the reasons for such a proposal. In the event that a consensus is not reached, the matter shall be referred to the Vice-Principal (Research) for resolution.
- 3) When a thesis has been completed and satisfactorily examined, the student may wish to delay its publication or deposition in the McGill and National Libraries for a short period. Such requests may be made, in writing, to the Graduate and Postdoctoral Studies Office. Delays of one, or in exceptional cases, two years may be approved.

#### **Proprietary Research\***

\*Section 8, 9 & 10 of the Regulations Governing Conflict of Interest in Proprietary Research, November 1985.

- 1) The enterprise in which a member has an economic interest may not employ University students. However, such an enterprise may enter into contractual agreements to this effect with the University or be a partner with the University within a program of one of the granting agencies.  
Where such enterprise has made a grant, gift or donation to the University, no payment out of such grant, gift or donation shall be made to the interested member without prior approval of the Principal.
- 2) Members intending to acquire an economic interest in an enterprise shall inform all students who may be affected by their actions at the earliest possible date. Students shall immediately be free to seek the advice of the departmental Chair, the Dean of the Faculty, or the Dean of Graduate and Postdoctoral Studies.
- 3) Where students are employed by such enterprise, the member having an interest therein shall ensure that students who have already done substantial work under their academic supervisor shall be able to continue in their chosen area of research. Where it is possible to differentiate between the project of the thesis student and that of the enterprise in such a way that the student may continue the thesis project unhampered, the Dean of Graduate and Postdoctoral Studies shall arrange for the appointment of a co-supervisor unconnected with the enterprise.

#### **Responsibilities of the Student**

Academic freedom brings responsibilities to students and staff alike. Students should realise that the good name and research reputation of the University and its professors rests in large measure upon the quality of research done by its students. Students, as members of the University, have the responsibility to follow the principles set out in the University Research Policy and in the regulations of the Graduate and Postdoctoral Studies Office.

#### **Responsibilities of the University**

- 1) The University shall inform students of all appropriate regulations and policies concerning research.

Ethics approval must be renewed on an annual basis. All McGill members must be familiar with the McGill Policy on the Ethical Conduct of Research Involving Human Subjects which articulates the administrative structures, procedures and requirements for the ethical review of human subject research at McGill University. This document and further information on McGill Research Ethics Boards and their submission requirements can be found at [www.mcgill.ca/rgo/ethics/human](http://www.mcgill.ca/rgo/ethics/human). For further information please contact the Research Ethics Officer at (514) 398-6831.

The Animal Use Protocol form can be obtained at

514)e398ce-

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## 12.5 Guidelines for Research with Animal Subjects

### A. Policies

#### 1. The University Animal Care Committee (UACC)

The University Animal Care Committee is the University body responsible for ensuring the humane care and use of animals in research and teaching. The UACC is responsible for ensuring University-wide understanding of, and compliance with, the applicable requirements concerning the procurement, care and use of animals at McGill University and its affiliated institutions.

The University Animal Care Committee reports to the Vice-Principal (Research).

The major responsibilities of this committee are:

- a) to ensure that all animal care and use at the University and affiliated institutions is carried out in accordance with the policies and guidelines of the Canadian Council on Animal Care and McGill University.
- b) to establish policies and procedures to ensure that no research, teaching or testing involving animals (including field studies) commences without prior approval by a Facility Animal Care Committee. Animal use protocols are reviewed and approved by Facility Animal Care Committees on an annual basis with particular emphasis on the ethics of animal investigation. All teaching projects, and those categorized at "Pain and Discomfort" Level D will be referred to the UACC Subcommittee on Ethics for further review.
- c) to ensure that all research using animals has been peer reviewed for scientific merit, irrespective of funding source; and provide a mechanism for projects funded from internal or industry sources to be peer reviewed according to the CCAC guidelines on animal use protocol review.

#### 2. Facility Animal Care Committees

Facility Animal Care Committees are established for each affiliated institution and each major University constituency using animals in research or teaching. The purpose of each FACC is to ensure that all animals used in research or teaching within its jurisdiction are used and cared for in accordance with all applicable requirements.

The Facility Committees have the authority to:

- a) stop any objectionable procedure if it considers that unnecessary distress or pain is being experienced by an animal;
- b) stop immediately any use of animals which deviates from the approved use, or any non-approved procedure, or any procedure causing unforeseen pain or distress;
- c) have an animal killed humanely if pain or distress caused to an animal cannot be alleviated.

### B. Procedures for Obtaining Approval of Research Projects

To permit review and approval by the appropriate Facility Animal Care Committee a completed "Animal Use Protocol" form must be submitted at least two months prior to (1) starting new projects; (2) changes in animal use procedures, or (3) expiry of previously approved applications. Animal use applications must be renewed annually. Research funds may be withheld by the University administration for programs that are in non-compliance with either University or CCAC guidelines. Note that animal use theory and practical training is now mandatory for all personnel involved in a project using live animals.

the commercial development of its Intellectual Property must, to the extent possible, result in benefits to Quebec and Canada. The University further recognizes that the presence of a vibrant, local, knowledge-based economy is beneficial to its members and wishes to contribute to its development.

The objectives of this policy are:

- To serve the public interest by contributing to the development of useful and morally acceptable products, services, and processes;

- To contribute, to the extent possible, to the socio-economic well-being of Quebec and Canada;

- To ensure equitable returns to the University in support of its academic mission, to affiliated institutions, and to the Inventors;

- To meet government and the public expectations with respect to putting to use University discoveries.

## **2. Definitions**

For the purpose of this policy, the following definitions apply:

“Author” means an employee of the University, whether academic or administrative and support staff, or another physical person associated with the University, who has written or created a Work.

for its own academic purposes, all Works created by an Author: (a) with University assistance; or (b) with the use of University equipment, facilities, or resources; or (c) in the course of academic duties or work in the course of study, research or teaching. This license shall neither confer to the University commercial rights, nor the right to reproduce published Works. The University shall not disseminate Works in a way that would allow persons who are not members of the University community to have electronic access to them. For the purpose of this section, the University's "own academic purposes" refers to research carried on at the University, by professors, students and staff of the University, and teaching by professors of the University to students registered at the University.

## **5. Policy on Software and Inventions**

### **5.1 Ownership of Rights to Inventions:**

Subject to sections 5.3 and 5.4, the Inventor and the University jointly own the rights to Inventions created by an Inventor: (a) with University assistance; or (b) with the use of University equipment, facilities, or resources; or (c) in the course of academic duties or work in the course of study, research, or teaching.

### **5.2 Ownership of Rights to Software:**

Subject to sections 5.3 and 5.5, the Inventor and the University jointly own the rights to Software created by an Inventor: (a) with University assistance; or (b) with the use of University equipment, facilities, or resources; or (c) in the course of academic duties or work in the course of study, research, or teaching; and in the case of Learnware, in the fields in which the Inventor has been teaching and doing research at any time during the six years preceding the date of creation of such Learnware.

### **5.3 Exception to Joint Ownership – Administrative and Support Staff:**

Notwithstanding sections 5.1 and 5.2, where the Invention or Software was created by an Inventor who is a member of the administrative and support staff of the University, as a result of activities covered by his or her Contract of Employment, the rights to such Invention or Software are owned by the University.

### **5.4 Specific Exceptions Applicable to Inventions:**

Notwithstanding section 5.1 and subject to section 5.3, the following categories of Inventions are not jointly owned by the University and the Inventor, and may be owned by the Inventor, the University, a third party, or jointly by two or more parties, as the case may be:

- a) where developed in the course of research sponsored by a third party pursuant to a written agreement with the University, wherein ownership rights are determined by specific terms of the agreement. Unless the terms of the agreement give ownership of the Invention to the third party, such Invention is owned by the University until all rights, such as a license or an option, granted to the third party under the agreement have been exercised or have become extinguished, at which point the Invention becomes jointly owned by the University and the Inventor;
- b) where developed in the course of a consulting agreement between the Inventor and a third party;
- c) where made by an Inventor in a domain outside his or her Field of Academic Research, and where only Incidental Use has been made of University facilities and resources. The rights are then owned by the Inventor;
- d) where made by an Inventor who is a member of administrative and support staff of the University, as a result of activities not covered by his or her Contract of Employment, and where only Incidental Use has been made of University facilities and resources. The rights are then owned by the Inventor;
- e) where the University assigned its rights to the Inventor in accordance with section 8.4 of this policy. The rights are then owned by the Inventor;
- f) where the Inventor assigned his or her rights to the University in accordance with section 7 of this policy. The rights are then owned by the University.

### **5.5 Specific Exceptions Applicable to Software:**

Notwithstanding section 5.2 and subject to section 5.3, the following categories of Software are not jointly owned by the University and the Inventor, and may be owned by the Inventor, the University, a third party, or jointly by two or more parties, as the case may be:

- a) where developed in the course of research sponsored by a third party pursuant to a written agreement with the University, wherein ownership rights are determined by specific terms of the agreement. Unless the terms of the agreement give ownership of the Software to the third party, such Software is owned by the University until all rights, such as a license or an option, granted to the third party under the agreement have been exercised or have become extinguished, at which point the Software becomes jointly owned by the University and the Inventor;
- b) where developed in the course of a consulting agreement between the Inventor and a third party;
- c) where limited to the electronic form of a Work, or where it is ancillary to a Work. The rights are then owned by the Inventor;
- d) works of art, including works of art expressed in multimedia format. The rights are then owned by the Inventor;
- e) in the case of Software which does not constitute Learnware, where developed by an Inventor in a domain outside his or her ten agreement



- a) The University declines to pursue commercialization, or decides to cease its efforts to commercialize the Invention or Software, under sections 8.1 or 8.2 of this policy;
- b) The University has been unsuccessful in commercializing the Invention or Software within a reasonable period of time;
- c) The University and the Inventor(s) agree that the Inventor(s) can successfully commercialize the Invention or Software independently of the University. In such a case, the Inventor(s) shall use best efforts to ensure benefits to Quebec and to Canada. Written approval of the Vice-Principal (Research) shall be obtained by the Inventor(s) before he or she enters into any commercialization agreement, including, without being limited to, a license agreement, a shareholders agreement and an option agreement, that place the Inventor(s) in a situation of potential conflict of interest, in particular in the case of an agreement with an enterprise in which the Inventor has a substantial interest;
- d) The Inventor(s) wish to develop Software for the purpose of licensing or distributing it without profit, or for the purpose of putting it in the public domain so that it is easily accessible, and his or her plan to develop such Software is in accordance with guidelines developed and from time to time updated by the Senate Committee on Technology Transfer for that purpose;
- e) OTT and the Inventor(s) have failed to agree on a mutually acceptable commercialization plan, and the Inventor(s) has chosen not to take advantage of the dispute resolution mechanisms contained at sections 10 and 11. In such a case, the Inventor shall use best efforts to ensure benefits to Quebec and to Canada. Written approval of the Vice-Principal (Research) shall be obtained by the Inventor(s) before he or she enters into any commercialization agreement, including, without being limited to, a license agreement, a shareholder agreement and an option agreement, that places him or her in a situation of potential conflict of interest, in particular in the case of an agreement with an enterprise in which the Inventor has a substantial interest.

### 8.5 Documentation:

Whenever rights are assigned to the Inventor under section 8.4, the University shall execute any document reasonably required for the purpose of protecting the Invention or Software and furthering its commercial development.

### 8.6 Inventor with a Private-Sector Affiliation:

Where an Invention or Software is developed by an Inventor who is receiving a salary from a private-sector enterprise for the purpose of working at the University, the University will consider licensing the private-sector enterprise to use such Invention or Software on terms that will take into account the University's relative contribution.

## 9. Revenues

### 9.1 Sharing of Income:

Net Income derived from the commercialization of Inventions or Software shall be shared between the Inventor(s) and the University on the following basis:

#### 9.1.1 Commercialization by the University:

In the case where the University is responsible for the commercial development of the Invention or Software, the first \$10,000 of Net Royalties shall accrue to the Inventor. Of the balance of Net Income, 60% shall go to the Inventor(s) and 40% shall go to the University.

#### 9.1.2 Commercialization by the Inventor(s):

In the case where the University assigns the rights to the Inventor(s) under section 8.4, and the Inventor(s) is responsible for the commercial development of the Invention or Software, Net Total Income shall be apportioned as described below:

- a) Royalties: Of the first \$100,000 of Net Royalties, 80% shall go to the Inventor(s) and 20% shall go to the University. Of any Net Royalties above \$100,000, 70% shall go to the Inventor(s) and 30% shall go to the University.

- b) Equity, Options and Other Consideration: Of the balance of Net Total Income, 70% shall go to the Inventor(s) and 30% shall go to the University.

### 9.1.3 Alternative Arrangements:

In cases covered by section 9.1.2, and where it is required by the conditions of the market specific to the transaction being contemplated, the University will consider reasonable proposals aimed at agreeing on an equitable sharing of Net Total Income different from that provided in said section.

### 9.2 Allocation of University's Share of Income:

In respect of royalties, the University's share of income shall be apportioned as follows: 25% to central administration, 25% to the faculties of the Inventors, 25% to OTT, and 25% to graduate fellowships. In respect of equity in the share capital of a company, the University's share of income shall be divided among central administration, the faculty(ies) of the Inventor(s), OTT, and research and fellowships on the basis of the following formula. In respect of equity, the share of central administration shall be earmarked for special projects that are not covered by the general budget of the University.

	\$1 to \$1M	\$1M to \$3M	over \$3M
<b>Central Administration</b>	33 1/3%	47%	65%
<b>Faculty(ies)</b>	33 1/3 %	20%	10%
<b>OTT</b>	16%	14%	0
<b>Research &amp; Fellowships</b>	17 1/3%	19%	25%

### 9.3 Multiple Inventors:

In cases where there is more than one Inventor, the Lead Inventor shall provide OTT with an agreement, signed by all Inventors, covering the distribution of each Inventor's share of the Net Income. The Lead Inventor is responsible for the identification of all Inventors, including students.

### 9.4 Founders:

A Founder of a spin-off company may receive equity (shares or options) over and above his or her share of Net Revenues as an Inventor under this policy.

### 9.5 Sharing with Other Academic Institutions:

Where an Invention or Software is developed wholly or in part by an Inventor during a temporary stay at another academic institution, or by an individual from another academic institution on a temporary stay at the University, or jointly by an Inventor working at the University and a member of another academic institution working at the other institution, rights to such Invention or Software and Net Income shall be shared between the University and the other academic institution, taking into account the policies of both institutions. The sharing of Net Income will normally take into account the relative contributions of the individuals and their institutions. If the other academic institution is a research institute affiliated with a McGill teaching hospital, the sharing of ownership and Net Income shall be governed by agreements in place between the University and its teaching hospitals.

### 9.6 Exception:

Inventions or Software resulting from activities carried out by an Inventor who is a member of administrative and support staff under a Contract of Employment are excluded from this section, unless there is a written agreement to the contrary between such Inventor and the University.

## 10. Dispute Resolution

Any dispute with respect to the application of this policy shall be referred to the Vice-Principal (Research) under this section. All material relevant to the dispute shall be provided to the Vice-Principal by all parties to the dispute, within 10 working days of the day on which the matter is referred to him or her. The Vice-Principal shall invite comments by interested parties and shall be free to consult with experts, if required. All information provided to experts by the Vice-Principal shall be treated as confidential by such experts. The Vice-Principal shall share the opinion of the expert with all interested parties and shall invite them to comment within a fixed delay. The Vice-Principal shall promptly advise the parties in writing of his or her decision in the matter.





**12.7 Regulations Governing Conflicts of Interest in  
Proprietary Research**

The present regulations shall apply to all members of the Univer-



# GRADUATE FELLOWSHIPS AND AWARDS







**BRUNO M. CORMIER RESEARCH FUND**

**Eligibility:** Awarded to Master's or doctoral level students conducting research in the humanities and social sciences relating to intervention with detained young offenders.

**Value:** \$5,000, non-renewable.

**Deadline:** February 28.

**Application:** Forms are available from the Fonds de recherche Bruno M. Cormier, Fondation La Cité des Prairies, 11815 Adolphe-Caron, Montreal, Quebec, H1E 6J8, Tel: (514) 648-5858, e-mail: [fondationjc@sympatico.ca](mailto:fondationjc@sympatico.ca) or the GPSO Fellowships and Awards Section.

**OFA # 321**

**CANADA COUNCIL GRANTS**

**Eligibility:** Grants are awarded for graduate level study in music.

Other disciplines such as architecture, creative writing, art education, and communications are considered if the work is not primarily concerned with academic research. Various short-term project grants are also available in these disciplines.

**Deadlines:** Vary with the disciplines.

**Application:** Forms can be obtained by writing to: Arts Awards Service, Canada Council, PO Box 1047, 350 Albert Street, Ottawa, Ontario K1P 5V8 1.

\$5,000, 4550 ext. 413:(514)-em8on: Ontario K3iplinesj 4.5 0www -0Strec, CANADA COU

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**Application:** Fellowships Guide and application forms are only available on the Web. Further information available from the McGill GPSO Fellowships and Awards Section, graduate departments or from FRSQ, 500, rue Sherbrooke Ouest, Suite 800, Montreal (Quebec) H3A 3C6. Tel.: (514) 873-2114. Fax:(514)873-8768. www.frsq.gouv.qc.ca.

**G.G. ALLAN ROEHER INSTITUTE RESEARCH GRANTS IN THE FIELD OF INTELLECTUAL DISABILITIES FOR GRADUATE STUDENTS**

**Eligibility:** Candidates must be Canadian citizens or Permanent Residents and be accepted into a full-time graduate program at a Canadian university. Field: a broad range of fields relating to human services and intellectual disabilities. Applicants must have definite research projects, supported by an academic advisor or an associate of the G.G. Allan Roeher Institute.

**Value:** Up to \$10,000.

**Deadline:** April 30.

**Application:** Information regarding specific application requirements and application forms are available from The Secretary, Bursaries and Grants Committee, The Roeher Institute, Kinsmen Bldg., York University, 4700 Keele Street, North York, Ontario M3J 1P3. Tel: (416) 661-9611.

**OFA # 173**

**INSTITUT DE RECHERCHE EN SANTÉ ET EN SÉCURITÉ DU TRAVAIL DU QUÉBEC (IRSST) BOURSES DE RECHERCHE**

**Eligibility:** Candidates must be Canadian citizens or Permanent Residents, domiciled in Quebec, who wish to gain research training in the field of occupational health and safety in a laboratory setting or as a member of a recognized team.

**Value:** \$14,100 for the Master's program and for the Ph.D. . level, \$18,000 up to \$24,000 for studies outside Canada. Tuition fees in excess of \$750 are paid for students taking up the award outside of Quebec. The fellowships are awarded for one year and can be renewed.

**Deadline:** To IRSST by first Tuesday in November.

**Application:** Forms are available from the GPSO Fellowships and Awards Section; the McGill Department of O.0908 Tw (ifeam.) Tj -6dakars2A renewed.ifeatc..6cf O.0908ru0TSTe7ifeatc..6cf O.0908heM o0G Ki I D

**Deadline:** March 1.

**Application:** Information and application forms available from John G. Bene Fellowship in Social Forestry, Centre Training and Awards Unit, International Development Research Centre, 250 Albert Street, Ottawa, Ontario, K1G 3H9. Tel: (613) 236-6163, ext. 2098. E-mail: cta@idrc.ca; www.idrc.ca/awards.

**OFA # 1**

#### JOINT JAPAN/WORLD BANK GRADUATE SCHOLARSHIPS

**Eligibility:** An applicant must: be a national of a World Bank member country; be under the age of 45; hold a Bachelor's degree in a development-related field; have at least two years of development-related work experience in the home country; provide proof of admission by May 1, to two universities; propose a development-related graduate program of study.

**Value:** Approximately \$30,000 (US), including travel, tuition, medical insurance; renewable once.

**Deadline:** February 1.

**Application:** Information and application forms available from Joint Japan/World Bank Graduate Scholarships Program, 1818 H Street NW, Washington, DC 20433 USA. Tel: (202) 473-6849. www.worldbank.org/wbi/scholarships.

**OFA # 448**

#### KREBS MEMORIAL SCHOLARSHIP

**Eligibility:** The scholarship is primarily intended to help candidates who wish to study for a Ph.D., in Biochemistry or allied biomedical science, but whose careers have been interrupted for non-academic reasons beyond their control. Tenable at any British university.

**Value:** A personal maintenance grant at an appropriate level and all necessary fees (equivalent to a Canadian Institutes of Health Research Studentship). Awarded for one year, but may be renewed up to a maximum tenure of three years. Offered in alternate years.

**Application:** Next competition 2005. Through the university department concerned. Forms may be obtained from the GPSO Fellowships and Awards Section; from the Administration Manager, The Biochemical Society, 59 Portland Place, London, England W1N3AJ; or from the Web at www.biochemsoc.org.uk.

**OFA # 475**

#### MACKENZIE KING OPEN SCHOLARSHIP

**Eligibility:** Open to graduates of any Canadian university for full-time postgraduate studies in Canada or elsewhere and, in any field. McGill only considers undergraduate applicants with First Class Honours Standing (CGPA of 3.7 or higher) and graduate applicants with cumulative "straight A" records.

**Value:** One scholarship of \$7,500 (subject to change).

**Deadline:** Normally February 1 to applicant's home university. Verify McGill's deadline with the GPSO Fellowships and Awards Section.

**Application:** Application is made through the "home" university, i.e., the Canadian university from which the applicant has or will receive the most recent degree. Further information and application forms are available from the GPSO Fellowships and Awards Web site at: www.mcgill.ca/gps/fellowships and Mackenzie King Scholarships Competition Office, c/o J. Blom, Curtis Building, 1822 East Mall, University of British Columbia, Vancouver, British Columbia V6T 1Z1.

**OFA # 353**

#### MELLON FELLOWSHIPS IN THE HUMANITIES

**Eligibility:** Citizens or Permanent Residents of the United States, presenting outstanding academic promise, and wishing to begin graduate work in preparation for a career of teaching and scholarship in a humanistic field of study.

**Tenure:** Awards may be taken to any accredited graduate school in the U.S. or Canada. Student must apply to a program leading to the Ph.D. degree.

**Value:** \$15,000 stipend plus tuition and standard fees; one-year entry level, portable merit fellowships.

**Deadline:** Early December (to request application see Web site).

**Nomination and Application:** Information regarding application requirements is available from the GPSO Fellowships and Awards Section or Robert Weisbuch, President and Director, The Andrew W. Mellon Fellowships in the Humanities, The Woodrow Wilson National Fellowship Foundation, 5Vaughn Drive, Suite 300, Princeton, New Jersey 08543-6313, USA. E-mail: mellon@woodrow.org, www.woodrow.org/mellon.

**OFA # 238**

#### MINISTÈRE DE L'ÉDUCATION SUMMER LANGUAGE BURSARIES

**Eligibility:** Under a joint agreement between the federal and provincial governments, Summer Language Bursaries are offered to full-time Canadian and Permanent Resident students who wish to learn French or English in a 5-week immersion course during the summer.

**Value:** The bursary, paid to the institution on the student's behalf, defrays the costs of tuition, mandatory instructional materials, and room and board, but does not cover pocket money, transportation costs or child care services, if applicable.

**Deadline:** Usually February 15.

**Application:** Application forms and information are available on the Web at www.cmec.ca/olp/index\_eng\_swf.htm or from the Provincial Coordinator of the student's province of residence. In Québec, the Coordonnateur, Bourses d'été de langues

et de langues secondes, Programmes de langue seconde, 1035, rue de la Montée, Québec, Québec, G1R 5A5. Tel: (418) 643-3750.

**Deadline:** Deadlines.

#### MONTREAL SHORE UNIVERSITY WOMEN'S CLUB SCHOLARSHIP

**Eligibility:** One award at the graduate level open to female residents of the West Island who are undertaking or returning to full time university study.

**Value:** \$2,000.

**Deadline:** March 31.

**Application:** Information and application forms available from MLUWC Scholarship Committee (514) 683-7101. Fax: (514) 697-8672.

**OFA # 541**

#### NATURAL SCIENCES AND ENGINEERING RESEARCH COUNCIL (NSERC) INDUSTRIAL POSTGRADUATE SCHOLARSHIPS

**Eligibility:** Awards are based on a specific research proposal involving student, faculty supervisor and collaborating company. Basic requirements are much like those of the regular NSERC Postgraduate Scholarships in the following entrikerCnd u full

ing, science, computing information services and agriculture) supported by NSERC. Awards are normally tenable at a Canadian university. McGill applicants must have obtained a GPA of 3.5 or better in each of the last 2 years of study.

**Value:** Master's: from \$17,300 up to \$17,500 for one year.

Doctoral: from \$21,000 to \$35,000 for up to three years

**Deadline:** Applicants with no Canadian university affiliation in the last 12 months, to NSERC, no later than November 15. Applicants enrolled at McGill or graduated in the last 12 months, to the department in early October (check for precise deadlines).

**Application:** Fellowships Guide and application forms are available only on the Web. Further information available from the GPSO Fellowships and Awards Section and McGill departments in September or directly from the Scholarships and Fellowships Division, NSERC, 350 Albert Street, Ottawa, Ontario K1A 1H5.

Tel: (613) 995-5992. E-mail: schol@nserc.ca, www.nserc.ca

**OFA # 375**

#### **PATRICIA HARNEY SCHOLARSHIP**

Dr. Patricia Harney, NSAC Diploma Class of '48 and OAC Professor in Horticultural Science has, through her estate, made generous provisions to support NSAC students who wish to pursue graduate studies at Macdonald Campus, McGill University or the Ontario Agricultural College at the University of Guelph.

**Eligibility:** Nova Scotia Agricultural College (NSAC) graduate accepted or registered at Macdonald Campus of McGill University for graduate work in agriculture. Recipients, while registered at Ontario Agricultural College or Macdonald Campus may pursue research at NSAC.

**Value:** Two \$5,000 renewable scholarships. Awards are tenable for a maximum of two years for a Master's Degree program and three years for a Ph.D. program. Renewability will be based on maintaining scholarship standing in the program (A- or 80% or CGPA of 3.7 or higher).

**Deadline:** March 31 (check with Student Affairs Office).

**Application:** Applications must be submitted to the NSAC Awards Office, P.O. Box 550, Truro, Nova Scotia, B2N 5E3. Application forms are also available from Toni Bird, Student Affairs Office, Macdonald Campus of McGill University, 21111 Lakeshore, Ste-Anne-de-Bellevue, Quebec, H9X 3V9.

#### **PEO INTERNATIONAL PEACE SCHOLARSHIPS**

**Eligibility:** Offered to women of any nationality qualified for admission to a graduate degree in Canada or the USA.

**Value:** \$6,000 (U.S.).

**Deadline:** Anytime between August 15 and December 15 to submit eligibility documentation; January 31 to submit final application, if eligibility approved.

**Application:** Proof of eligibility must be established before an application will be considered. Send documentation to PEO International Peace Scholarship Fund, PEO Executive Office, 3700 Grand Avenue, Des Moines, Iowa, USA 50312-2899.

**OFA # 127**

#### **POST SECONDARY STUDENT SUPPORT – DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT (DIAND)**

**Eligibility:** For Canadian treaty/status Indians and Inuit pursuing graduate study leading to a Master's or doctoral degree.

**Value:** Tuition, travel and/or living expenses.

**Deadline:** June 15 and October 15 to the DIAND, regional counsellor.

**Application:** "Financial Assistance Application" forms and further details are available from the DIAND, Quebec Region Indian and Inuit Affairs, CP 51127, Postal Counter G. Roy 320 St-Joseph east, Quebec, Quebec. Tel: (418) 648-7551 or the DIAND, Programming and Funding Directorate, in Ottawa. Tel: (613) 997-8396, 953-6771; www.inac.gc.ca/index\_e.html.

**OFA # 164**

## **SOCIAL SCIENCES AND HUMANITIES RESEARCH COUNCIL**





**LLOYD CARR-HARRIS FELLOWSHIP\***

Established in 1995 through the generosity of the Lloyd Carr-Harris Foundation.

**Eligibility:** The fellowships may be held by students registered in any graduate program in the health sciences at McGill. No citizenship restrictions.

**Value:** \$15,000; renewable twice.

**MAX E. BINZ FELLOWSHIP\***

Established from the estate of the late Max E. Binz, who was born in Switzerland, emigrated to Canada in 1930, established a successful textile company, and became a generous benefactor of McGill University.

**Eligibility:** The fellowship is open to all students in degree programs in graduate studies. No citizenship restrictions.

**Value:** \$10,000; non-renewable.

**MAX STERN FELLOWSHIP IN HUMANITIES AND SOCIAL SCIENCES\***

Established through the generosity of the Dr. and Mrs. Max Stern Foundation.

**Eligibility:** The fellowship may be held by students registered in any graduate program in the humanities or social sciences at McGill. No citizenship restrictions.

**Value:** \$15,000, renewable twice.

**MCGILL ALUMNAE SOCIETY FELLOWSHIP\***

Established in 1988 to commemorate the 100th anniversary of the founding of the McGill Alumnae Society.

**Eligibility:** To be awarded to a research student in any faculty who is pursuing studies of benefit or significance to women. Preference will be given to women applicants. No citizenship requirements.

**Value:** \$10,000, renewable twice.

**PHILIP F. VINEBERG GRADUATE FELLOWSHIP\***

Endowed in 1992 in memory of Philip F. Vineberg, O.C., Q.C, B.A., M.A., B.C.L., L.L.D., former Professor and Emeritus Governor of McGill University.

**Eligibility:** Open to graduate students pursuing in an advanced degree in Arts, Education, Law, Library Science, Music, Religious Studies or Social Work, to finance one year of study. Awarded to a graduate student who best exemplifies the qualities of intelligence as demonstrated by academic record and creative thinking; breadth of interest, perspective and tolerance as demonstrated by cross cultural interests; record of service to others; excellence as demonstrated by a record of disciplined undergraduate achievement at another university and the promise of more to come. The fellowship is open to all eligible students with preference to Canadian citizens and Permanent Residents.

**Value:** \$10,000, non-renewable.

**PHILIP P. BAILY FELLOWSHIP\***

**Eligibility:** Established in 1995 through a generous bequest by Philip Pendlebury Baily (B.Sc. 1913, M.Sc. 1914) for students registered in any graduate program in the Faculty of Medicine or Science. No citizenship restrictions.

**Value:** \$12,000, non-renewable.

**SAUL HAYES GRADUATE FELLOWSHIP\***

**Eligibility:** Established by Edgar and Charles Bronfman in memory of Saul Hayes for graduate students undertaking research with preference to the areas of Civil Liberties and Human Rights. No citizenship restrictions.

**Value:** \$10,000; tenable for up to four years.

**SOLVAY FELLOWSHIP\***

**Eligibility:** Offered for the first year of graduate study in any department at McGill. The holder must have graduated in any undergraduate faculty of McGill in the session prior to that for which the award is given, and must obtain permission to proceed to graduate study. No citizenship restrictions.

**Value:** \$10,000; non-renewable.

**SR TELECOM AWARDS**

Established in 1997 through a generous gift from SR Telecom, Inc. **Eligibility:** The awards will be presented each year to enhance major fellowships for students in Engineering and Computer Science.

**Value:** minimum \$4,000 each.

**WOMEN'S CENTENNIAL FELLOWSHIP\***

Established in 1984 by the Graduate and Postdoctoral Studies Office to commemorate the 100th Anniversary of the Admission of Women students to McGill University.

**Eligibility:** Preference will be given to women applicants in a Ph.D. program. No citizenship restrictions.

**Value:** \$10,000; non-renewable.

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**4.3 Complementary McGill Awards to Major Fellowships**

The Beijing, Neil Croll and Walter Hitschfeld Memorial Awards are given as award complements to the most highly ranked McGill Major Fellowship awardees, meeting the specific eligibility criteria of each award.

**BEIJING MEMORIAL AWARD**

**Eligibility:** Awarded on the basis of academic merit to a student working towards a higher degree at McGill University, with a preference to those from the People's Republic of China.

**Application:** No application necessary. Awarded by the Fellowships Committee of the GPSO to an outstanding student who has also been awarded a McGill Major Fellowship.

**Value:** \$1,000.

**NEIL CROLL MEMORIAL AWARD**

Established in memory of the late Professor Neil Croll, Ph.D., M.D., Professor of Parasitology and Director of McGill International, and a teacher and friend of students from developing countries.

**Eligibility:** For graduate students, with a preference to those from developing countries.

**Value:** \$1,000.

**Application:** No application necessary. Awarded by the Fellowships Committee of the GPSO to an outstanding student who has also been awarded a McGill Major Fellowship.

**WALTER HITSCHFELD AWARD**

Established in honour of W.F. Hitschfeld Ph.D., F.R.S., F.R.S.C., a teacher and friend of many such students and former Director of McGill International.

**Eligibility:** For graduate students, with a preference to those from developing countries.

**Value:** \$1,000.

**Application:** No application necessary. Awarded by the Fellowships Committee of the GPSO to an outstanding student who has also been awarded a McGill Major Fellowship.

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**4.4 Dissertation Fellowships****ROBERT AND MARY STANFIELD DISSERTATION FELLOWSHIP**

Established in 1994 through the Robert and Mary Stanfield Foundation.

**Eligibility:** Offered to a doctoral student (selected by the GPSO) nearing completion of the Ph.D. degree, involved in the study of Canada.

**Value:** Minimum \$6,000, non-renewable.

**Deadline:** Normally early April.

**Application:** Contact the GPSO Fellowships and Awards Section Web site for details on application/nomination procedures.

**STANDARD LIFE DISSERTATION FELLOWSHIP**

Established in 1997 by a generous donation by the Standard Life Insurance Company.

**Eligibility:** Awarded by the GPSO to an outstanding doctoral student in Health Sciences nearing the completion of a Ph.D. degree.

**Value:** Minimum \$6,000.

**Deadline:** Normally early April.

**Application:** Contact the GPSO Fellowships and Awards Section Web site for details on application/nomination procedures.

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#### 4.5 Differential Fee Waivers

The Graduate and Postdoctoral Studies Office awards approximately 120 Differential Fee Waivers per term to international students, approximate value: \$3,165 Ph.D., \$3,600 Masters.

##### **Eligibility and Nomination Procedures**

These differential fee waivers are restricted to international graduate students at McGill whose visa status requires them to pay full international tuition fees. Recipients must be registered full-time and be within the period of residency. (See explanation of residency in the General Information section of the *Graduate and Postdoctoral Studies Calendar*.) Students in a qualifying year or additional session are not eligible. Students in "privatized" programs are not eligible. All eligible international students are automatically considered by departments for differential fee waivers, if the unit has them to offer. There are no application forms, since these differential fee waivers are awarded based exclusively on

**DELTA KAPPA GAMMA - DR. MILDRED BURNS AWARD FOR LEADERSHIP IN EDUCATION**

Established in 2001 by the Delta Kappa Gamma Society in honour of Dr. Mildred Burns, a retired associate professor of the Faculty of Education. Awarded by the Faculty of Education Graduate Studies Scholarships Committee to a student upon graduation who has



**CHARLES JAMES PATTON, M.D., AND ELIZABETH ROSS PATTON MEMORIAL PRIZE**

**Eligibility:** Established in 2003 by a bequest from Charles Francis Patton in memory of his parents, Charles James Patton, M.d., and Elizabeth Ross Patton. awarded by the postgraduate awards committee to an outstanding graduate student for excellence in medical research.

**Value:** Minimum \$400.

**DEFI CORPORATIF CANDEREL STUDENTSHIP AND FELLOWSHIP**

**Eligibility:** Open to Ph.D. and post-doctoral fellow candidates within their first year of working with staff of the McGill Cancer Centre and/or the Division of Research, Department of Oncology at McGill.

**Application:** Candidates must submit a C.V. with publications, letters of reference and an outline of their proposed project with investigator's name to: Dr. Michael L. Tremblay, McGill Cancer Center, 3655 Promenade Sir William Osler, Montreal, Quebec H3G 1Y6.

**Value:** \$10,000 Studentships – \$15,000 Fellowships. One year support in both cases.

**DR. BENJAMIN SHORE PRIZE IN PLASTIC SURGERY**

Established in memory of Dr. Benjamin Shore, M.D.,C.M. 1965.

**Eligibility:** This prize will be awarded annually to a resident training in one of the McGill teaching hospitals who demonstrates outstanding performance in the Plastic Surgery Program. This prize will be used to fund travel to a national or international meeting in the field of plastic surgery or for special support of a resident doing research in plastic surgery. The Prize will be awarded by the Program Director of the Plastic Surgery Training Program in consultation with the Associate Dean of Post-graduate Medical Education.

**Value:** \$2,500.

**DR. GERALD B. PRICE MEMORIAL AWARDS**

Three awards, established in 2004, by family and friends, to honour Dr. Gerald B. Price's memory and his many contributions as Director of the Division of Experimental Medicine.

**Eligibility:** Awarded by the Division of Experimental Medicine on the basis of merit, through an annual competitive process, to students enrolled in the 2nd or 3rd year of the Ph.D. program in the Division of Experimental Medicine. The awards will be used to enhance the students' graduate training by providing travel funds for the presentation of a scholarly contribution at a scientific conference. The amount of the award is expected to be matched by the awardee's supervisor.

**Value:** \$650 each.

**DR. PREMYSL "MIKE" PELNAR ACADEMIC ENRICHMENT AWARD**

Established through a generous anonymous donation honouring Dr. Premysl Pelnar, a renowned occupational health physician.

**Eligibility:** Awarded to graduate students of the Department of Occupational Health to further their training and professional activities in the field of occupational health. Awarded by the Chair of the Department upon consultation with the Faculty.

**Value:** \$300 - \$600 per year.

**F.C. HARRISON FELLOWSHIPS**

**Eligibility:** These fellowships will be awarded on the basis of (1)academic achievement, (2)demonstrated research aptitude, (3)financial need. All registered and prospective full-time graduate students may apply for these awards.

**Value:** The Fellowships Committee of the Department of Microbiology and Immunology will award annual fellowships of up to \$5,000 to deserving candidates for graduate degrees in the Department.

**Deadline:** Completed application forms should be returned to the Fellowships Committee before June 1.

**GEDDES PRIZE IN BIOMEDICAL ENGINEERING**

Dr. L.A. Geddes (B.Eng. 1945; M.Eng. 1953; Hon.D.Sc. 1971) established an annual prize in Biomedical Engineering at the discretion of the Chair of the Department of Biomedical Engineering.

**HARRY SHANKMAN SCHOLARSHIPS**

A bequest from the late Annette Shankman Rieder in honour of her brother Harry Shankman, M.D., provides annual scholarships for meritorious medical students in the M.D./Ph.D. program. Awarded by the Faculty of Medicine Scholarships Committee, on the recommendation of the M.D./Ph.D. Program Director.

**Value:** Minimum \$3,000 each.

**F.C. HARRISON FELLOWSHIPS**

**Application:** Forms available from the Secretariat of the Research Institute, 4060 Sainte Catherine Street West, Room 205, Montreal, Quebec, H3Z 2Z3.

#### MELVILLE PRIZE IN PHARMACOLOGY

Established to honour Professor Kenneth I. Melville who was Chairman of the Department of Pharmacology and Therapeutics from 1953 to 1967 and Professor Emeritus from 1967 until his death in 1975.

**Eligibility:** Awarded annually to two graduate students: one senior, one junior; and Post Doctoral Fellow whose research presentation at the annual Pharmacology Research Day (or equivalent occasion) is judged by an *ad hoc* advisory committee to be the best.

**Value:** \$400/\$200/\$100.

#### MONTREAL LEAGUE FOR THE HARD OF HEARING AWARD

Established by a gift from the Montreal League for the Hard of Hearing Inc. for students in training.

**Eligibility:** Candidates must be enrolled at the graduate level in the School of Communication Sciences and Disorders doing work in the area of hearing impairment. Awarded by the School.

**Value:** \$1,000.

#### PERCY HERMANT FELLOWSHIPS IN OPHTHALMOLOGY

This fellowship, established by Mr. Percy Hermant, is divided among the first-year residents in ophthalmology.

**Eligibility:** Candidates must be graduates in Medicine of McGill or other approved medical schools, must be commencing the study of Ophthalmology at McGill and must be planning to practice this specialty in Canada.

**Application:** Apply to the Chair, Department of Ophthalmology, McGill University.

#### PRESTON ROBB FELLOWSHIP

**Eligibility:** Established in 1994, awarded on a strictly competitive basis by the Montreal Neurological Institute (MNI) to support the training of a clinical fellow to work jointly with one of its basic and one of its clinician scientists. Candidates must have an M.D. degree with clinical studies in neurology or neurosurgery.

**Value:** Initial appointments, one year to a maximum value of \$25,000.

**Deadline:** October 15 to MNI for a fellowship commencing July 1 of the following year.

**Application:** Application forms are available from the Director's Office, MNI.

#### ROLANDE AND MARCEL GOSSELIN GRADUATE STUDENTSHIPS

**Eligibility:** Established in 2003 by a bequest from Rolande Dubreuil Gosselin. Awarded by the Faculty of Medicine's Postgraduate Awards Committee to two Ph.D. students undertaking cancer research under the direction of a member of the McGill Cancer Centre.

**Value:** Minimum \$12,500 each.

#### ROWLAND C. FRAZEE POST GRADUATE FELLOWSHIP IN NEUROMUSCULAR DISEASES

Established in 1988 to honour Rowland Frazee's distinguished career with the Royal Bank of Canada and community service, to promote research into and the development of innovations of home and ambulatory treatment of young people with muscular dystrophy and other degenerative neuromuscular diseases.

**Eligibility:** Post-graduate (residency) physicians in the Department of Pediatrics with specialty training in pediatrics or a related discipline.

**Value:** \$10,000 per annum for five years.

**Application:** The fellowship will be administered by the Faculty of Medicine and the recipient will be selected by the Chair and senior members of the Department of Pediatrics in consultation with the Dean of the Faculty of Medicine.

#### SAMUEL S. LERNER MEMORIAL AWARD

Established in 2002 by a bequest from Grace Bernice Lerner in memory of her husband, Samuel S. Lerner.

**Eligibility:** Awarded by the office of the Associate Dean, Graduate Studies and Research of the Faculty of Medicine, to outstanding graduate students pursuing cancer research.

**Value:** Minimum \$250.

#### SIR EDWARD W. BEATTY MEMORIAL SCHOLARSHIPS FOR MEDICAL STUDENTS

**Eligibility:** Awarded annually to students of any nationality.

Applies to students registered in the M.D., C.M./Ph.D. program.

**Value:** Two scholarships, not necessarily of equal value.

**Application:** More information can be obtained by contacting the office of the Associate Dean, Medical Education and Student Affairs.

#### THEODORE SOURKES PRIZE

Established in 1992 by the Department of Pharmacology and Therapeutics in honour of Professor Theodore Sourkes.

**Eligibility:** Awarded annually to recognize outstanding contribution by a graduate student in the Department of Pharmacology and Therapeutics, as judged from a paper published in a peer-reviewed journal. Awarded by the Department to a student currently in the program or having graduated within a year.

**Value:** \$500.

#### 5.2.2 Faculty of Medicine: Internal Studentships

The following studentships are open to full-time graduate students at McGill who have completed six months of research and study towards their degree. They are awarded upon recommendation of the Postgraduate Awards Committee of the Faculty. Information regarding these studentships is sent to departmental chairs by January of each year. Deadline for submission of applications is generally the first week in March. Further information can be obtained from the office of the Associate Dean, Graduate Studies and Research, Faculty of Medicine.

#### CLAUDE J.P. GIROUD BURSARY IN ENDOCRINOLOGY

**Eligibility:** Established by a bequest from Alix Auzolle Giroud in memory of her son, Dr. Claude J.P. Giroud, former professor of Experimental Medicine at McGill. Awarded on a competitive basis to a full-time graduate student pursuing research in Endocrinology.

#### DR. ARTHUR H. JUDSON FELLOWSHIPS

Established by a bequest from Frances Catherine Judson in memory of her husband. To be awarded by the Faculty of Medicine Postgraduate Awards Committee to graduate students as part of the Faculty of Medicine's internal studentships.

**Value:** \$10,500.

#### DR. JOHN A. LUNDIE RESEARCH FELLOWSHIP

Established in 2003 by a bequest by Dr. John A. Lundie for a graduate student pursuing cancer research.

**Eligibility:** Awarded by the Faculty of Medicine's Postgraduate Awards Committee. Preference shall be given to candidates pursuing research in the causes and/or cure of cancer.

**Value:** \$6,000.

#### ELAINE BÉLANGER GRADUATE STUDENTSHIP IN MEDICAL RESEARCH

Established in 2003 by a bequest from Elaine Bélanger for a graduate student pursuing medical research. Awarded by the Faculty of Medicine's Postgraduate Awards Committee.

**Value:** minimum \$6,500.

#### ELIZABETH STEFFEN MEMORIAL AWARD

**Eligibility:** Established in 1995 by a bequest of the late Elizabeth Steffen (M.D. 1945) and awarded by the Faculty of Medicine to contribute to the support of a full-time graduate student pursuing research in the Faculty of Medicine.

**ESTHER CUSHING FELLOWSHIP**

**Eligibility:** Established in 1992 for a student working towards a Master's or doctoral degree in the Faculty of Medicine.

**F.S.B. MILLER MEMORIAL FUND**

**Eligibility:** Established in 1982 to provide support for Genetic and Viral research in Neurobiology.

**G. RUTHERFORD CAVERHILL FELLOWSHIP**

**Eligibility:** Established in 1943 by Mrs. Rutherford Caverhill for full-time graduate study and training in the Department of Medicine.

**GEORGE G. HARRIS FELLOWSHIP IN CANCER**

**Eligibility:** Established in 1962 by a bequest of George G. Harris to provide a fellowship in Cancer Research. Established in 1992 7.5 Tf 0 a bequest of George G. Harris 5B Eligibility: AA

#### **DR. YU-MING LAM FELLOWSHIP**

Established in 1999 by a generous gift from Dr. Yu-Ming Lam (DDS 1972) and family in honour of Mr. Yin-Bun Lam.

**Eligibility:** Awarded by the Faculty of Dentistry to an entering postdoctoral, doctoral or master's student in the Faculty of Dentistry.

**Value:** \$10,000, tenable for one year.

#### **HONG KONG FELLOWSHIP IN DENTISTRY**

Established in 2002 by a generous gift from a McGill graduate from Hong Kong. The fellowship will be awarded to an outstanding student who has graduated from a Chinese university and is entering a Postdoctoral, Ph.D. or M.Sc. program of study in the Faculty of Dentistry. Awarded by the Dean of the Faculty in consultation with the Graduate Studies Committee. The recipient will be someone who can be expected to make a significant contribution to the advancement of science in their home country after the completion of their studies.

**Value:** Minimum \$25,000.

#### **5.2.4 Nursing**

In addition to the following, several private corporations also provide funding (e.g., The Heart and Stroke Foundation). Students should consult the Director, School of Nursing, 3506 University Street, Montreal, Quebec, H3A 2A7

#### **ALUMNAE ASSOCIATION OF THE MCGILL SCHOOL OF NURSING SCHOLARSHIP**

**Eligibility:** Scholarships are available for students in graduate programs.

**Value:** Minimum of \$1,000 per award prorated by student status.

**Deadline:** Applications should be submitted by September 30.

**Application:** To the Chair of the Scholarship Committee, Alumnae Association, School of Nursing, 3506 University Street, Montreal, Quebec, H3A 2A7.

#### **CANADIAN NURSES FOUNDATION FELLOWSHIP**

Members of the Canadian Nurses Foundation and Canadian Nurses Association may apply for awards for study at the baccalaureate, master's and doctoral level. Special awards are identified for neuro-surgical, oncology, community health nursing, epidemiology, etc.

**Eligibility:** Applicants must be registered in a program and be willing to serve in a nursing position in Canada for one year for each academic year funded. Quebec applicants must apply for licensure in another Canadian province or territory in order to apply for a Fellowship.

**Deadline:** April 15.

**Application:** Apply to the Canadian Nurses Foundation, 50TheDriveway, Ottawa, Ontario, K2P 1E2 after November 1.

#### **CORPORATION OF NURSES OF THE DISTRICT OF MONTREAL BURSARY**

Bursaries are awarded yearly for study leading to a Master's degree or to a doctorate in nursing.

**Application:** For further information re: application, please write to: Corporation of Nurses of the District of Montreal, 666Sherbrooke Street W., Suite 1004, Montreal, Quebec, H3A1E7.

#### **F. MOYRA ALLEN PRIZE**

Established in 1987 in honour of Dr. F. Moyra Allen, B.N. (1948), Emeritus Professor of Nursing 1985, for her distinguished career and international renown.

**Eligibility:** Awarded by the School to a graduating student in the Master's program who shows potential for a distinctive career in the study and practice of nursing.

**Value:** 800.

#### **IRMA K. RILEY AWARDS**

Established through a bequest from Irma K. Riley, Cert. Nurs. 1951. Awarded on the basis of scholarly achievement by the

School of Nursing to outstanding non-nurse applicants entering the Qualifying program for a Master's degree in Nursing.

**Value:** Minimum \$2,800 each.

#### **NESSA LECKIE MEMORIAL AWARD**

Established in 2001 through a generous bequest from Nessa Leckie, B.N. 1961. Awarded by the School of Nursing to an outstanding student enrolled in the Master's program whose major focus is mental health **or psychiatric nursing**, who is working or has previously worked in the nursing field in an area relating to mental health **or psychiatric nursing** or who has demonstrated clinical expertise in this area. Not open to students in the Qualifying Year of the direct entry program.

**Value:** Minimum \$2,500.

#### **ORDER OF NURSES OF QUEBEC BURSARIES**

**Value:** Eight bursaries of \$10,000 are awarded each year to nurses for studies leading to a Master's degree or to a doctorate degree in nursing.

**Deadline:** March 15.

**Application:** To the Ordre des infirmières et infirmiers du Québec, Secretary of the Committee on Bursaries, 4200 Dorchester Blvd West, Westmount, Quebec, H3Z 1V4.

#### **ROYAL VICTORIA HOSPITAL SCHOOL OF NURSING**

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**Value:** \$15,000; renewable once.

**Application:** Students apply through the McGill Major Fellowships competition; see section 4.2, "McGill Major Fellowships (for continuing students only)".

#### "OLD SUN" ENTRANCE SCHOLARSHIP

Established in 1994 by Joy Harvie Maclaren, a 1944 Macdonald dietetics graduate, in recognition of the 50th anniversary of her graduation and in honour of her late father. Eric Harvie was made Honorary Chief Old Sun by the Blackfoot tribe of Alberta in recognition of his great interest in their native culture and making it possible for this to be recorded for future preservation. Chief Old Sun and Chief Crowfoot together signed Treaty No. 7 with the Canadian Government in 1874 for land, peace and education.

**Eligibility:** Preference to Canadian aboriginal students (alternatively students from Western Canada) who are entering studies in dietetics, human nutrition, or environmental sciences on the Macdonald Campus. Applicants must demonstrate academic achievement, community involvement, leadership and financial need. Undergraduate and graduate students will be considered.

**Value:** \$3,000 - \$9,000. May be renewed for a maximum of two years subject to satisfactory standing and full-time status.

**Application:** Awarded by the Faculty of Agricultural and Environmental Sciences Scholarships Committee, after department invitation of candidates to apply.

#### PHILIP CARPENTER FELLOWSHIP IN BIOLOGY

Established in 1892 by Mrs. Philip P. Carpenter to provide "a post-graduate teaching fellowship or scholarship in Natural Science or some branch thereof."

**Eligibility:** New applicants to the M.Sc. or Ph.D. program; to be awarded on the recommendation of the Biology Department.

**Value:** Two awards of \$2,000 each year.

**Application:** An application for admission must be received in the Biology Department prior to March 1.

#### PLANT SCIENCE POSTGRADUATE AWARD

This memorial award was established by the family and friends of the late Robert Klinck, a former student.

**Eligibility:** Awarded to a student who has successfully completed at least one year of post-graduate studies in the Department of Plant Science and who has demonstrated good citizenship in the Department.

**Value:** Approximately \$1,200.

**Application:** By departmental recommendation to the Faculty of Agricultural and Environmental Sciences Scholarships Committee.

#### ROLAND LOISELLE PRIZE IN PLANT GENETICS

Established in 2000 in honor of Roland Loiselle (B.Sc. Agr. 1949, M.Sc. 1951).

**Eligibility:** Awarded by the Department of Plant Science to a graduate student who is conducting research in plant genetics. The award is renewable for one year in an M.Sc. program and two years in a Ph.D. program subject to satisfactory progress reports from the supervisory committee. The recipient must be a citizen or Permanent Resident of Canada.

**Application:** By departmental recommendation to the Faculty of Agricultural and Environmental Sciences Scholarships Committee.

**Value:** Minimum \$1,500.

#### ROTARY CLUB OF MONTREAL INTERNATIONAL AGRICULTURAL AWARD

Established by the Rotary Club of Montreal in 1997 to provide opportunity for international students in agriculture to study at McGill.

**Eligibility:** Awarded to an international student for graduate level studies at the Macdonald Campus in the area of agriculture and food production. Preference will be given to entering students from Asia, Africa or the Caribbean, who require additional financial assistance and who intend to return to their home country to train others.

**Value:** \$5,000. Renewable for one year in the M.Sc. program and two years in the Ph.D. program.

**Application:** By departmental recommendation to the Faculty of Agricultural and Environmental Sciences Scholarships Committee.

#### SIR VINCENT MEREDITH FELLOWSHIP IN AGRICULTURAL ECONOMICS

**Eligibility:** Offered to an outstanding student admitted to the graduate program in Agricultural Economics. The recipients of this fellowship may be expected to participate in the teaching program of the department.

**Value:** \$10,000 (two instalments) renewable once on the basis of satisfactory progress.

**Deadline:** April 1.

**Application:** Apply to the Department of Agricultural Economics. Entering graduate students should submit their fellowship application with application for graduate studies.

#### T.W.M. CAMERON AWARD IN PARASITOLOGY

**Eligibility:** Open to M.Sc. or Ph.D. graduates at the Institute of Parasitology on completion of their degree. Awarded for excellence in parasitology, demonstrated in the course of study at the Institute of Parasitology.

**Value:** A book prize.

**Application:** Nominations by a selection committee of the Institute of Parasitology.

#### VINEBERG FAMILY FELLOWSHIP

Established in 1990 by the family of Gertrude Vineberg to support research on environmental quality.

**Eligibility:** Awarded by the GPSO on the recommendation of the Executive Committee of the Limnology Research Centre to an outstanding student pursuing graduate studies and research on fresh water pollution, conservation and rehabilitation.

**Value:** \$8,000, non-renewable.

#### WALTER M. STEWART POSTGRADUATE SCHOLARSHIP IN AGRICULTURE

From a fund established by the late Walter M. Stewart.

**Eligibility:** Awarded annually to students studying at the post-graduate level at Macdonald Campus. Preference will be given to graduates of Quebec universities. If there are insufficient suitable candidates at the postgraduate level in a particular year,

**Eligibility:**

### 5.3.2 Chemical Engineering

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#### **WILLIAM H. GAUVIN FELLOWSHIP IN CHEMICAL ENGINEERING**

Established in the memory of William H. Gauvin, O.C., B.Eng. (1941), M.Eng. (1942), Ph.D. (1945), D.Sc. (Hon.) (1985), former Professor of Chemical Engineering.

**Eligibility:** Awarded by the GPSO to a student in the first or second year of Ph.D. study upon recommendation of the Department of Chemical Engineering. No citizenship restrictions.

**Value:** Up to \$15,000; renewable once.

### 5.3.3 Chemistry

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#### **CANADIAN SOCIETY FOR CHEMISTRY - MONTREAL-2001 GRADUATE AWARD**

Established in 2002 by the organizing committee of the CSC-Montreal 2001 conference to recognize excellence and distinguished academic standing by students in the Department of Chemistry.

**Eligibility:** Awarded by the Department of Chemistry to one or more outstanding graduate students to support expenses related to the presentation of a paper or papers at a major national or international conference.

**Value:** Minimum \$2,650.

#### **CARL A. WINKLER AWARD IN CHEMISTRY**

Made possible by the donations of his graduate students, colleagues, friends, and a matching gift by Polysar Limited.

**Eligibility:** Given annually to the Ph.D. candidate who upon graduating is judged to be of outstanding academic excellence.

**Value:** Approximately \$1,000.

**Application:** No applications necessary. Awarded by the Chemistry Department.

#### **COLL MCFEE MEMORIAL SCHOLARSHIP**

Established in 1968 from a bequest of the late Miss Julia Beatrice Anderson McFee in honour of her father, Coll McFee and her brother, Malcolm Charles Coll McFee, B.A. (1905), B.Sc. (1908), M.Sc.

**Eligibility:** To a student proceeding to the M.Ed. (Secondary Education) degree in Chemistry or a graduate of the McGill Chemistry Department who is proceeding to a M.Sc. or Ph.D. degree.

**Value:** Varies.

**Deadline:** June 1.

**Application:** Apply to the Chair, Department of Chemistry.

#### **DAVID J. SIMKIN AWARD IN PHYSICAL CHEMISTRY**

Established in 1998 in honour of D.J. Simkin, physical chemistry professor in the Department of Chemistry from 1969-1997.

**Value:** \$500.

**Application:** Awarded by the Department of Chemistry to a doctoral student at the beginning of the student's third year of doctoral studies in physical chemistry research on the basis of excellence in graduate course work and research.

#### **PALL DISSERTATION AWARD**

Established in 1997 by Dr. David Pall.

**Value:** \$6,000.

**Application:** No application necessary. Awarded by the Department of Chemistry to an outstanding doctoral student who is in the last six months of the Ph.D. program.

#### **RICHARD T. MOHAN SCHOLARSHIP**

Established in 1971 to honour the memory of the late Richard T. Mohan.

**Eligibility:** Awarded to a post-graduate student proceeding to the Ph.D. degree.

**Value:** Varies.

**Application:** No applications necessary. Awarded by the Chemistry Department.

#### **ROBERT ZAMBONI PRIZE(S) IN CHEMISTRY**

Established in honour of Dr. Robert Zamboni (Ph.D. in Chemistry 1979), a distinguished Medicinal chemist at Merck Frosst Centre for Therapeutic Research.

**Eligibility:** Awarded by the Department of Chemistry on an annual basis to graduate students who have demonstrated excellence in research for the dissemination of their research.

**Value:** Minimum \$300.

#### **T. STERRY HUNT AWARDS IN CHEMISTRY**

**Value:** Sevin Ch96Gdissa Tw (RI/F1 7.5 Tf 0.2488 Tc -0.8342 Tw Tc -0.836lt5 Tj 0

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**Eligibili02:**



**JOHN STEVENSON MEDAL**

**Eligibility:** Awarded on the Department's recommendation to the graduating student ranking first in the M.Sc.A. program in Mineral Exploration in the Department of Earth and Planetary Sciences.

**LEROY MEMORIAL FELLOWSHIPS IN EARTH AND PLANETARY SCIENCES**

Established by friends of Captain O.E. LeRoy (Arts, 1895), who was killed at Passchendale, in October 1917.

**Eligibility:** May be awarded annually to a student who desires to proceed with postgraduate studies in Earth and Planetary Sciences at McGill.

**Value:** \$7,000.

**Application:** Awarded by the Department of Earth and Planetary Sciences.

**WILLIAM HENRY HOWARD SCHOLARSHIPS**

**Eligibility:** Open to undergraduate and graduate students in Earth and Planetary Sciences.

**Value:** Two scholarships of \$1,500 each.

Bequeathed in 1955 by the late Mrs. Florence P. Howard in memory of her husband.

**Application:** Awarded by the Department of Earth and Planetary Sciences.

**5.3.5 Mining, Metals and Materials Engineering****B.J. HARRINGTON BURSARY IN MINING ENGINEERING**

Supported by graduates in Mining Engineering in memory of the late Professor B.J. Harrington.

**Eligibility:** Awarded annually to a suitable graduate student.

**Value:** \$4,000.

**HORACE G. YOUNG FELLOWSHIPS**

**Eligibility:** Awarded to graduates of McGill University who are conducting advanced research in the Department of Mining and Metallurgical Engineering.

**Value:** Seven awards of \$3,000 each are made annually.

**Application:** Awarded by the GPSO on the recommendation of the Chair of the Department of Mining, Metals and Materials Engineering.

**JAMES DOUGLAS FELLOWSHIPS IN MINING ENGINEERING**

**Eligibility:** Awarded annually to suitable graduate students.

**Value:** Five research and teaching fellowships of \$2,000 each in the Department of Mining, Metals and Materials Engineering endowed by the late Dr. James Douglas.

**SIR WILLIAM DAWSON FELLOWSHIP IN METALLURGY**

Endowed in memory of the late Sir William Dawson, Principal of McGill University from 1855 to 1893.

**Value:** Two research and teaching graduate awards of \$6,000 or six undergraduate awards totalling \$12,000 in the Department of Mining, Metals and Materials Engineering.

**WILLIAM STEWART RUGH SCHOLARSHIP**

Endowed by the late Helen Stewart Rugh in memory of her father, William Stewart Rugh.

**Eligibility:** The awards are made on the recommendation of the Chair of the Department of Mining, Metals and Materials Engineering.

**Value:** Five research and teaching postgraduate awards of \$3,000 each or up to ten undergraduate awards of \$1,500 each in the late Dr. James Douglas.

SIR WILLIAM DAWSON FELLOWSHIP IN METALLURGY (Value: \$12,000) to suitable graduate students (HORACE G. YOUNG FELLOWSHIPS) to suitable graduate students (JAMES DOUGLAS FELLOWSHIPS IN MINING ENGINEERING) to suitable graduate students (WILLIAM STEWART RUGH SCHOLARSHIP) to suitable graduate students (B.J. HARRINGTON BURSARY IN MINING ENGINEERING) to suitable graduate students



**HUGH MCLENNAN MEMORIAL SCHOLARSHIP**

Established by the Hon. John Stewart McLennan, Dr. Francis McLennan and Miss Isabella McLennan in memory of Hugh McLennan, son of the Hon. John Stewart McLennan, killed at the Battle Ypres in 1915. Awarded for travel to the student who has maintained the highest standing throughout professional studies in Architecture. Selection is made by a Committee of Staff of the School of Architecture.

**Value:** \$4,500.

**JOHN BLAND SCHOLARSHIP IN ARCHITECTURE**

Established in 1998 by a generous gift from a McGill graduate of Chemical Engineering (Class of 1959), from Hong Kong, in honour of Professor John Bland, Director of the School of Architecture between 1941 and 1972. Awarded by a committee of staff of the School of Architecture to a graduating student to support work in China.

**Value:** \$6,000.

**JOHN BONSALL PORTER SCHOLARSHIP**

**Eligibility:** Open to full-time graduate students currently registered in a M. Eng. in Civil, Mechanical, or Electrical Engineering, preferably in Civil Engineering.

**Value:** \$1,000.

Founded by Dr. W.W. Colpitts (B.Sc. 1899).

**Application:** Apply to the Dean of the Faculty of Engineering.

Applications from graduates of other universities must be accompanied by certified statements of academic standing and letters of recommendation.

**JOHN BRADBURY AWARD IN GEOGRAPHY**

Established in memory of John Bradbury, remembered as one who inspired students and colleagues alike with his enthusiasm for understanding the world, and his commitment to improving the working conditions of ordinary people.

**Eligibility:** Awarded annually to a Master's student in Geography.

standing graduating student who has demonstrated excellence in the research, site analysis and program preparation for the final design project of the M. Arch. I Program.

**Value:** Minimum \$500.

#### **RAY (RAYMOND TAIT) AFFLECK PRIZE IN DESIGN**

Established in 1989 in memory of Raymond Tait Affleck (FRAIC, RCA), B.Arch. 1947, by his family, colleagues and friends. Awarded to a student in the School of Architecture for distinction in Design in the M.Arch.1 final design project. The winner will be selected by a jury of three members, at least one of whom is a professional architect who is not a member of the staff of the School of Architecture.

**Value:** \$1,000.

#### **R.M. FOWLER MEMORIAL FELLOWSHIP**

Donated by the Pulp and Paper Industry of Canada in memory of Robert M. Fowler, president of the Canadian Pulp and Paper Association from 1945 to 1972.

**Eligibility:** Offered annually for competition among full-time students in the Master of Engineering (without thesis) Pulp and Paper option. Applicants must be Canadian citizens or Permanent Residents. Candidates will be judged on both their academic achievement and their demonstrated interest in a career in the Canadian pulp and paper industry.

**Value:** A fellowship of at least \$21,000.

**Application:** For information apply to the Chair, Graduate Admissions Committee, Department of Chemical Engineering.

#### **RON RICE MEMORIAL AWARD**

Established by family, friends, associates, students and graduates to honour the memory of Professor Ron Rice of the School of Urban Planning and the Department of Civil Engineering and Applied Mechanics, who passed away on August 20th, 2000.

**Eligibility:** Awarded to a student pursuing graduate studies in the field of Transportation Planning and/or Engineering, based on academic merit, by the GPSO on the recommendation of the School of Urban Planning and the Department of Civil Engineering and Applied Mechanics.

**Value:** \$1,000.

#### **SCHOOL OF ARCHITECTURE FELLOWSHIPS**

**Eligibility:** Offered annually (in January) to students in the graduate programs from funds contributed by graduates of the School of Architecture. First and second year students registered in the graduate programs in Architecture are eligible.

**Value:** Varying amounts.

#### **ROYAL ARCHITECTURAL INSTITUTE OF CANADA MEDAL**

Offered to a graduating student in the professional program who, in the judgment of the Faculty of the School of Architecture, has completed the most outstanding final design project/thesis for that academic year and who shows promise of being an architect of distinction after graduation. Selection is made by the School of Architecture.

#### **STUART A. WILSON MEMORIAL PRIZE**

Established in 1991 in memory of Stuart Anthony Wilson by family, friends and colleagues. Stuart Wilson graduated from the McGill School of Architecture in 1943 and taught there from 1948 to 1991. The prize is awarded by a committee of staff of the School of Architecture to the student with the best portfolio in the annual Sketching School.

**Value:** \$150.

#### **WARREN FELLOWSHIPS IN GEOGRAPHIC INFORMATION SYSTEMS**

Established by Roger Warren (B.Com. 1955) to graduate students with strong academic standing whose research is in geographic information systems. Awarded to one or more students by the GPSO upon the recommendation of the Department of Geography.

**Value:** Minimum \$5,000; renewable.

#### **WERNER GRAUPE MEMORIAL MMM FELLOWSHIP**

Established in 2001 in memory of Werner Graupe, a long-standing supporter and friend of the University, by the Masters in Manufacturing Management (MMM) program. Awarded by the MMM program fellowships committee to graduate students in the MMM program. Preference shall be given to students who are Canadian citizens or Permanent Residents and demonstrate fluency in French and English. Priority given to full-time students; part-time students will be considered for partial awards in the absence of qualified full-time candidates.

**Value of full award:** \$20,000.

#### **WILFRED ONIONS MEMORIAL PRIZE**

Established in 1991 in memory of Wilfred Onions, B.Arch. 1932, by family, friends and fellow graduates in Bermuda. This prize commemorates his passion for sketching and life-long commitment to the profession of architecture, and is awarded by a committee of staff of the School of Architecture to the student with the best single work in the Sketching School.

**Value:** \$200.

#### **WORLD METEOROLOGICAL ORGANIZATION (WMO)**

**Eligibility:** Open to applicants from developing countries, nominated by their governments, for studies or training in meteorology and operational hydrology at universities or meteorological training institutes in countries where facilities are available.

**Value:** Normally based on United Nations Development Programme stipend rates.

**Application:** Submitted by Government of candidate's country through the Director of the Meteorological/Hydrological Service, 41, avenue Giuseppe-Motta, 1211 Geneva 20, Switzerland, or the local United Nations Development Programme office.

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## **5.4 Social Sciences and Humanities**

### **5.4.1 Various Social Science and Humanities Units**

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#### **ALEXANDER MACKENZIE FELLOWSHIP IN POLITICAL SCIENCE**

**Eligibility:** Tenable by a graduate of any accredited university, conditional upon acceptance by the GPSO in the field of Political Science. A certain amount of tutorial and teaching work is required.

**Value:** One award of \$5,000 and one of \$3,000, possible renewal.

**Application:** No application is required.

#### **ALLEN OLIVER FELLOWSHIPS IN ECONOMICS AND POLITICAL SCIENCE**

Established by Mrs. Frank Oliver, of Edmonton Alta, in proud and loving memory of her son, the late Allen Oliver, M.C., B.A. Lieutenant, 26th Battery, C.F.A., who was killed in action at the Somme on November 18, 1916. Lieutenant Oliver was an honours graduate in 1915 in the Department of Economics and Political Science.

**Eligibility:** Awarded to the student who stands highest in first class honours in the Departments of Economics and Political Science at the final B.A. examination. The holder is required to pursue studies in Economics and Political Science at McGill or elsewhere.

**Value:** Two awards of \$2,500 (one in political science; one in economics).

**Application:** Through the Departments of Economics and Political Science.

#### **ALLIANCE ATLANTIS FELLOWSHIPS IN COMMUNICATIONS**

Established in 2000 through a generous gift from Alliance Atlantis Communications.

**Eligibility:** Awarded annually, by the Department of Art History and Communication Studies, to two students who have completed one year of study in the graduate program in Communications.

**Value:** \$12,500 each; non-renewable.

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**ROBERT VOGEL MEMORIAL AWARD IN HISTORY**

Established in memory of Robert Vogel, an inspiring teacher, historian, former Chair of the Department of History and former Dean of the Faculty of Arts.

**Eligibility:** Awarded by the Department of History to the most promising student entering either the M.A. or Ph.D. program, whose focus of research is European history, broadly defined.

**Value:** Minimum \$1,000.

**ROYAL BANK FELLOWSHIP IN UNIVERSITY TEACHING**

Established in 1994 by the Royal Bank.

**Eligibility:** Awarded by the 4cGill Centre for University Teaching and Learning to a doctoral student who will conduct research in university teaching. Fellowship holders are expected to become involved in teaching improvement programs offered by the CUTL.

**Value:** \$15,000 renewable once.

**Deadline:** February 28.

**Application:** Apply to the Director, CUTL, 3700 McTavish.

**SAMUEL LAPITSKY SCHOLARSHIP**

**Eligibility:** To be awarded on the recommendation of the Departments of Sociology or Anthropology (each in alternate years).

**Value:** To aid with tuition fees.

**Deadline:** February 1.

**Application:** Apply to the Departments of Sociology in even years, or Anthropology in odd years.

**SAUL AND FREDA FRANKEL PRIZE**

Established in 2000 by Professor Saul Frankel (B.A., M.A., Ph.D. McGill), McGill professor in the Departments of Economics and Political Science from 1952 to 1969. Awarded to a graduating Honours or first-year M.A. student for an outstanding research paper on a topic in the 'history of ideas'. Awarded by the Faculty of Arts Scholarships Committee upon recommendation from an adjudicating committee.

**Value:** \$1,000.

**SLAVA KLIMA PRIZE FOR EXCELLENCE IN ENGLISH LITERARY STUDIES**

Established in 2002 by a bequest from Slava Klima, former professor of English Literature.

**Eligibility:** Awarded by the Department of English to an outstanding doctoral student in literature.

**Value:** Minimum \$1,250.

**T. PALMER HOWARD, Q.C. AWARD IN CANADIAN HISTORY**

Established in 1990 by the Pan-Canada Foundation to honour T. Palmer Howard, Q.C., B.A.(1931), B.C.L.(1934), in recognition of his interest in the research and writing of Canadian history.

**Eligibility:** Awarded by the History Department to a leading candidate entering the M.A. or Ph.D. program in Canadian history at McGill.

**Value:** \$2,000.

**TERESA WHELAN KIERANS FELLOWSHIP IN ART HISTORY**

Established in 1993 by Thomas Kierans, B.A. (1961), in honour of his mother.

**Eligibility:** Awarded by the GPSO on the recommendation of the Art History Department to a graduate student in Art History. No citizenship restrictions.

**Value:** \$12,500.

**THE FOUNDATION FOR THE ADVANCEMENT OF PROTESTANT EDUCATION GRADUATE FELLOWSHIP IN HISTORY**

Established in 2002 by The Foundation for the Advancement of Protestant Education for an outstanding graduate student in the Department of History.

**Eligibility:** Awarded by the Department of History to graduate students in History on the basis of academic excellence and outstanding research potential. Preference shall be given to students researching the history of Protestant education in the province of Quebec.

**Value:** Minimum \$7,500.

**WARREN FELLOWSHIP IN THE MCGILL INSTITUTE FOR THE STUDY OF CANADA**

Established in 2001 through a generous gift from Roger W. Warren, Commerce, 1955.

**Eligibility:**

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**H.E. HERSCHORN GRADUATE SCHOLARSHIP**

**Eligibility:** Tenable by a student entering either the first or the second year of the M.B.A. program. Open to Canadian students only.

**Value:** Established in 1965, covering the amount of the current tuition fees.

**Application:** Awarded by the Faculty of Management Scholarships Committee, no application necessary.

**HELGI SOUTAR FELLOWSHIP**

Established in 1998 through the generosity of Ian Soutar in honour of his wife, Helgi Soutar.

**Value:** \$38,000.

**Application:** Awarded by the Faculty of Management Scholarships Committee to a student from Estonia in the M.B.A. program based on high academic achievement and strong leadership skills. Awardees are expected to return to Estonia at some future date.

**KENNETH F. BYRD PRIZE**

Established in 1981 by the Montreal-based Chartered Accountancy firms.

**Value:** \$1,000.

**Application:** Awarded to a student in the Graduate Diploma Program in Public Accountancy whose academic record is judged to be outstanding among those who graduate during the academic year.

**LIONEL PELHAM KENT SCHOLARSHIP**

Established in 1998 in memory of Lionel Pelham Kent, C.A. through the generosity of family and friends.

**Eligibility:** Open to students entering the final year of the C.A. program, who intend to continue their program of studies at McGill.

Awarded by the Faculty of Management Scholarships Committee. The winner will be chosen based on outstanding skills in written and oral communication combined with high academic standing.

**Value:** \$1,500.

**LATIN AMERICA AWARD**

Two awards valued at \$9,000 will be granted to students from Latin America entering the first year of the M.B.A. program. This award will be based on academic excellence and will be renewable for the second year. All applicants to the M.B.A. program will be considered. Recipients will be notified at the time of admission.

**M.B.A. ENTRANCE AWARD**

**Eligibility:** The selection is based on academic excellence.

**Value:** Each year the Faculty of Management Scholarship Committee awards a limited number of M.B.A. Entrance Fellowships valued at approximately \$1,500 (non-renewable).

**Application:** No application is necessary. All applicants to the M.B.A. program will be considered. Recipients will be notified at the time of admission.

**M.B.A. INTERNATIONAL STUDENT AWARD**

All international students are considered for renewable awards.

The number and size of these awards vary from year to year. The selection is based on academic excellence. All applicants to the M.B.A. program will be considered. Recipient will be notified at the time of admission.

**MCGILL ASSOCIATES MEDAL FOR GREAT DISTINCTION IN THE M.B.A. PROGRAM**

**Eligibility:** Established by the McGill Associates, a sterling silver medal will be awarded each Spring by the Scholarships Committee of the Faculty of Management to the leading student in the full-time M.B.A. program.

**NORMAN STRAUSS DOCTORAL FELLOWSHIP IN PROFESSIONAL ETHICS IN BUSINESS**

Endowed in 1992 by Edith Strauss in memory of her husband, this fellowship is intended to commemorate the integrity and character of Norman Strauss.

**Eligibility:** Awarded by the Faculty of Management to support outstanding doctoral students in Management who have demonstrated an interest in researching, studying and promoting business ethics. Consideration may be given to students pursuing research in the area of corporate social responsibility. Standing in the program to be evaluated by the Ph.D. Program Director.

**Value:** \$10,000, renewable once, based on satisfactory standing in the program.

**PLLARCZYK FELLOWSHIP**

First awarded in 1997, this fellowship will be awarded every second year. The purpose of this award is to create a distinguished international fellowship that will enable outstanding students from Poland to pursue a two year Master of Business Administration at McGill Faculty of Management. The fellowship is intended to be a comprehensive award covering the principal expenses which such students will incur while in Canada. Fellowship applications must meet the following criteria; Polish citizen under 40 years of age; Degree equivalent to a Canadian Bachelors degree, record of high academic achievement; TOEFL of 600; 2 years work experience, a written essay on career goals and expectations. Successful candidates must plan to return to Poland and participate in its economic life.

**ROGER C. BENNETT PRIZE IN MARKETING**

Established in 1999 with the support of friends and family of the late Roger C. Bennett, distinguished Professor of Marketing (Faculty of Management), who had a zest for life.

**Eligibility:** Awarded by the Faculty of Management Scholarships Committee to a graduating M.B.A. student who has demon-

**Value:**

**Value:** \$c life.

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**ERIC AWARD**

**Eligibility:** Awarded to a graduate or undergraduate student in the Faculty of Music for outstanding achievement in the field of electro-acoustic music. Awarded by the Faculty of Music Scholarships Committee on the recommendation of the staff of the

Principal and Vice-Chancellor of McGill University from 1994 to December 2002.

**Eligibility:** Awarded by the Faculty of Music Graduate Committee to a graduate student in the Department of Theory.

**Value:** Minimum \$5,000; renewable.

#### **PHYLLIS AND BERNARD SHAPIRO FELLOWSHIPS IN OPERA**

Established in 2002 by faculty, alumni, family and friends in honour of Phyllis and Bernard J. Shapiro. Dr. Bernard J. Shapiro was the Principal and Vice-Chancellor of McGill University from 1994 to December 2002.

**Eligibility:** Awarded by the Faculty of Music Graduate Committee to graduate or diploma students in Opera/Voice Performance.

**Value:** Minimum \$5,000; renewable.

#### **PRIX DE LA SOCIÉTÉ DE MUSIQUE CANADIENNE**

**Eligibility:** Established by La Fondation des Amis de l'Art.

Awarded to a Composition student, graduate or undergraduate, who is a Canadian citizen in alternating years to McGill and Université de Montréal. Available to McGill students in 2004-05.

**Value:** \$5,000.  
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#### **RACHEL AND BENJAMIN SCHECTER MEMORIAL SCHOLARSHIP**

Established in 1997 by a bequest from the late Dr. Samuel Schechter in memory of his parents, Rachel and Benjamin Schechter. Awarded by the Faculty of Music Scholarships Committee to any full-time student in a degree or diploma in Music.

**Value:** \$3,600.

#### **SARA BERLIND MEMORIAL FELLOWSHIP**

Established by a bequest from Sara Berlind.

**Eligibility:** Awarded by the Faculty of Music to an outstanding student to pursue graduate studies in Music.

**Value:** \$5,000.

#### **VERNA-MARIE PARR GÉLINAS AND PAUL-MARCEL GÉLINAS SCHOLARSHIPS**

Established in 1998 by Verna-Marie Parr Gélinas, Dip. Social Work 1938, and Paul-Marcel Gélinas.

**Eligibility:** Awarded by the Faculty of Music to talented students studying in an undergraduate or graduate program in the Faculty of Music. Preference will be given to instrumentalists in the McGill Symphony Orchestra.

**Value:** Minimum \$1,800 each.

### **5.4.6 Religious Studies**

#### **A.R. GORDON AWARDS**

Established in 1998 by a bequest from Janette R. Gordon in memory of her father, Rev. Alexander Reid Gordon, who was a

Professor of Hebrew and Old0.32665 Tc -02(OF0 Tf 0.3868tu0 ratts in 20 Tc -0.1132d 0.2683 Tc -0.5533 Tw o0O33 Tw o0O33 o,Qemory tYa Tf 0

annually by the School to a graduate student in Social Work who has generated a particularly innovative research or service project.  
**Value:** Minimum \$500.

#### **MARGARET GRIFFITHS AWARD IN CHILD WELFARE**

Established in 1994 through a bequest from Professor Margaret Griffiths, a long-time member of the faculty of the McGill School of Social Work.

**Eligibility:** Awarded annually by the School of Social Work on the basis of academic and professional merit to an incoming full-time student in the Master of Social Work program, with a declared interest in services to children.

**Value:** Varies.

#### **MARGARET MARY BURNS AWARD**

Established in 1997 by a bequest from Margaret Mary Burns who received a Diploma from the Montreal School of Social Work in 1944.

**Eligibility:** Awarded on the basis of academic standing to graduate students by the School of Social Work.

**Value:** Maximum Varies.

#### **MIRIAM AND E. MICHAEL BERGER FELLOWSHIP**

**Eligibility:** Awarded annually by the School of Social Work to a graduate student of the School whose area of practice or research is in the field of community organization and/or social policy and who demonstrates academic competence and financial need.

**Value:** Varies.

#### **MYER KATZ FELLOWSHIP IN SOCIAL WORK**

Established in 1986 by contributions from former students, colleagues and friends, the School of Social Work Alumni Committee, and the McGill Advancement Program, on the occasion of the retirement of Professor Myer Katz from the Directorship of the School of Social Work.

**Eligibility:** Awarded annually to a student pursuing graduate studies related to clinical social work practice.

**Value:** Varies.

#### **SCHOOL OF SOCIAL WORK ALUMNI PRIZES**

The Alumni Committee of the School makes three awards each year to graduating M.S.W. students:

- 1) Alumni Prize for the Outstanding M.S.W. Thesis
- 2) Alumni Award for Excellence in Clinical Practice
- 3) Alumni Prize for the Outstanding M.S.W. Independent Study Project

**Value:** \$200 each.

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## **6 Student Financial Assistance**

### **6.1 Government Student Aid**

#### **6.1.1 Citizens and Permanent Residents of Canada**

Need-based student financial aid programs are offered by the federal/provincial governments. Applications should be directed directly to the province (or territory) of residence. Application forms are available from the governmental authorities as well as the Student Aid Office. In formation on governmental student aid and links can be found on McGill's Financial Aid Website at [www.mcgill.ca/stuserv/aid/aid.htm](http://www.mcgill.ca/stuserv/aid/aid.htm).

#### **6.1.2 Citizens and Permanent Residents of the United States**

Stafford Loans (subsidized and unsubsidized) and parental loans (PLUS) are available for studies at McGill. Students must submit a FAFSA application to have their financial need assessed. FAFSA may be completed on the Web at [www.fafsa.ed.gov](http://www.fafsa.ed.gov). The resulting SAR and a Master Promissory Note (Stafford Application) is submitted to the Student Aid Office. Students may contact the Office

for information on alternative loan programs and should also check with banks and other lending organizations in the U.S.

More information can be found on McGill's Financial Aid Website at [www.mcgill.ca/stuserv/aid/aid.htm](http://www.mcgill.ca/stuserv/aid/aid.htm).

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### **6.2 McGill Student Aid**

The Student Aid Office administers the University's need-based financial aid programs which includes short-term loans, limited bursary assistance and a Work-Study program. All applicants for aid must first apply for the maximum government assistance for which they may be eligible. The Office is located in the Brown Student Services Building, 3600 McTavish, suite 3200, Telephone (514) 398-6013/14. A limited number of small bursaries are awarded on the basis of financial need and academic standing. Funding for the bursaries comes from several different sources at McGill including an annual transfer of funds to the Student Aid Office from the Graduate and Postdoctoral Studies Office.

#### **CAROLINE AND RICHARD RENAUD BURSARIES**

Endowed in 1999 with a generous gift from Carolyn and Richard Renaud.

**Eligibility:** Awarded on the basis of financial need by the Student Aid Office to students entering or enrolled in graduate studies at McGill with a preference to students in programs in the Graduate School of Library and Information Studies.

#### **EBEN HOPSON BURSARY FOR STUDY AT MCGILL**

Established in 1988 through a donation from the North Slope Borough of Alaska in honour of the late Eben Hopson, Mayor of the North Slope Borough from 1972 to 1980, to advance the pursuit, promotion and sharing of knowledge in those areas which are of common interest and relevance to the scientific, social and economic development, and the greater welfare of the North Slope Borough and the countries of the Circumpolar North.

**Eligibility:** For the support of students from the North Slope Borough of Alaska for graduate or undergraduate studies at McGill in any field deemed in the welfare of the North Slope Borough.

**Application:** Applications should be submitted to the GPSO and awards will be made by the Eben Hopson Fellowship committee and the North Slope Mayor or designee.

**Value:** \$6,000. Awards are renewable for a second year of Masters study to a fourth year of Doctoral studies and Bachelor's study.

#### **GEORGES, PAUL AND ROBERT MASSON BURSARIES IN SCIENCE**

Established in 2002 by Georges Masson, Ph.D. 1942, Paul Masson, B.A. 1968, and Robert Masson, B.Sc. 2002, to commemorate the three generations of Massons at McGill.

**Eligibility:** Awarded to one or more students in any department in the Faculty of Science. Preference shall be given to students in the departments of Biology and Mathematics. Awarded by the Student Aid Office on the basis of financial need.

#### **GRADUATE STUDENTS' BURSARY FUND**

Established in 1989 by the GPSO to assist full-time students in any graduate degree program. Awarded by the Student Aid Office to students requiring financial assistance to pursue studies or research at McGill.

#### **GRADUATE STUDENTS' LOAN FUND**

Established in 1951 by the Board of Governors for students in Graduate Studies.

#### **IRVING ORRIN VINCENT BURSARY**

Established by Mrs. J.B. Owen in memory of her father, the late Irving Orrin Vincent, B.A. 1907, M.A. 1908, a noted teacher and Principal of Edward VII School in Montreal from 1912 until his death in 1920.

**Eligibility:** Awarded annually by the Student Aid Office on the basis of academic merit and financial need to a graduating stu-

林達成醫生獎學金

李甘棠博士獎學金

梁醒華牙醫獎學金

**DR. YU-MING LAM FELLOWSHIP**

Established in 1999 by a generous gift from Dr. Yu-Ming Lam (DDS 1972) and family in honour of Mr. Yin Bun Lam.

**Eligibility:** Awarded by the Faculty of Dentistry to an entering postdoctoral, doctoral or master's student in the Faculty of Dentistry.

**Value:** \$10,000. Tenable for one year.

**MCLAUGHLIN FELLOWSHIP**

Established by the R. Samuel McLaughlin Foundation for post-M.D. fellows undertaking research within McGill University and affiliated hospitals.

**Eligibility:** The Fellowship will be awarded by the Postgraduate Awards Committee of the Faculty of Medicine for one year, but the recipient is eligible to re-enter the competition for a second year of support. Applicants must be eligible to practice in Quebec.

**Value:** Minimum \$25,000.

**PETER QUINLAN FELLOWSHIP**

To honor the memory of Peter Quinlan, a fellowship fund has been established in his name by his family and friends.

**Eligibility:** The Peter Quinlan Fellowship will support young researchers (M.D. or Ph.D.) who wish to undertake postdoctoral training in Oncology at McGill University and its affiliated hospitals under the direction of a member of the Faculty of Medicine. The Fellowship will be awarded by the Postgraduate Awards Committee of the Faculty of Medicine for one year, but the recipient is eligible to re-enter the competition for a second year of support.

**Value:** Stipend will follow CIHR salary scale.

**RICHARD H. TOMLINSON POSTDOCTORAL FELLOWSHIPS**

Established in 2000 through a very generous gift from Dr. Richard H. Tomlinson (Ph.D. 1948). Awarded annually by the GPSO to recruit outstanding individuals into postdoctoral positions in any department at McGill University. Tomlinson Fellows who accept a fellowship from an agency external to McGill will be entitled to one-half the full value of the Tomlinson Fellowship.

**Eligibility:** The Tomlinson Postdoctoral Fellowships are for new postdoctoral scholars accepted into a postdoctoral research position at any department at McGill University.

**Value:** \$30,000, renewable annually based on satisfactory progress, to a maximum tenure of 2 years for postdoctoral level.

**Application:** Applications for a Tomlinson Postdoctoral Fellowship must reach the intended department by December 1, 2003 and should be accompanied by a letter from a McGill faculty member indicating their willingness to supervise the applicant's postdoctoral research in the event a fellowship is awarded. Current doctoral students and postdoctoral scholars at McGill are not eligible to apply.

**Deadline:** December 1.

[www.mcgill.ca/gps/fellowships](http://www.mcgill.ca/gps/fellowships)

**SUSTAINABLE AGRICULTURE FELLOWSHIP**

Established in 1995 through an endowment by a graduate of the Macdonald Farm Management and Technology Program, to foster innovative research in sustainable development that might not otherwise find support through traditional funding sources.

**Eligibility:** The proposed research would address themes such as food systems, agriculture, conservation, and the environment; sustainable systems and the community; issues in Canada's North; and food, nutrition and community development.

**Value:** \$35,000 at the postdoctoral level, may be renewable once.

**Deadline:** February 1, to Scholarships Committee for a fellowship commencing September 1.

**Application:** Awarded by the Faculty of Agricultural and Environmental Sciences Scholarship Committee on the basis of academic merit and suitability of the proposed research to the fellowship theme. Priority will be given to postdoctoral fellows. Additional information is available from the Macdonald Campus Student Affairs Office, 2111 Lakeshore, Ste-Anne-de-Bellevue, Quebec, H9X 3V9. Doctoral candidates will be considered in the second round if no suitable postdoctoral candidate is found.

**7.2 External Postdoctoral Fellowships****ANDREW W. MELLON POSTDOCTORAL FELLOWSHIPS IN THE HUMANITIES AT STANFORD UNIVERSITY**

**Eligibility:** Applicants must be US Citizens or Permanent Residents. For scholar-teachers in the humanities, tenable at Stanford University, who will be receiving a Ph.D. no more than one year prior to the competition or on track to finish the degree program by the end of the academic years. Limited teaching duties are required.

**Value:** \$37,750 US per year, renewable.

**Deadline:** To be announced.

**Application:** Additional information and forms are available from the Office of the Dean, School of Humanities and Sciences, Stanford University, Stanford, California USA.

Tel:(415)723-9785. E-mail: [mcahill@leland.stanford.edu](mailto:mcahill@leland.stanford.edu);

[www.stanford.edu](http://www.stanford.edu).

**OFA # 269**

**Value:** \$37,750 US per year

**Deadline:** February 1, 2004

**Value:** 24 months



**CHIANG CHING-KUO FOUNDATION – FELLOWSHIP AWARDS (POSTDOCTORAL)**

**Eligibility:** For postdoctoral research in the field of Chinese studies in the humanities and social sciences. Tenable anywhere.

**Value:** varies depending on availability of funds and needs of applicant.

**Deadline:** February 1.

**Application:** Additional information and forms are available from

**INSTITUT NATIONAL DE LA RECHERCHE SCIENTIFIQUE  
(INRS) POSTDOCTORAL FELLOWSHIPS**

**Eligibility:** The INRS offers postdoctoral fellowships to researchers wishing to join research teams within one of its seven centres (affiliated with the Université du Québec located throughout the province). These carry out research on: culture and society, water, energy and materials, geological sciences, oceanography, health, telecommunications and urban planning. Candidates must have either recently completed their doctoral studies or be in the final stages.

**Value:** Approximately \$26,000 (renewable).

**Deadline:** March 26.

**Application:** Information regarding specific application requirements available from the INRS, 2600, boul. Laurier, Tour de la Cité, bureau 640, Case Postale 7500, Sainte-Foy, Québec G1V 4C7. Tel: (418) 654-2517. Fax: (418) 654-3858.

E-mail: rene-paul\_fournier@inrs.quebec.ca; www.inrs.quebec.ca.

**OFA #411**

**J. LOUIS LÉVESQUE POSTDOCTORAL FELLOWSHIP**

**Eligibility:** The Fondation Armand-Frappier offers two \$25,000 Postdoctoral fellowships to candidates having recently obtained their doctoral degrees. The awardees train at the Institut Armand-Frappier in epidemiology, immunology, applied and environmental microbiology, vaccines and virology.

**Value:** \$30,000, renewable once.

**Deadline:** April 15.

**Application:** Information regarding specific application requirements available from the President, J. Louis Lévesque Fellowship Award Committee, Fondation Armand-Frappier, 531 boul. des Prairies, Ville de Laval, Québec H7V 1B7.

Tel:(514)686-5360. Web site: www.inrs-iaf.quebec.ca

E-mail: Monique.lafond@inrs-laf.quebec.ca.

**OFA # 232**

**JSPS POSTDOCTORAL FELLOWSHIPS FOR FOREIGN  
RESEARCHERS**

This Japan Society for the Promotion of Science (JSPS) fellowship was established to assist foreign researchers wishing to conduct research in Japan.

**Eligibility:** Candidates must be a citizen of a country that has diplomatic relations with Japan, have obtained a doctoral degree within the five years preceding award tenure. Preference for natural sciences and engineering.

**Value:** Covers monthly living allowance, return travel, dependents allowance and medical insurance, for one year (renewable).

**Deadline:** Two applications periods, May and September.

**Application:** There are two nomination routes: a) through the nominating authority in the applicant's country (in Canada, NSERC); b) through a Japanese host researcher. Information and application materials available from Japanese Programs, NSERC, 350 Albert Street, Ottawa, Ontario, K1A 1H5. Tel: (613) 996-2009. E-mail: cep@nserc.ca. Web site: www.jspg.go.jp

**OFA # 203**

**JUVENILE DIABETES FOUNDATION POSTDOCTORAL  
FELLOWSHIPS IN DIABETES RESEARCH**

**Eligibility:** By the beginning of the period of support sought, applicant must hold a doctoral degree or equivalent from an accredited institution and must not be simultaneously serving an internship or residency. Applicants must be sponsored by an investigator affiliated full-time with an accredited institution, who agrees to supervise the applicant's training. The sponsor need not have a background in diabetes, but the research project must be diabetes-related.

**Value:** \$31,092 - \$44,616 for 2 years, \$5,500 research allowance.

Deadline: 31

areas of agriculture, communications, environment, health, fisheries, etc.

**Value:** \$40,800 per year, renewable for up to two more years.

**Deadline:** No deadline.

**Application:** Fellowship guide and application forms are available only on the Web. Further information available from Visiting Fellowship's Office, NSERC, Constitution Square, Tower II, 350 Albert Street, Ottawa, Ontario, K1A 1H5. Tel: (613)996-3762, www.nserc.ca.

**OFA # 374**

#### **ORGANIZATION OF AMERICAN STATES (POSTDOCTORAL) FELLOWSHIPS**

**Eligibility:** Offered to Canadian citizens and Permanent Residents for postdoctoral research in any field except medicine, in any of the OAS member countries.

**Value:** Covers monthly living allowance, health insurance, tuition and related fees, study material, plus return travel for one year (renewable).

**Deadline:** January 31.

**Applications:** Can be obtained on the Web or from the OAS Program Officer, International Council for Canadian Studies, 75Albert, S-908, Ottawa, Ontario, K1P 5E7, (613)789-7828, www.iccs-ciec.ca or the GPSO Fellowships and Awards Section.

**OFA # 91**

#### **SHASTRI INDO-CANADIAN INSTITUTE POSTDOCTORAL RESEARCH FELLOWSHIPS**

**Eligibility:** Candidates must be Canadian citizens or Permanent Residents and have completed a Ph.D. Affiliation with an Indian institution is not a prerequisite. Usually tenable in the social sciences and humanities.

**Value:** Rs. 13,038 living expenses per month and up to Rs. 3,300 per month for research, plus travel to and from India for 3 to 12 months.

**Deadline:** November 15.

**Application** Information regarding specific application requirements and application forms are available from the Shastri Indo-Canadian Institute, 1402 Education Tower, 2500 University Dr. N.W., Calgary, Alberta T2N 1N4. Tel:(403) 220-7467. E-mail: sci@ucalgary.ca, www.ucalgary.ca/~sici.

**OFA # 88**

#### **SOCIAL SCIENCES AND HUMANITIES RESEARCH COUNCIL OF CANADA THERESE F. CASGRAIN (POSTDOCTORAL) FELLOWSHIP FOR RESEARCH ON WOMEN AND SOCIAL CHANGE IN CANADA**

**Eligibility:** Applicants must be Canadian citizens or Permanent Residents at the time of application and the award is only tenable in Canada. Affiliation with a university or an appropriate research institution is desirable but not a condition of the award. Applicants must have obtained a doctorate before taking up the award, though there are no restrictions as to time elapsed since obtaining the doctoral degree. The award is intended for research on "Women and Social Change in Canada".

**Value:** Up to \$40,000 per year, of which \$10,000 may be used for travel and research expenses. Non-renewable. Offered every even-numbered year.

**Deadline:** October 1.

**Application:** Forms are available only on the Web. Further information available from the GPSO Fellowships and Awards Section or SSHRC, Constitution Square, Tower II, 350 Albert Street, Ottawa, Ontario, K1P 6G4. Tel: (613) 992-0691, www.sshrc.ca/web/apply/program\_descriptions/fellowships/casgrain\_e.asp.

**OFA # 342**

#### **SOCIAL SCIENCES AND HUMANITIES RESEARCH COUNCIL (SSHRC) POSTDOCTORAL FELLOWSHIPS**

**Eligibility:** For persons who have obtained a doctoral degree no more than three years prior to the competition deadline and who intend to pursue full-time postdoctoral study or research while

affiliated with a university or recognized research institution. Applicants must be Canadian citizens or Permanent Residents. **Value:** \$35,028 (renewable) plus research allowance of up to \$5,000.

**Deadline:** October 1.

**Application:** Forms are available only on the Web. Further information available from the GPSO Fellowships and Awards Section or from the Social Sciences and Humanities Research Council of Canada, Constitution Square, Tower II, 350Albert Street, Ottawa, Ontario, K1P 6G4. Tel: (613) 992-0691; www.sshrc.ca.

**OFA # 372**

#### **STAGES DE FORMATION POSTDOCTORALE AU QUÉBEC POUR JEUNES DIPLÔMÉS ÉTRANGERS**

This program funds postdoctoral research internships in Quebec universities, enabling teams already involved in joint research to exchange young researchers.

**Eligibility:** Open to recent Ph.D.s (less than three years), citizens of one of the designated countries (excluding Canadian dual nationals): Germany, Spain, Italy, United Kingdom, Belgium, France, Switzerland, Australia, Denmark, United States, Japan, Norway, Finland, Sweden, Israel, South Korea. Priority pri5 TwL-, ci441 Tc - \$5,000.



**CANADIAN INTERNATIONAL DEVELOPMENT AGENCY (CIDA) AWARDS FOR CANADIANS**

**Eligibility:** Canadian citizens seeking to enhance their expertise in international development who possess an undergraduate degree or diploma, and who are admitted to a graduate program. Applicants must demonstrate a commitment to international development, substantiated through the applicant's educational background, work, volunteer experience and personal interests. The program aims to promote better linkages and contacts with developing countries and to encourage long-term partnerships and cooperation.

**Value:** \$10,000 for one year of support. At least 25% of the time must be spent in the host country.

**Deadline:** Normally February 1 to CBIE (confirm with GPSO Fellowships and Awards Section).

**Applications:** Available from the Canadian Bureau for International Education, CIDA Awards for Canadians Program, 220 Laurier Avenue West, Suite 1100, Ottawa, Ontario K1P 5Z9. Tel: (613) 237-4820, ext. 234, www.cbie.ca.

**OFA # 23**

**CELANESE CANADA INTERNATIONALIST FELLOWSHIPS**

**Eligibility:** The Celanese Canada Internationalist Fellowships (CCIF) provide opportunities for Canadians to study abroad in order to build their international competence, and to further Canada's participation in the world economy into the new millennium. Open to Canadian citizens and Permanent Residents who hold at least one university degree, the latest normally awarded no longer than five years from the date of application. Applicants may be in the final year of a degree program. Tenable anywhere in the world outside Canada; preference will be given to candidates planning to work and study overseas.

**Value:** \$10,000 per year. The entire program abroad must be at minimum eight consecutive months (full academic year).

**Deadline:** March 1 to CBIE (confirm with GPSO Fellowships and Awards Section).

**Applications:** Available from the Canadian Bureau for International Education, 220 Laurier Avenue West, Suite 1100, Ottawa, Ontario K1P 5Z9. Tel: (613) 237-4820, www.cbie.ca.

**OFA # 38**

**COMMANDER C. BELLAIRS GRADUATE FELLOWSHIPS**

**Eligibility:** Tenable at the Bellairs Research Institute of McGill University, St. James, Barbados (specializing in marine biology, marine ecology, geography, geology, behavioural ecology and other fields). Candidates should be registered full-time in graduate studies at McGill and may apply at any point in their research program for a fellowship to allow them to work at Bellairs.

**Value:** Up to \$10,000 per year, plus travel expense for graduate level, and up to \$20,000 per year for postdoctoral level.

**Deadline:** April 1. Check availability for 2005 with GPSO in February.

**Application:** Additional information and application forms are available from the Fellowships and Awards Web page at: www.mcgill.ca/gps/fellowships.

**OFA # 125**

**COMMONWEALTH SCHOLARSHIPS FOR GRADUATE STUDIES**

**Eligibility:** This scheme provides opportunities for Canadian students to pursue graduate studies in other Commonwealth countries (list of countries may vary). Candidates must be Canadian citizens or Permanent Residents who are graduates of a Canadian university.

**Value:** Awards are normally made for two academic years and cover all expenses.

**Deadline:**

October 25 for the following countries: India, Sri Lanka, Trinidad and Tobago, and United Kingdom.

December 31 for the following countries: Fiji and New Zealand.

**Application:** Information and application forms are available on the Web or from the GPSO Fellowships and Awards Section and International Council for Canadian Studies (ICCS), 75 Albert, S-

908, Ottawa, Ontario, K1P 5E7. Tel: (613) 789-7828, Fax: (613) 789-7830. E-mail: general@iccs-ciec.ca, www.iccs-ciec.ca.

**OFA # 49**

**DEUTSCHER AKADEMISCHER AUSTAUSCHDIENST (DAAD) – GERMAN ACADEMIC EXCHANGE FELLOWSHIPS**

The German Academic Exchange Service (DAAD) offers scholarships to highly-qualified students for graduate study and/or research at universities or institutes in Germany.

**Eligibility:** McGill students may be eligible to apply for DAAD fellowships under three distinct programs: McGill/DAAD, Bourses Québec-Allemagne, and the Foreign Government Awards program run by ICCS.

DAAD Fellowships (Annual Grants) are open to graduating seniors, graduate students and Ph.D. candidates under 33 years of age, enrolled full-time at time of application. Applicants must have a well-defined research project that makes a stay in Germany essential, plus adequate knowledge of the German language to carry out their proposed research.

**Value:** DM 1075 to DM 1555 per month, plus air fare, tuition fees and health insurance.

**Special Requirements - DAAD****1) Bourses Québec-Allemagne:**

Canadian citizen and Permanent Resident of Quebec.

**Deadline:** September 30 (confirm with the GPSO Fellowships and Awards Section).

**2) McGill/DAAD:**

Canadian or US citizen attending McGill University for at least one year (citizens of other countries must obtain prior permission from the DAAD).

**Deadline:** October 11 (confirm with the GPSO Fellowships and Awards Section).

**3) Others:**

Students who are ineligible under (1) or (2) should contact the DAAD Office, daadny@daad.org.

**Application:** Information and application forms are available from the GPSO Fellowships and Awards Section.

**OFA # 306**

**DR. AND MRS. MILTON LEONG FELLOWSHIP FOR STUDY IN CHINA**

梁家康 醫生夫婦中國研究學研究生獎學金  
Established in 1994 through a donation of Dr. Milton H.K. Leong, B.Sc.1966, M.D., C.M.1971, and Susanna S.C. Leong (Liang), B.Sc. 1969, M.Sc. 1973 to support academic exchanges between McGill and Chinese universities. Available to McGill graduate students in the Faculty of Science who study at Nankai, Peking and Tsinghua Universities.

**Eligibility:** Awarded by the GPSO on the recommendation of the Faculty of Science.

**Value:** Up to \$15,000; tenable in China for up to one year.

**FOREIGN GOVERNMENT AWARDS**

The International Council for Canadian Studies (ICCS) administers a number of foreign government awards on behalf of the Government of Canada and other foreign governments.

**Eligibility:** A common condition is that the applicant be a Canadian citizen and have completed a first degree.

**Value:** Covers monthly living allowance, tuition and related fees, plus return travel for one year (renewable).

**Deadline:** Varies (confirm deadline with offices below).

**Applications:** Can be obtained on the Web or from the International Council for Canadian Studies, 75 Albert, S-908, Ottawa, Ontario, K1P 5E7. Tel: (613) 789-7828, www.iccs-ciec.ca or the GPSO Fellowships and Awards Section.

Countries currently supported: Chile, Colombia, Finland, France, Germany (DAAD), Italy, Japan, Mexico, Netherlands, Russia and Spain.

Awaiting approval: Peru, Venezuela.

**OFA # 499**

#### **GOVERNMENT OF ITALY SCHOLARSHIPS**

**Eligibility:** Canadian citizens and Permanent Residents wishing to pursue graduate studies for up to 8 months in Italy, in the following fields: Italian language and literature, music, visual arts, performing arts, art restoration and sciences.

**Value:** 1,500,000 Italian lire per month, plus medical insurance and return airfare.

**Deadline:** September 29 (short term), April 28 (long term).

**Application:** Forms are available from the GPSO Fellowships and Awards Section or from the Embassy of Italy, Cultural Office, 275 Slater Street, Suite 2100, Ottawa, Ontario, K1P 5H9. Tel: (613)232-2401. Web site: [www.italcultur-qc.org/istituto/scholarships.htm](http://www.italcultur-qc.org/istituto/scholarships.htm).

**OFA # 504**

#### **GRADUATE STUDENT RESEARCH SUPPORT IN THE SOCIAL SCIENCES AND HUMANITIES**

**Eligibility:** Limited funds are available from the McGill Graduate and Postdoctoral Studies Office for support of certain aspects of graduate student research in the social sciences and humanities. This may include thesis research conducted at a site remote from McGill. This program will not cover typing or reproduction of theses, subsistence for field work or computer time and supplies.

**Value:** Awards up to \$3,500.

**Deadline:** April 17, October 17, January 16.

**Application:** Further details and application forms are available from McGill University, Research Grants Office, Room 429, James Administration Building. Tel: (514) 398-3790.

#### **GUY DRUMMOND FELLOWSHIP IN POLITICAL SCIENCE**

**Eligibility:** Originally endowed by the late Guy M. Drummond, killed in action in 1915, to encourage study in France. Recipients are nominated by the Department of Political Science, with preference to graduating honours students, on the basis of: academic record, likelihood of valuable future contribution to Canadian life and proficiency in French, among other things. Fellowships are tenable for study at an approved University or institute in Paris. One year fellowships may also be offered as entrance awards to Masters or Ph.D. students in political science intending to carry out graduate work related to France, or for continuing students to support a year in France as part of the graduate program.

**Value:** \$18,000 for up to 2 years, including \$7,000 for one year of study at McGill and \$11,000 for one year of study in Paris. One-year fellowships may also be offered.

**Application:** Further details on application and deadlines are available from the McGill Department of Political Science.

#### **INTER-AMERICAN DEVELOPMENT BANK SCHOLARSHIPS**

**Eligibility:** Candidates must: be a national of one of the member countries of the Bank, essentially a developing country, hold a bachelor's degree in the social sciences, law, business, or other development related technical field, have a superior academic record, have at least 2 years work experience in a development field, be currently enrolled in a graduate degree program and intend to return to their home country after completion of study.

**Value:** Covers full tuition, health insurance, stipend, travel and book allowance.

**Deadline:** May 15 (confirm with the GPSO Fellowships and Awards Section).

**Application:** Forms and additional information are usually available in March from the Inter-American Development Bank, 1300 New York Avenue N.W., Washington, D.C. 20577, USA. [www.iadb.org](http://www.iadb.org).

**OFA # 51**

#### **INTERNATIONAL DEVELOPMENT RESEARCH CENTER**

age, have a university degree and be willing to study the Japanese language.

**Value:** Travel and living allowances for up to two years are provided, plus tuition fees.

**Deadline:** June, check with Consulate.

**Application:** Forms are available from Consulate General of Japan, Monbusho Scholarships, 600 de la Gauchetière Street West, Suite 2120, Montreal, Quebec, H3B 4L8.

Tel: (514) 866-3429.

**OFA # 218**

#### **MACDONALD TRAVELLING SCHOLARSHIP**

**Eligibility:** Founded by the will of the late Sir William Macdonald "for the purpose of enabling English speaking Law students to take a course of studies in France", the testator "deeming it of great importance that the English-speaking members of the legal profession should be proficient in the French language". The scholar selected is required to pursue a year's study in the Law faculty of a French University approved, in each case, by the Faculty. The award is made at the discretion of the Faculty to a student of the graduating class proceeding to the Bar, who has obtained First or high Second Class honours in the final examination, and who would be unable without such financial help to spend a year in France. The Faculty interprets the will of the late Sir William Macdonald as intending that the scholarship be awarded only to students preparing for the legal profession in the Province of Quebec. Under the present regulations the scholarship must be used in the year in which it is awarded.

**Value:** Approximately \$18,000.

**Deadline:** May 1.

**Application:** Candidates should apply to the Faculty of Law, Student Affairs Office.

#### **MACKENZIE KING TRAVELLING SCHOLARSHIPS**

**Eligibility:** Offered to a graduate of any Canadian university to engage in postgraduate studies in the U.S. or U.K in international or industrial relations (including international or industrial aspects of law, history, politics, economics). Applicants should be persons of unusual worth and promise. Awards are based on academic achievement, personal qualities and demonstrated aptitudes, as well as proposed program of study. McGill only considers undergraduate applicants with First Class Honours Standing (CGPA of 3.5 or higher) and graduate applicants with cumulative "straight A" records.

**Value:** Approximately four scholarships per year of up to \$10,000.

**Deadline:** Normally February 1 to applicant's home university.

Verify McGill's deadline with the GPSO Fellowships and Awards Section.

**Application:** Application is made through the "home" university, i.e. the Canadian university from which the applicant has or will receive the most recent degree. Further information and application forms are available from the GPSO Fellowships and Awards Web site at: [www.mcgill.ca/gps/fellowships](http://www.mcgill.ca/gps/fellowships) and Mackenzie King Scholarships Competition Office, Faculty of Graduate Studies, University of British Columbia, 235-2075 Westbrook Mall, Vancouver, -2075 Westbrook MwoV6T1Z1

Deadline: eIE0.1186 Tj -42.75 i492 egree.

**ORGANIZATION OF AMERICAN STATES FELLOWSHIPS**

**Eligibility:** Offered to Canadian citizens and Permanent Residents for graduate study and/or postdoctoral research in any field except medicine, in any of the 33 OAS member countries.

**Value:** Covers monthly living allowance, tuition and related fees, plus return travel for one year (renewable).

**Deadline:** January 31.

**Applications:** Can be obtained from the OAS Program Officer, International Council for Canadian Studies, 75 Albert, S-908, Ottawa, Ontario, K1P 5E7, Tel: (613) 789-7828. E-mail: general@iccs.ciec.ca, www.iccs-ciec.ca or the GPSO Fellowships and Awards Section.

**OFA # 91**

**Applications:**

January 31.

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January 31.



**Value:** Rs. 13,080 living expenses per month and up to Rs. 3300 per month for research, for varying durations depending on fellowship.

**Deadline:** June 30 (January 31 for Language Fellowships).

**Application:** Information regarding specific application requirements and application forms are available from the Shastri Head Office, 1402 Education Tower, 2500 University Drive N.W., Calgary, Alberta, T2N 1N4. Tel: (403) 220-7467. E-mail: sici@ucalgary.ca, www.ucalgary.ca/~sici

**OFA # 88**

#### **THOMAS SHEARER STEWART TRAVELLING FELLOWSHIP**

**Eligibility:** The fellowship was established in 1967 by the family of the late Thomas Shearer Stewart, Q.C. a graduate of the Faculty of Law class of 1908 and is granted to a recent graduate of the Faculty of Law designated by the Dean of the Faculty. Preference is given to a graduate who is a Canadian citizen intending to reside in Canada upon completion of studies.

**Value:** \$12,000, awarded at the discretion of the Faculty of Law.

**Deadline:** May 1.

**Application:** Further information is available from the Student Affairs Office, Faculty of Law.

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Katz (Myer) Fellowship in Social Work . . . . .	
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Keefer Fellowship . . . . .	
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Keenan (Mary) Scholarship in English . . . . .	
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Kellogg (W.K.) Foundation Loan Fund . . . . .	
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MGSF Fellowships . . . . .	63	Price (Dr. Gerald B.) Memorial Awards . . . . .	65
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Montreal Lakeshore University Women's Club Scholarship . . . . .	58	Rapagna (Margherita) Memorial Prize in Rehabilitation Science . . . . .	69
Montreal League for the Hard of Hearing Award . . . . .	66	Recruitment Fellowships . . . . .	60
Morrow (Robert E.), QC, Fellowships . . . . .	80	Reid (J.H. Stewart) Memorial Fellowship . . . . .	57
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Motorola Foundation Graduate Award in Electrical and Computer Engineering . . . . .	75	Reinhardt (Carl) Scholarships and Bursaries in Physics and Earth and Planetary Sciences . . . . .	72, 73
Moyse Travelling Scholarships . . . . .	95	Religious Studies Bursary Fund . . . . .	85
Murray (Virginia) Prize for Cataloguing . . . . .	82	Renaud (Caroline and Richard) Bursaries . . . . .	86
National Research Council (NRC) Research Associateships . . . . .	90	Rhodes Scholarships . . . . .	96
Natural Sciences and Engineering Research Council (NSERC) Visiting Fellowships in Canadian Government Laboratories . . . . .	90	Rice (Ron) Memorial Award . . . . .	76
Natural Sciences and Engineering Research Council (NSERC) Industrial Postgraduate Scholarships . . . . .	58	Riente (Lara) Memorial Prize in Linguistics . . . . .	78
Natural Sciences and Engineering Research Council (NSERC) Industrial Research Postdoctoral Fellowships . . . . .	90	Riley (Irma K.) Awards . . . . .	68
Natural Sciences and Engineering Research Council (NSERC) Postdoctoral Fellowships . . . . .	90	Robb (Preston) Fellowship . . . . .	66
Natural Sciences and Engineering Research Council (NSERC) Postgraduate Scholarships and Canada Graduate Scholarships . . . . .	58	Roehrer (G.G. Allan) Institute– Research Grants in the Field of Intellectual Disabilities for Graduate Students . . . . .	57
Nenniger (Emil) Memorial Fellowship . . . . .	74	Rosenthal (Barbara) Prize . . . . .	68
Ng Wai Yee (Mr. and Mrs. Johnson) Fellowship . . . . .	79	Rotary Club of Montreal International Agricultural Award . . . . .	71
Noad (Anne Dudley) Award . . . . .	77	Rotary Foundation Scholarships . . . . .	96
Northern Scientific Training Program . . . . .	64	Royal Architectural Institute of Canada Medal . . . . .	76
Norton (David Fate and Mary J.) Fellowship in Philosophy . . . . .	77	Royal Bank Fellowship in University Teaching . . . . .	80
“Old Sun” Entrance Scholarship . . . . .	71	Royal Victoria Hospital School of Nursing Almunae Association Bursary . . . . .	68
Oliver (Allen) Fellowships in Economics and Political Science . . . . .	76	Rugh (William Stewart) Scholarship . . . . .	73
Onions (Wilfred) Memorial Prize . . . . .	76	Saint John's College, Cambridge Studentships . . . . .	96
Ontario Graduate Scholarship Program . . . . .	95	Salisbury (Richard F.) Prize in Anthropology . . . . .	79
Ontario-Quebec Exchange Fellowships . . . . .	95	Salomon (Jennie and Joseph) Memorial Bursary . . . . .	87
Order of Nurses of Quebec Bursaries . . . . .	68	Schechter (Rachel and Benjamin) Memorial Scholarship . . . . .	85
Organization of American States (Postdoctoral) Fellowships . . . . .	91	Schloss (Julius) Memorial Award . . . . .	84
Organization of American States Fellowships . . . . .	96	Schoenauer (Norbert) and David Farley Fellowship in Architecture . . . . .	75
Ortega (Alvaro) Award . . . . .	73	School of Architecture Fellowships . . . . .	76
Overseas Research Students (ORS) Awards . . . . .	96	School of Social Work Alumni Prizes . . . . .	86
Owen (Casper W.) Fellowship . . . . .	69	Schubert (Joseph) Memorial Scholarship . . . . .	67
Paidoussis (M. P.) Prize in Mechanical Engineering . . . . .	75	Schulich Scholarship for Entrepreneurship . . . . .	83
Pall Dissertation Award . . . . .	72	Semaan (Ingrid) Prize . . . . .	78
Paltiel (Freda L.) Award for Immigrant and Minority Women's Health and Development . . . . .	85	Semaan (J. Jeffery) Prize . . . . .	78
Pao (Sir Yue-Kong) Fellowships . . . . .	64	Senez (Aubrey) Fellowship . . . . .	80
Paprican Fellowships in Pulp and Paper Engineering . . . . .	75	Shankman (Harry) Scholarships . . . . .	65
Parr Gélinas (Verna-Marie and Paul-Marcel Gélinas) Scholarships . . . . .	85	Shapiro (Phyllis and Bernard) Fellowships in Opera . . . . .	85
Patrick (Wendy) Award . . . . .	82	Shapiro (Phyllis and Bernard) Fellowships in Theory . . . . .	84
Patton (Charles James, M.D., and Elizabeth Ross) Memorial Prize . . . . .	65	Shastri Indo-Canadian Institute Fellowships . . . . .	96
Peacock (John Williamson Frederick) Memorial Scholarship . . . . .	64	Shastri Indo-Canadian Institute Postdoctoral Research Fellowships . . . . .	91
Pelnar (Dr. Premysl) Academic Enrichment Award . . . . .	65	Sheldon (Lotte Marcus ) Prize . . . . .	85
Pesner (Dr. and Mrs. I.N.) Memorial Prize . . . . .	67	91	
Peters (Eileen) Fellowship . . . . .	61		
Phillips (Gordon) Fund for Research in Cardiovascular Diseases . . . . .	67		
Plant Science Postgraduate Award . . . . .	71		
Pllarczyk Fellowship . . . . .	83		
Pollack (Maurice) Foundation Fellowship . . . . .	84		
Porter (John Bonsall) Scholarship . . . . .	75		

Sourkes (Theodore) Prize . . . . .	66
Soutar (Helgi) Fellowship . . . . .	83
Special Libraries Association Scholarships . . . . .	82
Spence-Sales (Harold) Prize in Urban Planning . . . . .	74
SR Telecom Awards . . . . .	62
St. John Ambulance (Order of St. John) of Canada Bursaries . . . . .	68
Stages de formation postdoctorales au Québec pour jeunes diplômés étrangers . . . . .	91
Standard Life Dissertation Fellowship . . . . .	62
Stanfield (Robert and Mary) Dissertation Fellowship . . . . .	62
Stansfield (Ellen Edith Grubb) Award . . . . .	78
Stauffer (Joseph S.) Fellowship . . . . .	75
Steffen (Elizabeth) Memorial Award . . . . .	66
Steinberg (Nathan) Fellowship in Political Science . . . . .	79
Stern (Max) Fellowship in Music . . . . .	84
Stern (Max) Fellowships in Humanities and Social Sciences . . . . .	62
Stern (Max) McCord Museum Fellowship . . . . .	60
Stern (Max) Recruitment Fellowships . . . . .	60
Stevenson (Deirdre and Robert) Award . . . . .	85
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The ideal preparation includes courses in agricultural economics, economic theory (intermediate micro and macro), calculus, linear algebra, and statistics. Students with deficiencies in these areas will be required to take additional courses as part of their degree program.

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#### 1.4 Application Procedures

Applicants for graduate studies must forward supporting documents to:

Department of Agricultural Economics  
Macdonald Campus of McGill University  
21,111 Lakeshore  
Sainte-Anne-de-Bellevue, QC H9X 3V9  
Canada  
Telephone: (514) 398-7820  
Fax: (514) 398-8130  
E-mail: agr.econ@mcgill.ca

Applications will be considered upon receipt of a completed application form, \$60 application fee, and the following supporting documents:

**Transcripts** - Two official copies of all university level transcripts with proof of degree(s) granted. Transcripts written in a language other than English or French must be accompanied by a certified translation. An explanation of the grading system used by the applicant's university is essential. It is the applicant's responsibility to arrange for transcripts to be sent.

It is desirable to submit a list of the titles of courses taken in the major subject, since transcripts often give code numbers only. Applicants must be graduates of a university of recognized reputation and hold a Bachelor's degree equivalent to a McGill Honours degree in a subject closely related to the one selected for graduate work. This implies that about one-third of all undergraduate courses should have been devoted to the subject itself and another third to cognate subjects.

**Letters of Recommendation** - Two letters of recommendation on letterhead (official paper) of originating institution or bearing the university seal and with original signatures from two instructors familiar with the applicant's work, preferably in the applicant's area of specialization. It is the applicant's responsibility to arrange for these letters to be sent.

**Competency in English** - Non-Canadian applicants whose mother tongue is not English and who have not completed an undergraduate degree using the English language are required to submit documented proof of competency in oral and written English, by appropriate exams, e.g., TOEFL (minimum score 570 on the paper-based test or 230 on the computer-based test) or IELTS (minimum 7 overall band). The MCHE is not considered equivalent. Results must be submitted as part of the application. The University code is 0935 (McGill University, Montreal); please use Department code 31 (Graduate Schools), Biological Sciences-Agriculture, to ensure that your TOEFL reaches this office without delay.

**Graduate Record Exam (GRE)** - The GRE is not required, but it is highly recommended.

AGEC 611 PRICE ANALYSIS. (3) (Winter) Topics: advanced microeconomic theory with application in agricultural economics.

AGEC 630 FOOD AND AGRICULTURAL POLICY. (3) (Winter)

AGEC 633 ENVIRONMENTAL ECONOMICS. (3) (Winter) Topics: environmental economics, resource pricing, and policy. Prerequisite: AGE 611.

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in ovarian follicular development; polycystic ovarian disease; computer assisted modeling of morphometric and kinetic data; cell biology and molecular genetics of ageing; senescence and cell cycle-specific genes and their products.

**Research in the Department** investigates the dynamics and organization of molecules, organelles, cells and tissues in several major systems of the body. The work makes fundamental contributions to a number of established and emerging multidisciplinary fields: cell and molecular biology, cellular immunology and hematology, reproductive biology, calcified tissue biology, tumor cell biology, developmental biology, neurobiology and ageing.

The Department offers contemporary facilities for the wide range of techniques currently employed in research. Modern methods of cell and molecular biology, immunology and biochemistry are used in conjunction with specialized microscopy in a variety of experimental systems. Techniques used by Department members include labeling with radioisotopes and other tracers, radioautography, immunocytochemistry, histochemistry, cryo immune microscopy, fluorescence microscopy, high resolution electron microscopy, scanning electron microscopy, backscattered electron imaging, confocal microscopy, microinjection, video-microscopy in living cells, X-ray microanalysis, electron de

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**ANAT 699D1 (4.5), ANAT 699D2 (4.5) M.Sc. THESIS RESEARCH SEMINAR.** (Students must register for both ANAT 699D1 and ANAT 699D2) (No credit will be given for this course unless both ANAT 699D1 and ANAT 699D2 are successfully completed in consecutive terms) (ANAT 699D1 and ANAT 699D2 together are equivalent to ANAT 699)

**ANAT 701 PH.D. COMPREHENSIVE EXAMINATION.** (0)

**ANAT 701D1 (0), ANAT 701D2 (0) PH.D. COMPREHENSIVE**

**Exam. T/F4 Ph Tc 0 Tc(M(2004(N)) /TD Tj 095Tj UANATD genetics 2008 /F1nUtnitica1, Tc Scienc(N)10jj4ANAT.1688(05132744(N)ANAT Haggas;**

Schools), Biological Sciences - Agriculture, to ensure that your TOEFL reaches this office without delay.

**Graduate Record Exam (GRE)** - The GRE is not required, but it is highly recommended.

DOCUMENTS SUBMITTED WILL NOT BE RETURNED.

**Application Fee (non-refundable)** - A fee of \$60 Canadian must accompany each application (including McGill students), otherwise it cannot be considered. This sum must be remitted using one of the following methods:

1. Credit card (by completing the appropriate section of the application form). NB: on-line applications must be paid for by credit card.
2. Certified cheque in Cdn.\$ drawn on a Canadian bank.
3. Certified cheque in U.S.\$ drawn on a U.S. bank.
4. Canadian Money order in Cdn.\$.
5. U.S. Money Order in U.S.\$.
6. An international draft in Canadian funds drawn on a Canadian bank requested from the applicant's bank in his/her own country.

**Deadlines** – Applications, including all supporting documents must reach the department no later than June 1 (March 1 for International) for the Sc.2615 Tc -0.0965 T520U.S. Mone 735d2Tw M Tw 0bw; Ooutt4y9.5 735.75 49j. Application Fee (non-refundable)



courses; under staff supervision. An approved course outline must be on file in the Departmental office prior to registration deadline.

**ANSC 692N2 TOPIC IN ANIMAL SCIENCES 1.** (1.5) (Prerequisite: ANSC 692N1) (No credit will be given for this course unless both ANSC 692N1 and ANSC 692N2 are successfully completed in a twelve month period) (ANSC 692N1 and ANSC 692N2 together are equivalent to ANSC 692) See ANSC 692N1 for course description.

**ANSC 693D1 (1.5), ANSC 693D2 (1.5) TOPIC IN ANIMAL SCIENCES 2.** (Students must register for both ANSC 693D1 and ANSC 693D2) (No credit will be given for this course unless both ANSC 693D1 and ANSC 693D2 are successfully completed in consecutive terms)

**ANSC 693N1 TOPIC IN ANIMAL SCIENCES 2.**

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- 4) If the proposal is passed, the student will then carry out field research and write a thesis. Thesis drafts are read and commented on by the thesis committee. When the thesis is ready for examination, it is submitted to the Graduate and Postdoctoral Studies Office, which appoints an internal examiner (usually from within the Department) and an external examiner (an acknowledged authority in the field from outside the university). If both examiners approve the thesis, an oral defense is arranged before a committee appointed by GPSO.

## 5 Architecture

School of Architecture  
Macdonald Harrington Building  
815 Sherbrooke Street West  
Montreal, QC H3A 2K6  
Canada

Telephone: (514) 398-6700  
Fax: (514) 398-7372  
Web site: [www.mcgill.ca/architecture](http://www.mcgill.ca/architecture)

*Director* — David Covo

*Graduate Program Coordinator* — Alberto Pérez-Gómez

### 5.1 Staff

#### *Emeritus Professors*

Harold Spence-Sales; B.A.(Well.), A.A.Dipl., L.L.D.(S. Fraser)  
Radoslav Zuk; B.Arch.(McG.), M.Arch.(M.I.T.), D.Sc.(U.A.A.),  
F.R.A.I.C., O.A.Q., O.A.A.

#### *Professors*

Vikram Bhatt; N.Dip Arch.(Ahmed.), M.Arch.(McG.), M.R.A.I.C.  
Derek Drummond; B.Arch.(McG.), F.R.A.I.C., O.A.Q., O.A.A.  
(*William C. Macdonald Professor of Architecture*)  
Avi Friedman; B.Arch.(Technion), M.Arch.(McG.), Ph.D.(Montr.),  
O.A.Q., I.A.A.  
Alberto Pérez-Gómez; Dipl.Eng.(Nat.Pol.Inst.Mexico), M.A.,  
Ph.D.(Essex) (*Saidye Rosner Bronfman Professor of  
Architectural History*)  
Adrian Sheppard; B.Arch.(McG.), M.Arch.(Yale), F.R.A.I.C.,  
O.A.Q., A.A.P.P.Q.

#### *Associate Professors*

Annmarie Adams; B.A.(McG.), M.Arch., Ph.D.(Calif.), M.R.A.I.C.  
(*William Dawson Scholar*)  
Martin Bressani; B.Sc.(McG.), B.Arch.(McG), M.Sc.(Arch.)(MIT),  
D.E.A., Docteur (Paris-Sorbonne - Paris IV), O.A.Q.  
Ricardo Castro; B.Arch.(Los Andes, Col.), M.Arch., M.A.(Oregon),  
M.R.A.I.C.  
David Covo; B.Sc.(Arch.), B.Arch.(McG.), F.R.A.I.C., O.A.Q.  
Robert Mellin; B.Arch., M.Sc.(Arch.) (Penn.State), M.Arch.(McG.),  
M.Sc., Ph.D.(U.Penn.), M.R.A.I.C., N.A.A.  
Pieter Sijpkens; B.Sc.(Arch.), B.Arch.(McG.)

#### *Faculty Lecturer*

Julia Bourke

#### *Course Lecturers*

Manon Asselin, Jean D'Aragon, Lisa Landrum, Nadia Meratla,  
Carlos Rueda Plata, David Theodore

#### *Adjunct Professors*

Cecile Baird, Ewa Bieniecka, Lawrence Bird, Michael Carroll,  
Nathalie David, Howard Davies, Georges Drolet, Gordon  
Edwards, François Émond, Julia Gersovitz, Nan Griffiths,  
DanHanganu, Pierre Jampen, Richard Klopp, Phyllis Lambert,  
Seymour Levine, Anna Mainella, Harry Mayerovitch, Sybil  
McKenna, Serge Melanson, Rosanne Moss, Carl Mulvey,  
JoannaNash, Harry Parnass, Louise Pelletier, Mark Poddubiuk,  
Louis Pretty, Daniella Rohan, Richard Russell, Robert Stanley,  
Sheila Theophanides, Samson Yip, Jozef Zorko

#### *Adjunct Professors*

Cecile Baird, Ewa Bieniecka, Lawrence Bird, Julia Bourke,  
MichaelCarroll, Nathalie David, HowardDavies, Georges Drolet,  
GordonEdwards, FrançoisÉmond, JuliaGersovitz,  
MarkGinocchio, DanHanganu, PhyllisLambert, SeymourLevine,  
Anna Mainella, HarryMayerovitch, SergeMelanson,  
RosanneMoss, CarlMulvey, JoannaNash, LouisePelletier,  
MarkPoddubiuk, Louis Pretty, DaniellaRohan, Jacques  
Rousseau, RichardRussell, Robert Stanley, FredWeiser,  
Samson Yip, JozefZorko

### 5.2 Programs Offered

M.Arch.I (professional), M.Arch. II (post-professional) (non-the-  
sis), Graduate Diploma in Housing, Ph.D.

The professional M.Arch.I program is accredited by the Cana-  
dian Architectural Certification Board (CACB), and is recognized  
as accredited by the National Council of Architectural Registration  
Boards (NCARB) in the U.S.A.

There are two areas of study in the post-professional M.Arch.II  
and Ph.D. programs: Architectural History and Theory, and Hous-  
ing (which includes Affordable Homes, Domestic Environments,  
and Minimum Cost Housing).

Information concerning the duration of programs, documents  
required of applicants, etc., may be obtained from: [profdegree.  
architecture@mcgill.ca](mailto:profdegree.architecture@mcgill.ca) (M.Arch.I), [postprofmaster.architecture@  
mcgill.ca](mailto:postprofmaster.architecture@<br/>mcgill.ca) (M.Arch.II and Graduate Diploma in Housing), or  
[phd.architecture@mcgill.ca](mailto:phd.architecture@mcgill.ca) (Ph.D.).

#### **Architectural Certification in Canada**

In Canada, all provincial associations recommend a degree from  
an accredited professional degree program as a prerequisite for



to advance their knowledge in the housing field, are not able, or inclined, to undertake studies towards a Master's degree.

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## **5.6 Courses**

**Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva)**

**ARCH 650 ARCHITECTURAL HISTORY SEMINAR 1.** (8) (3-5-16) Western Architectural history from Antiquity to the Renaissance. A hermeneutic reading of primary sources, i.e. a section or chapter of an historical treatise, a frontispiece or image, in the framework of recent scholarship on the subject.

**ARCH 651 ARCHITECTURAL HISTORY SEMINAR 2.** (8) (3-5-16) Early Modern European theory of architecture, 17th - 19th centuries. A hermeneutic reading of primary sources, i.e. a section or chapter of an historical treatise, a frontispiece or image, in the framework of recent scholarship on the subject.

**ARCH 652 ARCHITECTURAL THEORY SEMINAR 1.** (4) (4-0-8) Phenomenology and hermeneutic.

**ARCH 653 ARCHITECTURAL THEORY SEMINAR 2.** (4) (4-0-8) The experience of modernity in cultural criticism, philosophy, literature and art.

**ARCH 671 DESIGN RESEARCH AND METHODOLOGY.** (4) (1-4-7) An architectural design problem is selected, bibliographic research undertaken, site selection established: program developed and theoretical approach evolved in preparation for course ARCH 673.

**ARCH 672 ARCHITECTURAL DESIGN 1.** (6) (2-10-6) A series of complex architectural and urban design issues are addressed with the intention of improving the student's facility to critically assess existing design solutions, to seek alternatives and to articulate clearly the rational and the impact of alternative proposals.

**ARCH 673 ARCHITECTURAL DESIGN 2.** (8) (2-14-8) (Prerequisite: ARCH 671 and ARCH 672) An individual, student-selected and faculty-approved study of complex architectural design objectives involving site and building program constraints, the integration of building systems and the demonstration of comprehensive design and presentation skills.

**ARCH 674 PROFESSIONAL PRACTICE 1.** (2) (2-0-4) The architect's relationship to his/her client: responsibility, business conduct, supervision, arbitration, issuing of certificates, competitions, standard forms of contracts, payments, liens, servitudes, public health, building regulations, fees.

**ARCH 675 PROFESSIONAL PRACTICE 2.** (2) (2-0-4) (Prerequisite: ARCH 674) The construction process will be examined. Topics include project and construction management, contracting methods, tendering, sureties, site safety, negotiations, cost control, quality control, delay claims, legal hypothecs. Standard documentation and procedures will be reviewed, including CCDC contract, OAQ forms, CSC MasterFormat.

**ARCH 676 SPECIFICATIONS AND BUILDING COSTS.** (2) (2-0-4) Principles of writing architectural specifications; discussion of actual specifications and practice in specifying for common trades; essays on common building materials; costing of materials and building assemblies.

**ARCH 678 ADVANCED CONSTRUCTION.** (3) (2-0-7) (Prerequisite: ARCH 674) An exploration of construction in relation to architectural design; research in advanced methods of construction and structure related to design problems and built projects; appropriate technologies and alternatives.

**ARCH 679 ARCHITECTURAL JOURNALISM.** (1) (0-0-3) (Prerequisite: ARCH 674) The project deals with the review and criticism of a recently constructed controversial building.

**ARCH 680 SKETCHING SCHOOL 2.** (1) (0-0-3) An eight-day supervised field trip in the late summer to sketch places or things having specific visual characteristics.

**ARCH 690 THESIS RESEARCH 1.** (3) (0-2-7) Ongoing research pertaining to thesis.

**ARCH 691 THESIS RESEARCH 2.** (6) (0-2-16) Ongoing research pertaining to thesis.

**ARCH 692 THESIS RESEARCH 3.** (6) (0-2-16) Ongoing research pertaining to thesis.

**ARCH 693 THESIS RESEARCH 4.** (12) (0-2-34) Ongoing research pertaining to thesis.

**ARCH 700 DISSERTATION PROPOSAL.** (0) Evaluation of research proposals to finalize a preliminary thesis proposal. Development of a comprehensive framework for the research project.

**ARCH 701 COMPREHENSIVE ORAL EXAMINATION.** (0) Presentation of research to an Advisory Committee, including a comprehensive review of material in the field.

**ARCH 702 PROGRESS REPORT 1.** (0) Research in progress and the writing of the dissertation.

**ARCH 703 PROGRESS REPORT 2.** (0) Final presentation of the dissertation to the committee.

## 6 Art History

Department of Art History and Communication Studies  
Arts Building, W-225 (West Wing, top floor)  
853 Sherbrooke Street West  
Montreal, QC H3A 2T6  
Canada

Telephone: (514) 398-6541  
Fax: (514) 398-7247  
E-mail: ahcs@mcgill.ca  
Web site: www.arts.mcgill.ca/programs/AHCS

*Chair ; Director, Graduate Programs in Communication Studies — TBA*

*Director, Graduate Programs in Art History —  
Christine Ross*

### 6.1 Staff

#### *Emeritus Professors*

John M. Fossey; B.A.(Birm.), D.U.(Lyon II), F.S.A., R.P.A.  
George Szanto; B.A.(Dart.), Ph.D.(Harv.)

#### *Professor*

Hans J. Böker; Ph.D.(Saarbrücken), Dr. Ing.-habil(Hannover)

#### *Associate Professors*

David Crowley; B.A.(Johns H.), M.Sc.(Penn.), Ph.D.(McG.)  
Christine Ross; M.A.(C' dia.), Ph.D.(Paris I)  
Will Straw; B.A.(Carl.), M.A., Ph.D.(McG.) (*on leave Sept. 2004 -  
Aug. 2005*)

#### *Assistant Professors*

Jenny Burman; B.A.(C' dia), M.A., Ph.D.(York)  
Ting Chang; B.A.(McG.), M.A.(Tor.), Ph.D.(Sussex)  
Charmaine Nelson; B.F.A., M.A.(C' dia), Ph.D.(Man.)  
Bronwen Wilson; B.A., M.A.(U.B.C.), Ph.D.(Northwestern)  
Angela Vanhaelen; B.A.(W.Ont.), M.A., Ph.D.(U.B.C.)

#### *Adjunct Professors*

David W. Booth, Louis De Moura Sobral, Johanne Lamoureux,  
Charles Levine, Constance Naubert-Riser

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**6.3 Admission Requirements**





tréal, and in Montreal offices of the Meteorological Service of Canada. The objective of the Centre is to study the evolution,







sizes the molecular, genetic and structure function events that occur in the humoral immune response. Interleukins and other mediators of inflammation, a field in which rapid changes are occurring, are discussed. The clinical significance of fundamental biochemical findings is described.

**BIOC 603 RECENT ADVANCES IN MOLECULAR GENETICS.** (3) (Prerequisites: BIOC 454 and permission of instructor.) Recent advances in our understanding of gene function and its control in normal and diseased cellular systems will be discussed in depth. Course given based on minimum registration of 10 students. Contact Student Affairs Officer for information.

**BIOC 604 MACROMOLECULAR STRUCTURE.** (3) (Prerequisite: BIOC 450 or equivalent) (Lectures in French and English) X-Ray crystallography, NMR spectroscopy, computational methods and theoretical approaches to the determination and analysis of macromolecular structures. Theory and practical applications will be covered. Examples will include interpretation of structure as it applies to biological functions. In conjunction with the Université de Montréal.

**BIOC 610 SEMINARS IN CHEMICAL BIOLOGY 1.** (1) (Restrictions: Open only to students registered for the M.Sc. or Ph.D. Graduate Option in Chemical Biology.) First multidisciplinary seminar in chemical biology.

**BIOC 611 SEMINARS IN CHEMICAL BIOLOGY 3.** (1) (Restrictions: Open only to students registered for the M.Sc. or Ph.D. Graduate Option in Chemical Biology.) Third multidisciplinary seminar in chemical biology.

**BIOC 695 THESIS RESEARCH 1 (CHEMICAL - BIOLOGY)** (6) (Restrictions: Open only to students registered for the M.Sc. Graduate Option in Chemical Biology.) Research toward completion of thesis.

**BIOC 696 RESEARCH SEMINAR.** (3) (Open to M.Sc. Biochemistry students only.) Compulsory participation in the departmental seminar series. Graded pass/fail, based on participation.

**BIOC 697 THESIS RESEARCH 1.** (9)

**BIOC 698 THESIS RESEARCH 2.** (12)

**BIOC 699 THESIS RESEARCH 3.** (15)

**BIOC 701 RESEARCH SEMINAR 1.** (0) (Biochemistry graduate students) Presentation on original current laboratory research carried out by student.

**BIOC 702 PH.D. THESIS PROPOSAL.** (0) (Biochemistry graduate students) Dissertation presented to Committee.

**BIOC 703 RESEARCH SEMINAR 2.** (0) (Ph.D. students in Biochemistry) Presentation of the planned thesis including central findings and original contribution to knowledge in the field of research.

**EXMD 615 MEMBRANE CARBOHYDRATES.** (3) The structure, function and biosynthesis of glycoproteins, glycolipids and glycoaminoglycans, and the biological role of complex carbohydrates at the cell surface.

### Advanced Undergraduate Courses

**BIOC 311 METABOLIC BIOCHEMISTRY.** (3) (Fall) (Prerequisites: BIOL 200, BIOL 201 or BIOC 212, CHEM 222) The generation of metabolic energy in higher organisms with an emphasis on its regulation at the molecular, cellular and organ level. Chemical concepts and mechanisms of enzymatic catalysis are also emphasized. Included: selected topics in carbohydrate, lipid and nitrogen metabolism; complex lipid and biological membranes; hormonal signal transduction.

**BIOC 312 BIOCHEMISTRY OF MACROMOLECULES.** (3) (Winter) (Prerequisites: BIOC 311, BIOL 200, BIOL 201 or BIOC 212) Gene expression from the start of transcription to the synthesis of proteins, their modifications and degradation. Topics covered: purine and pyrimidine metabolism; transcription and its regulation; mRNA processing; translation; targeting of proteins to specific cellular sites; protein glycosylation; protein phosphorylation; protein turnover; programmed cell death (apoptosis).

**BIOC 404 BIOPHYSICAL CHEMISTRY.** (3) (Winter) (Prerequisites: CHEM 204, CHEM 214 or equivalent) (Not open to students who have taken 180-404) Hydrodynamic and electrophoretic methods for separation and characterization of macromolecules. Optical and magnetic resonance spectroscopy of biopolymers, and applications to biological systems.

**BIOC 450 PROTEIN STRUCTURE AND FUNCTION.** (3) (Fall) (Prerequisites: BIOC 311, BIOC 312 and/or sufficient organic chemistry. Intended primarily for students at the U3 level) Primary, secondary, tertiary and quaternary structure of enzymes. Active site mapping and site-specific mutagenesis of enzymes. Enzyme kinetics and mechanisms of catalysis. Multienzyme complexes.

**BIOC 454 NUCLEIC ACIDS.** (3) (Fall) (Prerequisites: BIOC 311, BIOC 312 or permission of instructor) Chemistry of RNA and DNA, transcription and splicing of RNA and their control; enzymology of DNA replication. Special topics on transgenics, genetic diseases and cancer.

**BIOC 455 NEUROCHEMISTRY.** (3) (Winter) (Prerequisites: BIOC 311, BIOC 312 or permission of instructor) Covers biochemical mechanisms underlying central nervous system function. Introduces basic neuroanatomy, CNS cell types and morphology, neuronal excitability, chemically mediated transmission, glial function. Biochemistry of specific neurotransmitters, endocrine effects on brain, brain energy metabolism and cerebral ischemia (stroke). With examples, where relevant, of biochemical processes disrupted in human CNS disease.

**BIOC 458 MEMBRANES AND CELLULAR SIGNALING.** (3) (Winter) (Prerequisites: BIOC 212, ANAT 262; one of PHGY 201, PHGY 209 or BIOL 205; one of BIOC 312 or ANAT 365; and BIOC 311 or permission of instructors) (This course is also listed as ANAT 458. Not open to students who have taken or are taking ANAT 458 or BIOC 456) An integrated treatment of the properties of biological membranes and of intracellular signaling, including the major role that membranes play in transducing and integrating cellular regulatory signals. Biological membrane organization and dynamics: membrane transport; membrane receptors and their associated effectors; mechanisms of regulation of cell growth, morphology, differentiation and death.

Faculty of Religious Studies; and  
Faculty of Arts, Department of Philosophy.

Students receive an M.A., LL.M. or M.Sc. degree in the discipline chosen with a specialization in Bioethics.

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### 9.3 Admission Requirements

M.D., bachelor's level professional training in a health science, or bachelor's degree in law, philosophy or religious studies. Other students may be considered on an individual basis.

Enrolment is limited to 12 students.

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### 9.4 Application Procedures

Applications are made initially through the Biomedical Ethics Unit in the Faculty of Medicine, which administers the program and teaches the core courses.

Applicants must be accepted by the appropriate Faculty, the Bioethics Graduate Studies Advisory Committee, and the Graduate and Postdoctoral Studies Office.

McGill's on-line application form for graduate program candidates is available at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

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### 9.5 Program Requirements

The curriculum is composed of required courses (for 6 credits) offered in the Biomedical Ethics Unit, bioethics courses (3 credits minimum) offered by the base faculty or department and any graduate courses required or accepted by a base faculty for the granting of a Master's degree, for a total of 21 credits. A minimum of 45 credits is required including the thesis.

Registration Requirements: Depending upon the requirements of the base discipline, a minimum of three terms is required for completion of the program, including course work and thesis.

Thesis Supervision: Thesis supervision for students in the 5 T8d097 eforororor.2575 To2715 5 eingerequired f5 -9d by5i,red or acquiqui in a base memb

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## 10 Biology

Department of Biology  
Stewart Biology Building  
1205 Avenue Docteur Penfield  
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Canada

Telephone: (514) 398-6400  
Fax: (514) 398-5069  
E-mail: [gradinfo.biology@mcgill.ca](mailto:gradinfo.biology@mcgill.ca)  
Web site: [www.mcgill.ca/biology](http://www.mcgill.ca/biology)

*Chair* — Paul F. Lasko

*Chair of Graduate Program* — Robert Levine

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### 10.1 Staff

#### *Emeritus Professors*

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scores are not required, but may be submitted. The Teu02of Eng-







M. Tabrizian, B.Sc.(Iran), M.Sc., Ph.D.(PMC-France),  
M.B.A.(HEC) (*joint appoint. with Dentistry*)

*Associate Members*

K. Cullen (*Physiology*), S. De Serres (*Physical and Occupational  
Therapy*), J. Gotman (*Neurology and Neurosurgery*), R. Mongrain  
(*Mechanical Engineering*), B.N. Segal (*Otolaryngology*), T. Steffen  
(*Surgery*), C. Thompson (*Neurology and Neurosurgery*)

*Adjunct Professor*

J.H.T. Bates (VT)

*Research Associates*

C. Baker, D. Guitton, A. Katsarkas

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### **Programs Offered**

The Department offers a graduate training program leading to  
Master's (M.Eng.) and Ph.D. degrees in Biomedical Engineering.

It provides instruction and opportunities for interdisciplinary  
research in the application of engineering, mathematics, and the  
physical sciences to problems in medicine and the life sciences.  
Courses are offered for graduate students in the life sciences and  
in engineering and the physical sciences.



3. Certified cheque in U.S.\$ drawn on a U.S. bank.
4. Canadian Money order in Cdn.\$.
5. U.S. Money Order in U.S.\$.
6. An international draft in Canadian funds drawn on a Canadian bank requested from the applicant's bank in his/her own country.

**Deadlines** – Applications, including all supporting documents

- complete a minimum of two non-engineering courses (each course should be chosen from a different department);
- complete a design or research project of 5 to 15 credits;
- complete all the remaining courses (to a total of at least 45 credits) as required in the student's departmental program (these courses must be approved by the student's Academic Advisor); and
- obtain a grade of B- (or 65%) or better in all required and approved courses.

#### Ph.D. - Bioresource Engineering

Candidates for the Ph.D. degree will normally register for the M.Sc. degree first. In cases where the research work is proceeding very satisfactorily, or where the equivalent of the M.Sc. degree has been completed previously, candidates may be permitted to proceed directly to the Ph.D. degree.

Requirements are:

- Courses of study selected for a Ph.D. program will depend on the existing academic qualifications of the candidate, and on those needed for effective pursuit of research in the chosen field. Candidates are encouraged to take an additional course of study of their own choice in some field of the humanities, sciences or engineering not directly related to their research. The program will be established by consultation of the candidate with a committee that will include the Research Director and at least one other professor.
- A comprehensive examination, ABEN701, will be taken either late in the first, or early in the second, registration year to qualify to proceed to the completion of the Ph.D. degree.
- Participation in graduate seminar during four terms.
- Satisfactory completion of a thesis.

#### Ph.D. – Neotropical Environment Option

The requirements for a candidate registering for this option are:

- 6 credits of required courses: ENVR610 and BIOL640.
- 3 credits chosen from AGRI550, BIOL553, BIOL641, ENVR611, ENVR612, ENVR680, GEOG498, POLI644, SOCI565.
- Participation in the MSE-Panama Symposium presentation in Montreal.
- Participation in graduate seminar during four terms.
- A comprehensive examination, ABEN701, will be taken either late in the first, or early in the second, registration year to qualify to proceed to the completion of the Ph.D. degree.
- Satisfactory completion of a Ph.D. thesis.

## 12.6 Courses

Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.

The course credit weight is given in parentheses after the title.

Denotes courses taught only in alternate years.

Denotes courses not offered in 2004-05.

**ABEN 501 SIMULATION AND MODELLING.** (3) (Restrictions: U3 students and above. Not open to students who have taken ABEN 612.)

**ABEN 502 DRAINAGE/IRRIGATION ENGINEERING.** (3) (Prerequisite: ABEN 217) (Restrictions: U3 students and above. Not open to students who have taken ABEN 611.)

**ABEN 504 INSTRUMENTATION AND CONTROL.** (3) (3 lectures and one 2-hour lab) (Undergraduate Prerequisite: ABEN 312 or ECSE 281) Principles and operation of instrument systems used for measurement and control in agricultural processes and research.

**ABEN 506 ADVANCES IN DRAINAGE MANAGEMENT.** (3) (3 weeks intensive course) Land drainage in relation to soils and crops. Design of regional drainage systems, stability of ditches, ice prob-

lems. Design of subsurface drainage systems. Theories of flow into drain tubes. Hydraulics of wells. Drainage of irrigated lands. Water table control.

**ABEN 509 HYDROLOGIC SYSTEMS AND MODELLING.** (3) (3 hour lectures) Use of deterministic and stochastic models to analyze components of the hydrologic cycle on agricultural and forested watersheds, floods frequency analysis, hydrograph analysis, infiltration, runoff, overland flow, flood routing, erosion and sediment transport. Effects of land-use changes and farm and recreational water management systems on the hydrologic regime.

**ABEN 512 SOIL CUTTING AND TILLAGE.** (3) (2 lectures and one 2-hour lab) (Undergraduate Prerequisite: ABEN 341).

**ABEN 515 SOIL HYDROLOGIC MODELLING.** (3) (3 lectures and one 3-hour lab).

**ABEN 518 BIO-TREATMENT OF WASTES.** (3) (One 3 hour lecture) Special topics concerning control of pollution agents from the agricultural industry; odour control, agricultural waste treatment including biological digestion, flocculants, land disposal and sedimentation, pesticide transport.

**ABEN 519 ADVANCED FOOD ENGINEERING.** (3) (3 lectures and one 2-hour lab) (Prerequisites: ABEN 325 and MECH 426, or permission of instructor) Advanced topics in food engineering. Concepts of mathematical modeling and research methodologies in food engineering. Topics include heat and mass transfer in food systems, packaging and distribution of food products, thermal and non-thermal processing, rheology and kinetics of food transformations.

**ABEN 525 CLIMATE CONTROL FOR BUILDINGS.** (3) (3 lectures and one 3-hour lab) (Prerequisite: ABEN 301) (Restriction: U3 students or above.)

**ABEN 530 FERMENTATION ENGINEERING.** (3) (3 lectures and one 3-hour lab) (Undergraduate Prerequisite: ABEN 325 or equivalent) (Graduate courses available to senior undergraduates with permission of the instructor) Advanced topics in food and fermentation engineering are covered, including brewing, bioreactor design and control and microbial kinetics.

**ABEN 531 POST-HARVEST DRYING.** (3) (Restrictions: U3 students or above. Not open to students who have taken ABEN 621)

**ABEN 532 POST-HARVEST STORAGE.** (3) (Restrictions: Not open to students who have taken ABEN 622) Active, semi-passive and passive storage systems; environmental control systems; post-harvest physiology and pathogenicity; quality assessment and control methodology; economic aspects of long-term storage.

**ABEN 608 SPECIAL PROBLEMS IN AGRICULTURAL ENGINEERING.** (3) (2 conferences, either term) Laboratory, field and library studies and reports on special problems related to agricultural and biosystems engineering that are not covered in regular course work.

**ABEN 616 ADVANCED SOIL AND WATER ENGINEERING.** (3) (3 lectures)

**ABEN 623 PROPOSAL PREPARATION.** (3) (3 hours conferences)

Critique of proposals for funding agencies. (3) (3 hours conferences)

Preparation of draft proposals for funding agencies. (3) (3 hours conferences)

Management of water quality for sustainability. Cause of soil degradation, surface

**ABEN 625 WATER QUALITY MANAGEMENT.** (3) Management of

671D2 are successfully completed in consecutive terms) (ABEN 671D1 and ABEN 671D2 together are equivalent to ABEN 671) Prepare project outline, execute and report. This project relates to the M.Sc. (Applied) degree.

**ABEN 672 PROJECT 2.** (6) Prepare project outline, execute and report. This project relates to the M.Sc. (Applied) degree.

**ABEN 672D1 (3), ABEN 672D2 (3) PROJECT 2.** (Students must register for both ABEN 672D1 and ABEN 672D2.) (No credit will be given for this course unless both ABEN 672D1 and ABEN 672D2 are successfully completed in consecutive terms) (ABEN 672D1 and ABEN 672D2 together are equivalent to ABEN 672) Prepare project outline, execute and report. This project relates to the M.Sc. (Applied) degree.

**ABEN 691 M.Sc. THESIS 1.** (4) Problem definition and literature Review.

**ABEN 692 M.Sc. THESIS 2.** (4)

**ABEN 693 M.Sc. THESIS 3.** (4) Methodology development.

**ABEN 694 M.Sc. THESIS 4.** (4) Experimentation 1.

**ABEN 695 M.Sc. THESIS 5.** (4) Experimentation 2.

**ABEN 696 M.Sc. THESIS 6.** (4) Data analysis.

**ABEN 697 M.Sc. THESIS 7.** (4) Draft thesis preparation.

**ABEN 698 M.Sc. THESIS 8.** (4) Thesis completion and acceptance.

**ABEN 699 SCIENTIFIC PUBLICATION.** (3) (Periodic conferences) Review and critique papers that are published in field of the candidate. Prepare draft paper(s) following the format of leading journals in field of study undertaken.

**ABEN 701 PH.D. COMPREHENSIVE EXAMINATION.** (0)

**ABEN 701D1 (0), ABEN 701D2 (0) PH.D. COMPREHENSIVE EXAMINATION.** (Students must register for both ABEN 701D1 and ABEN 701D2.) (No credit will be given for this course unless both ABEN 701D1 and ABEN 701D2 are successfully completed in consecutive terms) (ABEN 701D1 and ABEN 701D2 together are equivalent to ABEN 701)

**ABEN 702 SPECIAL PROBLEMS IN AGRICULTURAL ENGINEERING 2.** (3) (2 conferences, either term) Advanced level laboratory, field and library studies and reports on special problems related to agricultural and biosystems engineering which are not covered in regular course work. Designed for doctoral level students with experience in postgraduate studies.

**ABEN 751 DEPARTMENTAL SEMINAR PH.D. 1.** (0) To give seminars and participate in discussions.

**ABEN 752 DEPARTMENTAL SEMINAR PH.D. 2.** (0) To give seminars and participate in discussions.

**ABEN 753 DEPARTMENTAL SEMINAR PH.D. 3.** (0) To give seminars and participate in discussion.

**ABEN 754 DEPARTMENTAL SEMINAR PH.D. 4.** (0) To give seminars and participate in discussions.

### 13.1 Staff

*Emeritus Professor*

M.E. Weber; B.S.E.(Prin.), Sc.D.(M.I.T.), P.Eng.

*Professors*

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## 13 Chemical Engineering

Department of Chemical Engineering  
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*Chair* — R.J. Munz

tions in these research areas exist with other engineering departments, the Faculty of Medicine and the Montreal Heart Institute. Research in biomedical engineering also includes development and characterization of biomaterials for human implants and biosensors.

Research in Plasma Technology includes fundamental studies in transport phenomena, reaction kinetics, optical emission and laser-absorption spectroscopy, and reactor design, as well as applied studies in plasma processing for environmental and biomedical engineering applications, advanced materials synthesis, and coating generation. Close collaboration is maintained with the Université de Sherbrooke through the Interuniversity Plasma Technology Research Centre (CRTP) and with other Québec universities through Plasma-Québec, a *Regroupement Stratégique FQRNT*.

Research related to the Environment is pursued on many fronts; for example, the plasma group is investigating plasma-assisted incineration, the biochemical group is evaluating biosorbents for heavy metals, the biodegradation of pesticides, and a number of projects considering the fate of plasticizers, chlorinated hydrocarbons and polymers in the environment. Other projects involve electrochemical treatment of wastewater, activated sludge treatment, development of environmentally-friendly corrosion inhibitors, etc.

Research in Computational Materials Science is a science-based program that seeks to design and control materials, products, and processes using molecular, mesoscopic, and macroscopic computational modeling. This work is in close collaboration with the National Science Foundation Center for Advanced Engineering Fibers and Films at Clemson University. The research in Computational Biomaterials Science seeks to understand the fundamental natural principles that lead to advanced materials such as superstrong spider silk fibers, natural foams, and biolubricants.

Research in colloids and interface science brings together a variety of theoretical, computational and experimental 'tools'. Current efforts are focused on the development of a novel optical-tweezer/micro-electrophoresis apparatus for probing the dynamics of "fuzzy" colloidal particles, and development of experiments and theory for studying the organization and dynamics of synthetic polymers grafted to lipid-bilayer membranes. The broader objectives are to understand in detail how macromolecules forming "soft" interfaces influence colloidal dynamics and equilibria.

### 13.3 Admissions Requirements

Admission to graduate study requires a minimum CGPA of 3.0/4.0 (or equivalent) for the complete Bachelor's program or a minimum GPA of 3.2/4.0 (or equivalent) in the last two years of full-time studies. Non-Canadian applicants whose mother tongue is not English must achieve a minimum TOEFL score of 577 on the paper-based test (233 on the computer-based test) prior to admission.

#### **M.Eng. (Thesis), M.Eng. (Project)**

Admission requires a Bachelor's degree (or equivalent) in chemical engineering or other engineering disciplines. Students with Bachelor's degrees in science wishing to pursue the M.Eng. first enter a Qualifying Program, normally of two terms, to prepare for entry into the M.Eng. program.

#### **M.Sc.**

Admission requires a Bachelor's degree (or equivalent) in science. In some cases, depending on the area of research, the student may be required to complete one or two extra courses as part of the graduate program.

#### **Ph.D.**

Program revisions are under consideration for September 2004

Admission requires a Master's degree (or equivalent) from a recognized university. Students in the Department's M.Eng. (Thesis) or M.Sc. program may transfer to the Ph.D. program after one year without submitting the Master's thesis following a formal "fast track" procedure.

### 13.4 Application Procedures

The application procedure is outlined on the Web at [www.mcgill.ca/chemeng/grad/application](http://www.mcgill.ca/chemeng/grad/application). The first step in the process is to complete a pre-application form. The completed preliminary application form is evaluated by the Admissions Committee. A formal application is only requested of the candidate if there is a reasonable probability of admission.

Full applications will be considered when the Graduate Admissions Committee has received:

1. application form of the Graduate and Postdoctoral Studies Office ([www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate));
2. two official transcripts;
3. two letters of reference;
4. application fee of \$60 Canadian;
5. TOEFL test results (if required).

Application deadlines differ for International and Canadian (and Permanent Resident) students, to allow time to obtain a visa.

Deadlines for Canadian (and Permanent Resident) applicants:  
 May 15 for September (Fall term) admission,  
 October 1 for January (Winter term) admission,  
 February 1 for May (Summer term) admission.

Deadlines for International applicants:

February 15 for September (Fall term) admission,  
 August 1 for January (Winter term) admission,  
 December 1 for May (Summer term) admission.

### 13.5 Program Requirements

#### **M.Eng., M.Sc.**

The Master's degrees require the completion of 45 credits and three terms of residence at McGill.

#### **M.Eng. (Thesis), M.Sc.**

Courses: 12 credits of graduate courses (500- or 600-level) (a minimum of 3 courses in Chemical Engineering, one of which is from the Chemical Engineering Fundamentals).  
 Research: 33 credits which include completion of a thesis proposal, presentation of a research seminar and submission of a thesis.

#### **M.Eng. (Project)**

Courses: 33-39 credits (a minimum of 18 credits in chemical engineering).

Project: (design or research): 6-12 credits.

The specialized versions of the M.Eng. (Project) follow the above distribution between courses and project.

The specialization in petrochemicals, polymers and plastics, which is offered in cooperation with the Institute Français du Pétrole (IFP), requires that the Winter term be spent at IFP in Paris where 15 course credits are completed. This program may be entered in September, January or May.

The specialization in environmental engineering requires the completion of a Core of 12 credits of environmental engineering courses and a research or design project related to the environment.

#### **Ph.D.**

The Ph.D. requires three years of residence at McGill.

Courses: A minimum of two 600-level Chemical Engineering courses; however, students must take at least three courses (or their equivalent) from the Chemical Engineering Fundamentals during their Master's and Ph.D. programs combined.  
 Research: completion of a thesis proposal, its defence, presentation of two seminars, and submission and defence of a thesis.





## **14 Chemistry**

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Web site: [www.mcgill.ca/chemistry](http://www.mcgill.ca/chemistry)

*Chair* — R.B. Lennox

*Director of Graduate Studies* — 801 She165 Tc (C) ty Tf 0.3176te Studies — 801yQector of Graduate Ston5 6.75 r

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Denotes courses not offered in 2004-05.

**CHEM 502 ADVANCED BIO-ORGANIC CHEMISTRY.** (3) (Prerequisite: CHEM 302) (Not open to students who have taken CHEM 402.) This course will cover biologically relevant molecules, particularly nucleic acids, proteins, and their building blocks. In each case, synthesis and biological functions will be discussed. The topics include synthesis of oligonucleotides and peptides; chemistry of phosphates; enzyme structure and function; coenzymes, and enzyme catalysis; polyketides; antiviral and anticancer agents.

**CHEM 503 DRUG DESIGN AND DEVELOPMENT 1.** (3) (Fall) (Prerequisites: CHEM 302, BIOL 200, BIOL 201 or BIOC 212, PHAR 300 or PHAR 301 or PHAR 303 or permission of instructor) (U3 and graduate students. Students can register only with permission of coordinators. Priority: students registered in the Minor in Pharmacology) (Not open to students who are taking or have taken PHAR 503) Interdisciplinary course in drug design and development covering chemistry, mechanisms of action and steps in drug development, principles and problems in drug design.

**CHEM 504 DRUG DESIGN AND DEVELOPMENT 2.** (3) (Winter) (Prerequisite: CHEM 503 and permission of instructor) (U3 and graduate students. Students can register only with permission of coordinators) (Not open to students who are taking or have taken PHAR 504) Groups of 2-4 students with different backgrounds will form a team. Each team will select a lead compound, design the analogues, propose the preclinical and clinical studies, present possible untoward effects, and reasons for drug (dis)approval.

**CHEM 531 CHEMISTRY OF INORGANIC MATERIALS.** (3) (Winter) (3 lectures) (Prerequisite: CHEM 381) Structure, bonding, synthesis, properties and applications of covalent, ionic, metallic crystals, and amorphous solids. Defect structures and their use in synthesis of specialty materials such as electronic conductors, semiconductors, and superconductors, and solid electrolytes. Basic principles of composite materials and applications of chemistry to materials processing.

**CHEM 534 NANOSCIENCE AND NANOTECHNOLOGY.** (3) (Fall) (Prerequisites: CHEM 334 or PHYS 334 or permission of instructor. Corequisites: one of CHEM 345, PHYS 357, or PHYS 446 or permission of instructor) (Not open to students who have taken or are taking PHYS 534) Topics discussed include scanning probe microscopy, chemical self-assembly, computer modelling, and microfabrication/micromachining.

**CHEM 543 CHEMISTRY OF PULP AND PAPER.** (3) (Fall) (2 lectures plus a reading/research project.) (Prerequisite: CHEM 302 or per-

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and analytical use of spectroscopic instrumentation with respect to fundamental and practical limitations. Classical emission, fluorescence, absorption and chemical luminescence. Topics may include photo-acoustic spectroscopy, multielement analysis, X-ray fluorescence and modern multiwavelength detector systems.

**CHEM 603 INFRARED AND RAMAN SPECTROSCOPY.** (5)

**CHEM 611 INORGANIC TOPICS 2.** (4) This advanced level course surveys recent trends in inorganic chemistry. Students select a topic from the current literature, research the topic, present periodic oral reports and a final summary paper. The instructor participates as a tutor and gives occasional oral presentations on topics of his choice.

**CHEM 612 ORGANOMETALLIC CHEMISTRY.** (5) A first course at the graduate level in organometallic chemistry. The theory and practice of the field is treated starting from basic principles of inorganic and organic chemistry.

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550 on the paper-based (213 on the computer-based) TOEFL for other programs. The test is administered by the Educational Testing Service and is easily available throughout the world. The results reach McGill approximately eight weeks after the test is taken. It is the student's responsibility to make the necessary arrangements with the examining board to write the test in the country of residence. Full information about the Test and a registration form may be obtained by writing to: Test of English as a Foreign Language, Box 6191, Princeton, New Jersey 08540-6151, U.S.A.

## 15.4 Application Procedures

Applications will be considered upon receipt of:

1. Application form
2. Two official transcripts
3. Two confidential letters of reference
4. \$60 application fee
5. Test results (TOEFL)

Applicants for entry into a graduate program are requested to address their completed forms for admission to the Chair of the Graduate Studies Admissions Committee, Department of Civil Engineering and Applied Mechanics.

Applications for September admission should be submitted by March 1, and those for January admission by August 1 (international students) and October 1 (Canadian students).

McGill's on-line application form for graduate program candidates is available at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

## 15.5 Program Requirements

### M.Eng.

Candidates may satisfy the requirements for the M.Eng. degree by following one of two options:

**Thesis Option** program (45 credits) requires a research thesis (27 credits), a compulsory Masters Research Seminar CIVE 662 (1 credit), and a minimum of five courses at the 500 or 600 level (17 credits). The thesis describing the candidate's research is to be submitted in accordance with the regulations of the Graduate and Postdoctoral Studies Office.

**Project Option** program requires a minimum of 30 credits of course work plus a project, the total amounting to 45 credits. The credits assigned to the project can vary between 5 and 15 depending on the amount of work involved.

Both programs normally require that course work credits be earned at the 500 and 600 levels. However, at least two courses must be taken at the 600 level. The above minimum course requirements for both options pertain to well prepared students; others may be required to take additional courses as a condition of acceptance or as determined in consultation with their director of studies or research. Only one 400-level Civil Engineering course may be counted towards program requirements.

Three terms of resident study at McGill are required for the degree. This is a minimum requirement and usually a longer period will be necessary. This residence requirement can also be satisfied by Project Option students through part-time (evening) studies over a period of three or more years.

### Master of Engineering (Environmental Engineering Option)

The program consists of a minimum of 45 credits, of which, depending on the student's home department, a minimum of 5 and a maximum of 15 may be allotted to the project. The balance is earned by coursework, of which one to three approved undergraduate (below 500-level) courses are allowed.

To complete the option, students must:

- complete four (4) required core courses (see section A below);
- complete a minimum of two (2) engineering courses (see section B below);

- complete a minimum of two (2) non-engineering courses (each course should be chosen from a different department) (see section C below)
- complete a design or research project of 5 to 15 credits
- complete all the remaining courses (to a total of at least 45 credits) as required in the student's departmental program (these courses must be approved by the student's Academic Advisor); and
- obtain a grade of B- (or 65%) or better in all required and approved courses

### Prerequisite

(Not credited to the Master Environmental Engineering Option Program) CIVE225 Environmental Engineering or equivalent environmental engineering courses.

#### A. Required Core Courses

CHEE591 Environmental Bioremediation  
CIVE555 Environmental Data Analysis  
or AEMA611 Experimental Designs  
CIVE615 Environmental Engineering  
OCCH612 Principles of Toxicology  
or FDSC505 Health Risks of Toxicants

#### B. Elective Engineering Courses

These are to be chosen from a list of specific courses offered by the following Engineering Departments:

Bioresource Engineering  
Chemical Engineering  
Civil Engineering and Applied Mechanics  
Mechanical Engineering  
Mining, Metals and Materials Engineering

#### C. Elective Non-engineering Courses

These are to be chosen from a list of specific courses offered by the following units:

Faculty of Agricultural and Environmental Sciences  
Department of Atmospheric and Ocean Sciences  
Department of Biology  
Department of Chemistry  
Department of Earth and Planetary Sciences  
Department of Economics  
McGill School of Environment  
Department of Epidemiology and Biostatistics  
Department of Geography  
Faculty of Law  
Faculty of Management  
Department of Occupational Health  
Department of Political Science  
Faculty of Religious Studies  
Department of Sociology  
School of Urban Planning

The Environmental Engineering Option Program is administered by the Faculty of Engineering. Further information may be obtained from the Program Coordinator, Department of Civil Engineering and Applied Mechanics.

### M.Eng. (Project) in Civil Engineering – Option in Rehabilitation of Urban Infrastructure

This program is offered jointly by McGill University, École de Technologie Supérieure, École Polytechnique de Montréal, and Institut National de la Recherche Scientifique - Urbanisation. A student registered at McGill is required to take courses at the other three institutions.

The program leads to a professional non-thesis (Project Option) degree with a minimum of 45 credits divided in three modules described below. Depending on their background and interests, students would specialize in one or two out of three possible areas: (1) underground water supply and drainage systems; (2) road infrastructure; (3) bridges, overpasses and tunnels. Students registered at McGill can specialize in area 3 or jointly in areas 2 and 3: students interested in other program scenarios are encouraged to register at one of the other three participating institutions.

### Module 1 Required courses (15 credits)

CIV(1) 6313 Méthodologie de réhabilitation des infrastructures urbaines  
 MGC(2) 810 Gestion des projets de construction et de réhabilitation  
 CIVE512(3) Advanced Civil Engineering Materials (required for McGill students)  
 RIU(5) 9500 Analyse du processus de décision et choix technologiques  
 RIU 9501 Financement des infrastructures et finances publiques locales

### Module 2 Specialized courses (15 credits)

Elective courses in rehabilitation (6 to 12 credits)

#### Area 1 Underground water supply and drainage systems

CIV 6314 Évaluation des systèmes d'alimentation en eau et d'assainissement

GCI 745 Réhabilitation des systèmes d'alimentation en eau et d'assainissement

#### Area 2 Road Infrastructure

MGC 835 Évaluation des chaussées

MGC 840 Conception et réhabilitation des chaussées

#### Area 3 Bridges, overpasses and tunnels

CIVE527 Renovation and Preservation: Infrastructure

CIVE617 Design and Rating of Highway and Railway Bridges (required for McGill students)

or CIV 6511 Conception et évaluation des ponts

Other graduate electives (3 to 9 credits) to be approved by the inter-university program coordination committee. McGill students specializing in area 3 are required to take at least 6 credits at McGill, while those specializing in areas 2 and 3 must take 3 credits at McGill.

### Module 3 Integration (15 credits)

Research project (15 credits)

- (1) Course offered by École Polytechnique de Montréal
- (2) Course offered by École de Technologie Supérieure
- (3) Course offered by McGill University
- (4) Course offered by Institut National de la Recherche Scientifique - Urbanisation

Documentation outlining the program and giving additional information is available on request.

### M.Sc.

Candidates with a Bachelor's degree in a discipline other than Engineering, such as Science or Arts, may be accepted into a M.Sc. program in the Department. Such students would typically study in the fluid mechanics, water resources, or environmental engineering areas, and would follow the Thesis Option program requirements.

### Ph.D.

Candidates normally register for the M.Eng. degree, Thesis Option, or M.Sc. degree in the first instance. Those who have a Master's degree acceptable to the Department may, however, be considered for direct registration for the Ph.D. degree (Ph.D.II).

The Ph.D. program consists of a research project and courses as required to develop the candidate's background. Candidates are expected to take a comprehensive preliminary oral examination (course CIVE701) within the first year of their Ph.D. registration. They must fulfill the requirements outlined in the General Information section of the *Graduate and Postdoctoral Studies Calendar*. There is no foreign language requirement.

Direct transfer into the Ph.D. program (fast-tracking) may be available for students who have demonstrated a superior record in the undergraduate program.

## 15.6 Courses for Higher Degrees

Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to

press. **Class Schedule lists courses by term and includes days, times, locations, and names of instructors.**

Denotes courses not offered in 2004-05.

**CIVE 512 ADVANCED CIVIL ENGINEERING MATERIALS.** (3) (3-3-3) (Prerequisite: CIVE 202)

**CIVE 514 STRUCTURAL MECHANICS.** (3) (3-1-5) Stress, strain, and basic equations of linear elasticity. General and particular solutions of plane and axisymmetric problems. Stress concentration and failure criteria. Unsymmetrical bending of beams; shear centres; torsion of thin-walled structural members. Curved beams. Formulation and applications of energy principles, and their connection to finite-element method.

**CIVE 519 SUSTAINABLE DEVELOPMENT PLANS.** (6) (Corequisites: Enrolment in full "Barbados Field Study Semester"; AGRI 413, AGRI 452 or CIVE 452, URBP 507) (Restrictions: Not open to students who have taken AGRI 519 or URBP 519. Permission of the Coordinator of the Field Semester required.) Geared for solving real-world environmental problems related to water at the local, regional and international scale in Barbados. Projects to be designed by instructors in consultation with university, government and NGO partners and to be conducted by teams of 2 to 4 students in collaboration with them.

**CIVE 526 SOLID WASTE MANAGEMENT.** (3) (3-2-4) (Prerequisite: CIVE 225)

**CIVE 527 RENOVATION AND PRESERVATION: INFRASTRUCTURE.** (3) (3-2-4) (Undergraduate Prerequisites: CIVE 202 and CIVE 318) Maintenance, rehabilitation, renovation and preservation of infrastructure; infrastructure degradation mechanisms; mechanical, chemical and biological degradation; corrosion of steel; condition surveys and evaluation of buildings and bridges; repair and preservation materials, techniques and strategies; codes and guidelines; case studies.

**CIVE 540 URBAN TRANSPORTATION PLANNING.** (3) (3-1-5) (Prerequisite: CIVE 319 or permission of instructor.) Process and techniques of urban transportation engineering and planning, including demand analysis framework, data collection procedures, travel demand modelling and forecasting, and cost-effectiveness framework for evaluation of project and system alternatives.

**CIVE 546 SELECTED TOPICS IN CIVIL ENGINEERING 1.** (3) (3-0-6) (Undergraduate Prerequisite: Permission of instructor)

**CIVE 550 WATER RESOURCES MANAGEMENT.** (3) (3-0-6) (Undergraduate Prerequisite: CIVE 323 or equivalent)

**CIVE 553 STREAM POLLUTION AND CONTROL.** (3) (3-2-4) (Undergraduate Prerequisite: CIVE 225)

**CIVE 555 ENVIRONMENTAL DATA ANALYSIS.** (3) (3-0-6) (Undergraduate Prerequisite: CIVE 302 or permission of instructor) Application of statistical principles to design of measurement systems and sampling programs. Introduction to experimental design. Graphical data analysis. Description of uncertainty. Hypothesis tests. Model parameter estimation methods: linear and nonlinear regression methods. Trend analysis. Statistical analysis of censored data. Statistics of extremes.

**CIVE 572 COMPUTATIONAL HYDRAULICS.** (3) (3-0-6) (Prerequisite: CIVE 327 or equivalent)

**CIVE 573 HYDRAULIC STRUCTURES.** (3) (3-0-6) (Prerequisites: CIVE 323 and CIVE 327) Hydraulic aspects of the theory and design of hydraulic structures. Storage dams, spillways, outlet works, diversion works, drop structures, stone structures, conveyance and control structures, flow measurement and culverts.

**CIVE 574 FLUID MECHANICS OF WATER POLLUTION.** (3) (Prerequisite: CIVE 327 or equivalent.)

**CIVE 577 RIVER ENGINEERING.** (3) (3-0-6) (Undergraduate Prerequisite: CIVE 428 or permission of the instructor.) (Graduate Corequisite: CIVE 428)

**CIVE 602 FINITE ELEMENT ANALYSIS.** (4) (Prerequisite: CIVE 514) Development of displacement based simple and high order, one, two and three dimensional elements for linear elastic stress analysis. Variational and other methods for element formulation. Plate



bending and shell elements. Finite element programming. Use of package programs in static analysis of structures.

**CIVE 603 STRUCTURAL DYNAMICS.** (4)

**CIVE 604 THEORY OF PLATES AND SHELLS.** (4)

**CIVE 605 STABILITY OF STRUCTURES.** (4) Buckling of elastic columns by equilibrium analysis. Buckling of inelastic columns. Energy analysis and approximate methods. Stability of frames. Torsional buckling of columns and flexural-torsional buckling of beams. Buckling of plates and axially compressed circular cylindrical shells. Stability analysis using the finite element method.

**CIVE 607 ADVANCED DESIGN IN STEEL.** (4) Design and behaviour of cold formed and hot rolled structural steel members and systems. Lateral load resistance design of steel roof diaphragms, flexural design of composite slabs, bracing requirements and design procedures for steel structures, floor vibration, member torsion, slender members and design procedures for low rise steel frame buildings.

**CIVE 609 RISK ENGINEERING.** (4)

**CIVE 610 SPECIAL TOPICS IN STRUCTURAL MECHANICS.** (4) Special problems in the theory and design of structures. These may include topics in the theories of elasticity and plasticity and advanced theories of shell structures.

**CIVE 612 EARTHQUAKE-RESISTANT DESIGN.** (4) Static and dynamic analyses, design codes, effects of local ground conditions, ductility demands on structural components. Inelastic behaviour of beams, columns, joints, shear walls and bracing under cyclic loading of steel concrete and masonry structures. Design applications.

**CIVE 614 COMPOSITES FOR CONSTRUCTION.** (4)

**CIVE 615 ENVIRONMENTAL ENGR. SEMINAR** (3) The course will expose the students to various environmental engineering issues. Lectures will be given by faculty and invited speakers from industry. Each student is required to prepare a written technical paper and make oral presentation.

**CIVE 617 DESIGN AND RATING OF HIGHWAY AND RAILWAY BRIDGES.** (4)

**CIVE 618 DESIGN IN CONCRETE 1.** (4) Concrete physical properties, creep, shrinkage; review of ultimate strength design; combined loadings; design of frames and flat plates; limit design, yield line theory; prestressed concrete, partial prestressing and load balancing. The course will include group projects.

**CIVE 622 PRESTRESSED CONCRETE.** (4)

**CIVE 623 DURABILITY OF MATERIALS.** (4)

**CIVE 624 DURABILITY OF STRUCTURES.** (4) Basic concepts, safety, durability, repair and strengthening; reliability analysis; deterioration mechanisms, preventive and corrective measures; design for durability; parking structures; bridges; steel, timber and masonry structures; municipal infrastructure; strengthening and retrofitting; management systems; case studies. This course will involve field trips and group design exercises.

**CIVE 628 DESIGN OF WOOD STRUCTURES.** (4)

**CIVE 630 THESIS RESEARCH 1.** (3)

**CIVE 631 THESIS RESEARCH 2.** (3)

**CIVE 632 THESIS RESEARCH 3.** (3)

**CIVE 633 THESIS RESEARCH 4.** (6)

**CIVE 634 THESIS RESEARCH 5.** (6)

**CIVE 635 THESIS RESEARCH 6.** (6)

**CIVE 648 SPECIAL TOPICS IN CIVIL ENGINEERING.** (4)

**CIVE 651 THEORY: WATER / WASTEWATER TREATMENT.** (4) Theoretical aspects of the chemistry of water and wastewater treatment. This will include acid-base and solubility equilibria; redox reactions; reaction kinetics; reactor design; surface and colloid chemistry; gas transfer; mass transfer; stabilization and softening; disinfection; corrosion.

**CIVE 652 BIOLOGICAL TREATMENT: WASTEWATERS.** (4) Process kinetics and reactors. Population kinetics of microorganisms and

their role in the various waste treatment processes. Unit processes for wastewater treatment, such as suspended-growth, attached-growth processes, sludge treatment, and nutrient removal. Biological treatment techniques for groundwater decontamination. Laboratory pilot plant exercises.

**CIVE 660 CHEMICAL AND PHYSICAL TREATMENT OF WATERS.** (4)

Theory and design of specific processes used for the physical and/or chemical purification of waters and wastewaters, including mixing, flocculation, sedimentation, flotation, filtration, disinfection, adsorption, ion exchange, aeration, membrane processes, distillation, removal of specific inorganics and organics, taste and odour control, process control, sludge treatment. Laboratory exercises will complement theoretical aspects.

**CIVE 662 MASTERS RESEARCH SEMINAR.** (1) (Restriction: For civil engineering students in the final semester of the thesis masters program.)

**CIVE 678 GRAVITY CURRENTS.** (4) Internal hydraulics of one-layer and two-layers systems. Boussinesq's approximation, concepts of specific energy and specific force, upstream and downstream influences. Waves, instabilities and turbulence in continuous stratified flows; the flux, gradient and local Richardson numbers. Turbulent mixing and entrainment across gravity and turbulent interfaces. Turbulent thermals, turbulent plumes and related mixing phenomena.

**CIVE 684 GROUNDWATER POLLUTION AND TRANSPORT PROCESSES.** (4)

**CIVE 686 SITE REMEDIATION.** (4) Field investigations; geotechnical and geophysical techniques; hydrogeological conditions; risk assessment; contaminant transport; remedial action plan; containment systems (gas, surface water, and ground water); on-site and off-site treatment techniques (solidification, stabilization, landfilling, and soil washing); In-situtreatment techniques (physical, biological, and chemical).

**CIVE 691 PROJECT 1.** (1)

**CIVE 692 RESEARCH PROJECT.** (2)

**CIVE 693 RESEARCH PROJECT.** (3)

**CIVE 694 PROJECT 4.** (4)

**CIVE 695 PROJECT 5.** (5)

**CIVE 696 RESEARCH PROJECT.** (6)

**CIVE 697 RESEARCH PROJECT.** (7)

**CIVE 701 PH.D. COMPREHENSIVE PRELIMINARY ORAL EXAM.** (0)

## 16 Classics

Graduate Program in Classics  
Department of History  
Stephen Leacock Building, Room 625  
855 Sherbrooke Street West  
Montreal, QC H3A 2T7  
Canada  
Telephone: (514) 398-3977  
Fax: (514) 398-8365  
E-mail: graduate.history@mcgill.ca  
Web site: www.arts.mcgill.ca/programs/history

### 16.1 Staff

#### *Emeritus Professors*

P. F. McCullagh; B.A.(Tor.), M.A.(McG.), Ph.D.(Chic.)

P. Vivante; B.A.(Oxon), Dott.Lett.(Florence) (*John MacNaughton*  
*Emeritus Professor of Classics*)

#### *Professor*

T. Wade Richardson; B.A.(McG.), A.M., Ph.D.(Harv.)

## 16.2 Programs Offered

**M.A. with Thesis** (48 credits over 4 terms, in 18 or 24 months)

**M.A. non-Thesis option** (48 credits over 3 or 4 terms, in 18 months)

**Ph.D.**

## 16.3 Admission Requirements

### M.A. Program

Candidates are required to have a B.A. Honours in Classics or equivalent.

### Ph.D. Program

Candidates are required to have a McGill M.A. in Classics or equivalent.

## 16.4 Application Procedures

No applications will be accepted for 2004-05 as the program has been temporarily suspended. Further information may be obtained from the Department of History.

## 16.5 Program Requirements

Please consult the Department for detailed regulations.

### M.A. with thesis

- 1) Course work: 18 credits
- 2) Special subjects: 6 credits (CLAS695D1/CLAS695D2)
- 3) Thesis: 24 credits:
  - CLAS696 – Methods (3)
  - CLAS697 – Proposal (3)
  - CLAS698 – Preparation (6)
  - CLAS699 – Completion (12)

### M.A. non-thesis option

- 1) Course work: 24 credits.
- 2) Special subjects: 12 credits (CLAS685D1/CLAS685D2, CLAS686D1/CLAS686D2).
- 3) Research papers: 12 credits
  - CLAS681 – Research Paper 1 (3)
  - CLAS682 – Research Paper 2 (3)
  - CLAS683 – Research Paper 3 (3)
  - CLAS684 – Research Paper 4 (3)

### Ph.D.

- 1) Course work: 24 credits;
- 2) Reading list;
- 3) Thesis and Oral Defence.

## 16.6 Courses Offered

**Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.**

The course credit weight is given in parentheses after the title.

**CLAS 515D1 (3), CLAS 515D2 (3) LATIN AUTHORS.** (Undergraduate Prerequisite: 9 credits in Intermediate Latin or equivalent) (Restricted to Honours and Graduate students) (Students must register for both CLAS 515D1 and CLAS 515D2.) (No credit will be given for this course unless both CLAS 515D1 and CLAS 515D2 are successfully completed in consecutive terms) Completion of a Reading List in Latin, with Faculty supervision, to be tested by written examination.

**CLAS 525D1 (3), CLAS 525D2 (3) ANCIENT GREEK AUTHORS.** (Undergraduate Prerequisite: 9 credits in Intermediate Greek or equivalent) (Restricted to Honours and Graduate students) (Students must register for both CLAS 525D1 and CLAS 525D2.) (No

credit will be given for this course unless both CLAS 525D1 and CLAS 525D2 are successfully completed in consecutive terms) Completion of a Reading List in Greek, with Faculty supervision, to be tested by written examination.

## 17 Communication Sciences and Disorders

School of Communication Sciences and Disorders  
Beatty Hall  
1266 Pine Avenue West  
Montreal, QC H3G 1A8  
Canada

Telephone: (514) 398-4137  
Fax: (514) 398-8123  
E-mail: [scsd@mcgill.ca](mailto:scsd@mcgill.ca)  
Web site: [www.mcgill.ca/scsd](http://www.mcgill.ca/scsd)

*Director* — Shari Baum

*Research Director* — Elin Thordardottir

### 17.1 Staff

#### *Emeritus Professor*

Donald Doehring; B.A.(Buff.), M.A.(N.M.), Ph.D.(Ind.)

#### *Professors*

Shari Baum; B.A.(C'nell), M.S.(Vt.), M.A., Ph.D.(Brown)  
Martha Crago; B.A., M.Sc.A., Ph.D.(McG.)  
Athanasios Katsarkas; M.D.(Thess.), M.Sc.(McG.), F.R.C.P.(C)

#### *Associate Professors*

Vincent Gracco; B.A., M.A.(San Diego), Ph.D.(Wis.-Madison)  
Rachel Mayberry; B.A.(Drake), M.S.(Wash.), Ph.D.(McG.)  
Marc Pell; B.A.(Ott.), M.Sc., Ph.D.(McG.)  
Linda Polka; B.A.(Slippery Rock), M.A.(Minn.), Ph.D.(S.Flor.)

#### *Assistant Professors*

Karsten Steinhauer; M.Sc., Ph.D. (Dr.rer.nat) F.U.Berlin  
Elin Thordardottir; B.A., M.Sc., Ph.D.(Wis.-Madison)

#### *Assistant Professor (Special Category)*

Susan Rvachew; B.Sc.(Alta.), M.Sc., Ph.D.(Calg.)

#### *Assistant Professors (Part-Time)*

Gabriel Leonard; B.A.(Dublin), D.A.P., M.Sc., Ph.D.(McG.)  
Sybil Schwartz; B.Sc.(McG.), M.Sc.A.(Iowa St.), Ph.D.(McG.)  
Rosalee Shenker; B.Sc.(Syr.), M.A.(Calif. St.), Ph.D.(McG.)

#### *Faculty Lecturer*

Jeanne Claessen; M.A.(Reading), Dip. Clinical Communication Studies(City University, London)

#### *Faculty Lecturers (Part-Time)*

Areej Alasser; B.Sc. (King Saud U.), M.A. (San Jose St.U.)  
Joane Déziel; B.Sc, M.Sc.(Montr.)  
Caroline Erdos; B.A. (C'dia), M.Sc.A.(McG.)  
Ruth Gesser; B.A.(C'dia), M.Sc.A.(McG.)  
Jill Harrison; B.A., M.Sc.(McG.)  
Helena Kisilevsky; B.A.(McG.), M.A.(UCLA), M.O.A.(Montr.)  
Cathy Mhun; B.A., M.Sc.A.(McG.)  
Darla Orchard; B.A., M.Sc.(McG.)  
Judith Robillard-Shultz; B.A., M.Sc.A.(McG.)  
Phaedra Royle; B.A.(C'dia), M.A.(McG.), Ph.D.(Montr.)  
Ameesh Shah; B.Sc. ASR, M.A. Ling. (Bom.), M.A.-SLP, M.Phil., Ph.D. C.U.N.Y.)  
Megha Sundara; B.Sc., M.Sc.(All India Inst. of Speech & Hearing)  
Colleen Timm; B.A.(C'dia), M.Sc.A.(McG.)  
Patricia Viens; ASLTA Certificate(Rochester I.T.), ASL Workshop Certificate(Vista U.)

#### *Associate Members*

Eva Kehayia (Physical and Occupational Therapy)  
Yuriko Oshima-Takane (Psychology)

#### *Adjunct Members*

Howard Chertkow (*Jewish Gen.*), David McFarland (*Montr.*)

**17.2 Programs Offered**

The School offers a professional degree in Communication Sciences and Disorders at the M.Sc. (Applied) level with specialization in Speech-Language Pathology and two research degrees, an M.Sc. (Research) and a Ph.D. in Communication Sciences and Disorders.

**M.Sc.(Applied) Degree in Communication Sciences and Disorders**

The professional degree leads to a Master of Science (Applied) with a specialization in Speech-Language Pathology. The pro-

specialization in Speech-Language Pathology. The program involves two academic years of full-time study and related practical work followed by a summer internship.

#### Year 1 Required Courses (31 credits)

##### Fall

- SCSD616 (3) Audiology  
SCSD617 (3) Anatomy and Physiology of Speech and Hearing

- SCSD619 (3) Phonological Development  
SCSD624 (3) Language Processes  
SCSD633 (3) Language Development  
SCSD681 (1) Practicum and Seminar 1

##### Winter

- SCSD631 (3) Speech Science  
SCSD632 (3) Phonological Disorders: Children  
SCSD637 (3) Developmental Language Disorders 1  
SCSD638 (3) Neurolinguistics  
SCSD682 (1) Practicum and Seminar 2

##### Summer

- SCSD646 (2) Introductory Clinical Practicum

#### Year 1 Complementary Course (3 credits)

One three-credit seminar option must be taken.

#### Year 2 Required Courses (31 credits)

##### Fall

- SCSD618 (3) Research and Measurement Methodologies  
SCSD636 (3) Fluency Disorders  
SCSD639 (3) Voice Disorders  
SCSD643 (3) Developmental Language Disorders 2  
SCSD644 (3) Applied Neurolinguistics  
SCSD683 (1) Practicum and Seminar 3

##### Winter

- SCSD609 (3) Neuromotor Disorders  
SCSD642 (3) Aural Rehabilitation  
SCSD669 (3) Special Developmental Speech/Language Problems  
SCSD680 (3) Deglutition and Dysphagia  
SCSD684 (1) Practicum and Seminar 4

##### Summer

- SCSD679 (2) Advanced Clinical Practicum

#### Year 2 Complementary Course (3 credits)

One three-credit seminar option must be taken.

#### M.Sc.(Applied) Complementary Course List

- SCSD634 (3) Research and Measurement Methodologies 2  
SCSD664 (3) Communication Sciences and Disorders 1  
SCSD666 (3) Communication Sciences and Disorders 3  
SCSD667 (3) Communication Sciences and Disorders 4  
SCSD670 (3) Communication Sciences and Disorders 2

A seminar may also be taken outside of the School upon approval of a faculty advisor.

#### M.Sc. in Communication Sciences and Disorders (45credits)

M.Sc. candidates must complete at least 45credits, including a minimum of 24 and a maximum of 39credits for thesis research (courses SCSD671, SCSD672, SCSD673 and SCSD674), and a minimum of 6 credits in other courses. The non-thesis credits can be special topic courses in the School and/or courses in other departments, as arranged with the student's thesis supervisor.

#### Thesis Component – Required (24 credits)

- SCSD671 (12) M.Sc. Thesis 1  
SCSD672 (12) M.Sc. Thesis 2

#### Complementary Courses (21 credits)

SCSD683 (1)  
SCSD672

#### Ph.D. in Communication Sciences and Disorders

Ph.D. students must complete a full graduate course in statistics and both advanced research seminars as well as the other course requirements in their individual program of study, and pass a comprehensive examination. Students entering the Ph.D. program through the fast-track option must additionally demonstrate the ability to complete a research project and related coursework during the initial year. An examination in a foreign language is not required.

#### Required Courses

#### 17.6 Courses

Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.

The course credit weight is given in parentheses after the title.

Denotes courses not offered in 2004-05.

**SCSD 609 NEUROMOTOR DISORDERS.** (3) The focus of this course will be on the assessment and management of motor speech disorders, associated with both acquired and developmental neuromotor disorders, and swallowing disorders (of both neuromotor and structural origin).

**SCSD 616 AUDIOLOGY.** (3) Basic diagnostic and rehabilitative procedures, goals and procedures used in clinical audiology, and the psychoacoustic theories on which they are based will be presented.

**SCSD 617 ANATOMY AND PHYSIOLOGY: SPEECH AND HEARING.** (3) The anatomy and physiology of speech and hearing mechanisms will be covered. Topics will include neuroanatomy, the anatomy and physiology of the head, neck and upper torso, and the external, middle, and inner ear.

**SCSD 618 RESEARCH AND MEASUREMENT METHODOLOGIES 1.** (3) Methodologies used in research and measurement in the field of communication sciences and disorders will be introduced. Topics covered include: the nature and interpretation of test norms; validity; interpretation of test score differences; and questionnaire development (scaling). Tests currently used in speech-language pathology and audiology are examined.

**SCSD 619 PHONOLOGICAL DEVELOPMENT.** (3) Theories and research related to normal and abnormal phonological development in children will be studied.

**SCSD 624 LANGUAGE PROCESSES.** (3) The structure and nature of on-line processing of the language code, and the interaction of structure and function of language will be studied. Theories about the nature of representation and research concerning its processing, and the role of sociocultural factors in linguistic performance also will be covered.

**SCSD 631 SPEECH SCIENCE.** (3) The acoustic analysis and perception of speech and related pathologies will be presented. Theories and models of speech production, speech motor control, and speech perception will be considered.

**SCSD 632 PHONOLOGICAL DISORDERS: CHILDREN.** (3) The nature of phonological disorders and clinical approaches for their remediation in children will be presented.

**SCSD 633 LANGUAGE DEVELOPMENT.** (3) Theories of language acquisition, prerequisites to language development, and current issues in research will be studied. Topics include the role of input, individual differences in acquisition, and language socialization.

**SCSD 634 RESEARCH AND MEASUREMENT METHODS 2.** (3) This course addresses the strengths and weaknesses of various research designs. Issues concerning the analysis of research designs. Issues concerning the analysis of research designs.

**SCSD 682 PRACTICUM AND SEMINAR 2.** (1) This course provides







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Students must be accepted by a research director before the Faculty approves the application, prior to final acceptance by the Graduate and Postdoctoral Studies Office.

Applications may be obtained by writing to the Graduate Program in Dental Sciences, Faculty of Dentistry.

**Deadlines** for receipt of the application on-line are as follows:

- Fall Term – March 1
- Winter Term – September 1
- Summer Term – November 1

**M.Sc. in Dental Sciences,  
option in Oral and Maxillofacial Surgery**

Applications must be submitted by September 15.

Information for financial support for this program may be obtained by writing to Dr. T.W. Head, Director of the program.

Further information may be obtained by writing to Graduate Program in Oral and Maxillofacial Surgery, Faculty of Dentistry.

Students will register in the four-year graduate-training program, which leads to a McGill Certificate of Residency Training. They will concurrently register with concurrently regis4t6-9 TD with cof Tw (They wr

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**20.5 Program Requirements**

All students who are registered in Graduate Clinical Programs in the Faculty of Dentistry, McGill University, and who are not already registered with l'Ordre, must register with l'Ordre des Dentistes du Québec. Further information may be obtained from the Registrar of l'Ordre des Dentistes du Québec, 625 René-Lévesque Boulevard West, 15th Floor, Montreal, QC H3B1R2.

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**M.SC. IN DENTAL SCIENCES**

The M.Sc. degree should normally be completed within two years of full-time study.

**Required Courses** (8 credits)

**Complementary Courses** (8 – 14 credits)

Other complementary courses in the University may be taken with the approval of the supervisor or research director.

**Thesis Research Courses** (24 – 30 credits)

The required number of Master's thesis credits (minimum 24) will be made up from among the following:

**M.SC. IN DENTAL SCIENCE, OPTION IN ORAL AND  
MAXILLOFACIAL SURGERY** (46 credits)

Duration: Four calendar years commencing July 1.

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members to discuss potential research areas since final acceptance requires identification of a research supervisor.

The M.Sc. Applied is intended to provide advanced learning in Nutrition with substantial course work and either a *practicum in the field of Dietetics* or a *project in the area of Human Nutrition*. Students need not define their research area prior to enrolment.

Research Facilities: Students may conduct research at the School of Dietetics and Human Nutrition, including the Mary Emily Clinical Nutrition Research Unit, the Centre for Indigenous Peoples' Nutrition and Environment (CINE), or at the McGill University Health Centre.

In addition to their research, eligible candidates may complete the equivalent of a Dietetics Internship for membership in the professional association for registration as Dietitians and Nutritionists in Canada. However, completion of specific undergraduate dietetics course work and practica will increase the duration and cost of the program.

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### 22.3 Admission Requirements

#### **M.Sc.**

Applicants must be graduates of a university of recognized reputation and hold a B.Sc. degree equivalent to a McGill Honours degree in a subject closely related to the one selected for graduate work. Applicants must have at least a cumulative grade point average (CGPA) in McGill University's credit equivalency of 3.2/4.0 (second class-upper division) during the last four full-time terms of a completed Bachelor's degree program in nutrition or a closely related field. High grades are expected in courses considered by the academic unit to be preparatory to the graduate program.

#### **M.Sc. (Applied)**

Applicants to the M.Sc. Applied project or practicum options must have a B.Sc.(Nutritional Sciences) or equivalent with a GPA of 3.2 or higher. The program is available to students who do not have a working knowledge of French, however, not all project or



admission to graduate studies, but who are considered inadequately prepared in the subject selected may be admitted to a Qualifying Program if they have met the School's minimum CGPA of 3.2 out of 4.0. The course(s) to be taken in a Qualifying Program will be prescribed by the academic unit. Qualifying students are registered in graduate studies, **but not as candidates for a degree**. Only one qualifying year (two terms) is permitted. **Successful completion of a qualifying program does not guarantee admission to a degree program.**

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## 22.5 Program Requirements

### **M.Sc.**

Program requirements for the M.Sc. include a minimum of 45 credits. This is comprised of 31 credits for the thesis (NUTR680, NUTR681, NUTR682, NUTR683), two credits of required seminars (NUTR 695, NUTR696), and four three-credit graduate courses. The student may be advised to take more than four courses.

### **M.Sc. Applied**

Program requirements for the M.Sc. Applied include a minimum of 45 credits. This is comprised of 29 course credits (nine three-credit courses and two credits of required seminars (NUTR 695, NUTR696), and 16 credits of project or practicum courses.

### **Ph.D.**

Requirements for the Ph.D. include a course of study recommended by the committee including a comprehensive examination (NUTR 701), a research dissertation, and two credits of required seminars (NUTR 797, NUTR 798). Course work at the Ph.D. level normally comprises a smaller portion than for the M.Sc. degree. The research program must clearly show originality and be a contribution to knowledge. At least three years are required to meet the Ph.D. requirements. Outstanding students may be permitted to transfer to the Ph.D. program from the M.Sc. Applied

**NUTR 653 M.Sc. (APPLIED) PROJECT 2.** (3) (Prerequisite: NUTR 652) Project execution. This project relates to the Human Nutrition M.Sc. (Applied) degree.

**NUTR 654 M.Sc. (APPLIED) PROJECT 3.** (3) (Prerequisite: NUTR 653) Continuation of project execution and data collection; preliminary analysis. This project relates to the Human Nutrition M.Sc. (Applied) degree.

**NUTR 655 M.Sc. (APPLIED) PROJECT 4.** (3) (Prerequisite: NUTR 654) Data analysis. Submission of project report. This project relates to the Human Nutrition M.Sc. (Applied) degree.

**NUTR 656 M.Sc. (APPLIED) PRACTICUM 1.** (3) (Prerequisite: NUTR 651) Clinical or community placement (4 weeks). Submission of placement report. This practicum relates to the Human Nutrition M.Sc. (Applied) degree.

**NUTR 657 M.Sc. (APPLIED) PRACTICUM 2.** (3) (Prerequisite: NUTR 656) Continuation of placement (4 weeks). Submission of placement report. This practicum relates to the Human Nutrition M.Sc. (Applied) degree.

**NUTR 658 M.Sc. (APPLIED) PRACTICUM 3.** (3) (Prerequisite: NUTR 657) Continuation of placement (4 weeks). Submission of placement report. This practicum relates to the Human Nutrition M.Sc. (Applied) degree.

**NUTR 659 M.Sc. (APPLIED) PRACTICUM 4.** (3) (Prerequisite: NUTR 658) Continuation of placement (4 weeks). Submission of placement report. This practicum relates to the Human Nutrition M.Sc. (Applied) degree.

**NUTR 660 M.Sc. (APPLIED) NUTRITION 2.** (1) (Prerequisites: NUTR 653; NUTR 659 or NUTR 655) Oral presentation. This presentation relates to the Human Nutrition M.Sc. (Applied) degree, project and practicum options.

**NUTR 680 HUMAN NUTRITION M.Sc. THESIS 1.** (6) Independent research under the direction of a supervisor toward completion of the M.Sc. thesis.

**NUTR 680D1 (3), NUTR 680D2 (3) HUMAN NUTRITION M.Sc. THESIS 1.** (Students must register for both NUTR 680D1 and NUTR 680D2) (No credit will be given for this course unless both NUTR 680D1 and NUTR 680D2 are successfully completed in consecutive terms) (NUTR 680D1 and NUTR 680D2 together are equivalent to NUTR 680)

**NUTR 680N1 HUMAN NUTRITION M.Sc. THESIS 1.** (3) (Students must also register for NUTR 680N2) (No credit will be given for this course unless both NUTR 680N1 and NUTR 680N2 are successfully completed in a twelve month period) (NUTR 680N1 and NUTR 680N2 together are equivalent to NUTR 680)

Tj 3N21NUTR 680N2 HUMAN NUTRITION M.Sc. THESIS 1. HESIS

Tj 3N 365 HUMAN NUTRITION M.Sc. THESIS 1. HESIS Equivalent to NUTR 680N1 and NUTR 680N2 together are equivalent to NUTR 680

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## 23 Earth and Planetary Sciences

Department of Earth and Planetary Sciences  
Frank Dawson Adams Building  
3450 University Street  
Montreal, QC H3A 2A7  
Canada

Telephone: (514) 398-6767  
Fax: (514) 398-4680  
E-mail: carol.matthews@mcgill.ca  
Web site: www.eps.mcgill.ca

*Chair* — A. Mucci

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### 23.1 Staff

#### *Emeritus Professors*

E.W. Mountjoy; B.A.Sc.(Br.Col.), Ph.D.(Tor.)  
W.H. MacLean; B.Geol.Eng.(Colo. Sch. of Mines), M.Sc.(A),  
Ph.D.(McG.)  
C.W. Stearn; B.Sc.(McM.), M.S., Ph.D.(Yale), F.R.S.C.

#### *Professors*

J. Arkani-Hamed; B.Eng.(Tehran), Ph.D.(M.I.T.)  
D. Francis; B.Sc.(McG.), M.Sc.(Br.Col.), Ph.D.(M.I.T.)  
A.J. Hynes; B.Sc.(Tor.), Ph.D.(Cantab.)  
O.G. Jensen; B.Sc., M.Sc., Ph.D.(Br.Col.)  
R.F. Martin; B.Sc.(Ott.), M.S.(Penn. St.), Ph.D.(Stan.)  
A. Mucci; B.Sc., M.Sc.(Montr.), Ph.D.(Miami)  
A.E. Williams-Jones; B.Sc., M.Sc.(Natal), Ph.D.(Queen's)

#### *Associate Professors*

January 1st. There are no special forms required to apply for financial aid from the Department, as all applicants will be considered for the awards for which they are eligible.

Candidates should indicate their field(s) of interest when making formal application for admission. Specific inquiries concerning the Department should be addressed to Graduate Admissions, Department of Earth and Planetary Sciences.

McGill's on-line application form for graduate program candidates is available at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

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### 23.5 Program Requirements

#### **M.Sc. Degree** (45 credits)

The M.Sc. degree program includes:

- a) 12 credits from formal graduate courses to be chosen with the approval of the research director and Director of Graduate Studies and
- b) a thesis (33 credits) to be submitted according to the regulations of the Graduate and Postdoctoral Studies Office and the Department.

#### **Ph.D. Degree**

The Ph.D. degree program comprises:

- a) an approved program of courses selected in consultation with the student's academic adviser, and approved by the Academic Standing Committee,
- b) a Comprehensive oral examination at the end of the Ph.D.II, and
- c) research leading to a Ph.D. thesis followed by an oral defense.

Highly qualified B.Sc. graduates may be admitted directly to the Ph.D.I year. Students with the M.Sc. degree may be admitted to either the Ph.D.I or Ph.D.II year, depending on their background. Students are required to take 18 credits of graduate course study in the Ph.D.I year, and 6 credits plus a comprehensive oral examination in the Ph.D.II year. There is no language requirement for the Ph.D. degree.

**EPSC 631D1 (1.5), EPSC 631D2 (1.5) FIELD STUDIES - OROGENIC BELTS.** (2-week field course in May, plus assigned papers) (Students must register for both EPSC 631D1 and EPSC 631D2) (No credit will be given for this course unless both EPSC 631D1 and EPSC 631D2 are successfully completed in consecutive terms)

**EPSC 644 TOPICS - ADVANCED EARTH SCIENCES 1.** (3) (3 hours lectures or seminars) A survey of a research topic of particular current interest.

**EPSC 645 TOPICS - ADVANCED EARTH SCIENCES 2.** (3) (3 hours lectures or seminars) A survey of a research topic of particular current interest.

**EPSC 655 ALTERATION LITHOGEOCHEMISTRY.** (3) (2 hours lecture, 3 hours lab)

**EPSC 697 THESIS PREPARATION 1.** (9) Independent study, theoretical and/or laboratory work in connection with the development of an M.Sc. thesis. Success in the course is dependent on presentation of an adequate progress report to the supervisory committee.

**EPSC 697D1 (4.5), EPSC 697D2 (4.5) THESIS PREPARATION 1.** (Students must register for both EPSC 697D1 and EPSC 697D2) (No credit will be given for this course unless both EPSC 697D1 and EPSC 697D2 are successfully completed in consecutive terms) (EPSC 697D1 and EPSC 697D2 together are equivalent to EPSC 697) Independent study, theoretical and/or laboratory work in connection with the development of an M.Sc. thesis. Success in the course is dependent on presentation of an adequate progress report to the supervisory committee.

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Telephone: (514) 398-6742  
Fax: (514) 398-1882  
E-mail: asian.studies@mcgill.ca  
Web site: www.arts.mcgill.ca/programs/eas

Chair — G. Fong

Director of Graduate Program — T. Looser

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## 24.1 Staff

### Professors

K. Dean; B.A.(Brown), M.A., Ph.D.(Stan.)  
R.D.S. Yates; B.A., M.A.(Oxon), M.A.(Calif.), Ph.D.(Harv.)

### Associate Professors

G. Fong; B.A., M.A.(Tor.), Ph.D.(Br. Col.)  
T. Lamarre; B.A.(Georgetown), M.A., Ph.D.(Chic.),  
D.Sc.(Aix-Marseille II)  
T. Looser; B.A.(UC Santa Cruz), M.A., Ph.D.(Chic.)

### Assistant Professors

P. Button; B.A.(Col.), M.A., Ph.D.(C'nell)  
A. McKnight; B.A.(Wellesley), M.A., Ph.D.(UC Berkley)  
H. Nakatani; B.A.(Tokyo), M.A.(Lond.), Ph.D.(Chic.)

### Faculty Lecturers

J. Chang; B.A.(Taiwan), M.A.(Harv.)  
S. Hasegawa; M.A.(Montr.)  
M. Kim; B.A., M.A.(Montr.)  
M. Uesaka; B.Sc.(Kyoto), M.A.(McG.)  
B. Wang; B.A.(Heilongjiang), M.A.(Calg.)

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## 24.2 Programs Offered

M.A. in East Asian Studies (*Ad Hoc*).

Ph.D. in East Asian Studies (*Ad Hoc*).

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## 24.3 Admission Requirements

### General

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their project. Research leading to original scholarship is a prerequisite for the acceptance of a Ph.D. thesis.

## 24.6 Courses for Graduate Students (M.A. and Ph.D.)

Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.

Term(s) offered (Fall, Winter, Summer) may appear after the credit weight to indicate when a course would normally be taught. Please check Class Schedule to confirm this information.

**Courses with numbers ending D1 and D2** are taught in two consecutive terms (most commonly Fall and Winter). Students must register for both the D1 and D2 components. No credit will be given unless both components (D1 and D2) are successfully completed in consecutive terms.

**Note:** All undergraduate courses administered by the Faculty of Arts (courses at the 100- to 500-level) have limited enrolment.

The course credit weight is given in parentheses after the title.

Denotes courses not offered in 2004-05.

**EAST 501 A DVANCED TOPICS IN JAPANESE STUDIES 1.** (3) (Fall) (Undergraduate Prerequisite: permission of instructor) (Departmental approval required) Consideration of selected topics and aspects of Japanese culture and society.

**EAST 502 A DVANCED TOPICS IN JAPANESE STUDIES 2.** (3) (Winter) (Undergraduate Prerequisite: permission of instructor) (Departmental approval required) Consideration of selected topics and aspects of Japanese culture and society.

**EAST 503 A DVANCED TOPICS IN CHINESE STUDIES 1.** (3) (Fall) (Undergraduate Prerequisite: permission of instructor) Consideration of selected topics and aspects of Chinese culture and society.

**EAST 504 A DVANCED TOPICS IN CHINESE STUDIES 2.** (3) (Winter) (Undergraduate Prerequisite: permission of instructor) (Departmental approval required) Consideration of selected topics and aspects of Chinese culture and society.

**EAST 515 SEMINAR: BEYOND ORIENTALISM.** (3) (Undergraduate Prerequisite: any EAS course at the 300-level or above or permission of instructor) Examines the cultural stakes and ethical implications of applying Western European models of understanding to East Asian societies. Provides background on interdisciplinary debates around "otherness", "cultural appropriation", and "postcolonialism", focusing on their history within East Asian Studies and their impact on that field's methodological assumptions, self-definition, and institutional practices.

**EAST 529 CONTEMPORARY CHINA: ANALYSIS OF CHANGE.** (3) (Not open to students who have taken ANTH 329)

**EAST 530 FOURTH LEVEL CHINESE.** (6) (Summer) (Undergraduate Prerequisite: EAST 430 or equivalent)

**EAST 530D1 (3), EAST 530D2 (3) FOURTH LEVEL CHINESE.** (Undergraduate Prerequisite: EAST 430 or equivalent) (Students must register for both EAST 530D1 and EAST 530D2.) (No credit will be given for this course unless both EAST 530D1 and EAST 530D2 are successfully completed in consecutive terms) (EAST 530D1 and EAST 530D2 together are equivalent to EAST 530) Development of skills required to conduct academic discussions in oral as well as in written forms. Teaching materials include original texts from Chinese newspapers, Chinese literature and videos.

**EAST 535 CHINESE FOR BUSINESS 1.** (3) (Prerequisite: EAST 330 or equivalent or permission of instructor)

**EAST 536 CHINESE FOR BUSINESS 2.** (3) (Prerequisite: EAST 535 or equivalent or permission of instructor)

**EAST 537D1 (3), EAST 537D2 (3) CHINA TODAY THROUGH TRANSLATION.** (Undergraduate Prerequisite: students with native or near native proficiency may register directly, other students require per-

mission of instructor) (Not open to students who have taken EAST 437) (Students must register for both EAST 537D1 and EAST 537D2.) (No credit will be given for this course unless both EAST 537D1 and EAST 537D2 are successfully completed in consecutive terms) A course to develop practical translation skills and

East Asian Studies Department  
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 Website: <http://www.mcgill.ca/east-asian-studies>

- EAST 600 EAST ASIAN STUDIES 1.** (3)  
**EAST 601 EAST ASIAN STUDIES 2.** (3)  
**EAST 619 TOPICS IN LITERARY THEORY.** (3)  
**EAST 651 SEMINAR IN TAOIST STUDIES 1.** (3)  
**EAST 652 SEMINAR IN TAOIST STUDIES 2.** (3)  
**EAST 653 CHINESE POPULAR CULTURE 1.** (3)  
**EAST 654 CHINESE POPULAR CULTURE 2.** (3)  
**EAST 655 PREMODERN CHINESE POETRY.** (3)  
**EAST 656 PREMODERN CHINESE NARRATIVE.** (3)  
**EAST 657 WOMEN'S WRITINGS IN TRADITIONAL CHINA.** (3)  
**EAST 660 SEMINAR: JAPANESE FICTION.** (3)  
**EAST 661 PREMODERN JAPANESE POETRY AND NARRATIVE.** (3)  
**EAST 662 POPULAR CULTURE IN JAPAN.** (3)  
**EAST 663 JAPANESE CULTURE AND THOUGHT.** (3)  
**EAST 680 SEMINAR: SOCIAL CHANGE IN JAPAN.** (3)  
**EAST 690 THESIS RESEARCH 1.** (3)  
**EAST 691 THESIS RESEARCH 2.** (3)  
**EAST 692 THESIS RESEARCH 3.** (3)  
**EAST 693 THESIS RESEARCH 4.** (3)  
**EAST 694 THESIS RESEARCH 5.** (3)  
**EAST 695 THESIS RESEARCH 6.** (3)  
**EAST 696 THESIS RESEARCH 7.** (6)  
**EAST 696D1 (3), EAST 696D2 (3) THESIS RESEARCH 7.** (Students must register for both EAST 696D1 and EAST 696D2) (No credit will be given for this course unless both EAST 696D1 and EAST 696D2 are successfully completed in consecutive terms) (EAST 696D1 and EAST 696D2 together are equivalent to EAST 696)  
**EAST 700D1 (3), EAST 700D2 (3) EAST ASIAN STUDIES 3.** (Students must register for both EAST 700D1 and EAST 700D2) (No credit will be given for this course unless both EAST 700D1 and EAST 700D2 are successfully completed in consecutive terms)  
**EAST 701D1 (3), EAST 701D2 (3) EAST ASIAN STUDIES 4.** (Students must register for both EAST 701D1 and EAST 701D2) (No credit will be given for this course unless both EAST 701D1 and EAST 701D2 are successfully completed in consecutive terms)  
**EAST 750 CHINESE LITERARY THEORY AND CRITICISM.** (3)

- John Galbraith; B.A.(Queen's), M.Phil., D.Phil.(Oxon)  
*(James McGill Professor)*  
 Christopher Green; M.A.(Conn.), Ph.D.(Wis.)  
 Joseph Greenberg; B.A., M.A., Ph.D.(Heb. U. of Jer.)  
 Jagdish Handa; B.Sc.(Lond.), Ph.D.(Johns H.)  
 Ngo van Long; B.Ec.(LaT.), Ph.D.(A.N.U.) *(James McGill Professor)*  
 Robin Thomas Naylor; B.A.(Tor.), M.Sc.(Lond.), Ph.D.(Cantab.)  
*(on leave 2003-04)*  
 J.C. Robin Rowley; B.Sc., M.Sc., Ph.D.(Lond.)  
 Victoria Zinde-Walsh; M.A.(Wat.), M.Sc., Ph.D.(Moscow St.)  
*Associate Professors*  
 Myron Frankman; B.Mgt.E.(Renss.), Ph.D.(Texas)  
 George Grantham; B.A.(Antioch), M.A., Ph.D.(Yale)  
 Franque Grimard; B.A.(York), Ph.D.(Prin.)  
 John Iton; B.A.(McG.), Ph.D.(Johns H.)  
 C. John Kurien; B.A.(Kerala), M.A., Ph.D.(Vanderbilt)  
 Mary MacKinnon; B.A.(Queen's), M.Phil., D.Phil.(Oxon)  
 Christopher T.S. Ragan; B.A.(Vic. B.C.), M.A.(Queen's), Ph.D.(M.I.T.)  
 Lee Soderstrom; B.A., Ph.D.(Calif.)  
 Thomas Velk; M.S., Ph.D.(Wis.)  
 Alexander Vicas; B.Com.(McG.), M.A., Ph.D.(Prin.)  
 William Watson; B.A.(McG.), Ph.D.(Yale)  
*Assistant Professors*  
 Jim Engle-Warnick; B.S.(Akron), M.B.A.(Carnegie-Mellon), Ph.D.(Pitt.)  
 Hassan Bencheekroun; Diplôme d'ingénieur d'état(École Mohamedia des ingénieurs, Morocco), Ph.D.(Laval)  
 Sonia Laszlo; B.A.(Ott.), M.A.(W.Ont.), Ph.D.(Tor.)

## 25 Economics

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 Canada

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 Fax: (514) 398-4938  
 E-mail: [graduate.economics@mcgill.ca](mailto:graduate.economics@mcgill.ca)  
 Web site: [www.mcgill.ca/economics](http://www.mcgill.ca/economics)

*Chair* — Christopher Green

### 25.1 Staff

#### *Emeritus Professors*

Irving Brecher; B.A.(McG.), M.S., Ph.D.(Harv.)  
 Kari Polanyi-Levitt; B.Sc.(Lond.), M.A.(Tor.)

#### *Professors*

Robert D. Cairns; B.Sc.(Tor.), Ph.D.(M.I.T.)  
 Russell Davidson; B.Sc., Ph.D.(Glasgow), Ph.D.(U.B.C.)(Canada)  
*Research Chair*  
 Antal Deutsch; B.Com.(Sir G. Wms.), Ph.D.(McG.)



Information and application form can be downloaded from the Economics Department Web site at [www.mcgill.ca/economics](http://www.mcgill.ca/economics).

Deadline: February 1st for financial consideration.

## 25.5 Program Requirements

Lectures and examinations in the graduate program (M.A. and Ph.D.) in Economics are given in Macroeconomics, Microeconomics and several fields: Econometrics; Economic Development; Economic History; Industrial Organization; International Economics; Labour Economics; Monetary Economics; Public Finance; Mathematical Economics; Advanced Theory. Courses at the 600 level are usually taught in the first-term. Seminars/courses at the 700 level are offered in many of the fields listed above. They are generally given in the second term and normally have as a prerequisite the corresponding 600-level course.

### Requirements for the M.A. Degree (48 credits)

#### I. M.A. with Thesis:

The requirements for the Master's degree are:

1. Successful completion of the following courses with a grade in each of at least B- (65%);
  - ECON610 (3 credits) Microeconomic Theory 1
  - ECON620 (3 credits) Macroeconomic Theory 1
 Twelve complementary credits which must include either ECON665 Quantitative Methods (3 credits) or ECON662D1/ECON662D2 Econometrics (6 credits)
  - A minimum of 6 credits must be taken in the same field.
2. Completion of a Master's thesis, the subject of which must be approved by a thesis committee.

The total thesis program requirement is 48 credits (18 credits of course work and 30 credits for the thesis). An average grade of B (70%) in approved courses is needed for graduation.

Econometrics ECON662D1/ECON662D2 or equivalent is strongly recommended but will not meet the 6-credit field requirement for the M.A.

#### II. M.A. with Research Paper:

1. Successful completion of the following courses with a grade in each of at least B- (65%):
  - Six required credits:
    - ECON610 (3 credits) Microeconomic Theory 1
    - ECON620 (3 credits) Macroeconomic Theory 1
  - Eighteen complementary credits which must include either ECON665 Quantitative Methods (3 credits) or ECON662D1/ECON662D2 Econometrics (6 credits)
    - A minimum of 6 credits must be taken in the same field.
2. A research paper of about 50 pages in length.
  - The total non-thesis program requirement is 48 credits (24 credits for course work and 24 credits for the research report). An average grade of B (70%) in approved courses is needed for graduation.

Econometrics ECON662D1/ECON662D2 or equivalent is strongly recommended but will not meet the six credit field requirement for the M.A.

Residency requirement for the M.A. degree: Three full-time terms for the M.A. degree one of which can be an approved Summer Term. Many students are able to complete the M.A. requirements in one calendar year.

#### III. M.A. Degree Program Non-thesis Option in Social Statistics:

The program complements disciplinary training with research experience applying statistical methods to Statistics Canada data (or equivalent). Students will normally complete normal program course requirements, supplemented by further statistical courses, as advised by the Option advisor, and subject to approval by the home department. Students will complete a statistics-based M.A.

research paper (Economics, Political Science, Sociology) or thesis (Geography) in conjunction with an interdisciplinary capstone seminar.

Acceptance into the program is by application to the Social Statistics Option Committee and is contingent on acceptance into the M.A. program in one of the participating departments (Economics, Geography, Political Science, Sociology), which in turn requires meeting the Graduate and Postdoctoral Studies Office admission requirements.

### REQUIREMENTS FOR THE Ph.D. DEGREE

The requirements for the doctoral degree are:

1. ncmpent5ia.13requirements.



**ECON 683 M.A. REPORT 4.** (3) The M.A. Report must demonstrate the candidate's ability to do independent work at the graduate level in a particular field of economics. While length will vary with the subject matter, it is expected that on average reports will be about 50 pages long. The Report will be graded jointly by two members of the Department. The supervisor will normally be one of the examiners.

**ECON 705 READING COURSE: SELECTED TOPICS ECONOMICS.** (3) Reading course in Economics.

**ECON 706 SELECTED TOPICS.** (3) (Prerequisites: ECON 610, ECON 620 and 6 additional credits at the 600 level) Reading course in Economics.

**ECON 710 SELECTED TOPICS IN ECONOMICS.** (3) Selected topics in specialized areas of Economic.

**ECON 720 ADVANCED GAME THEORY.** (3)

**ECON 721 ADVANCED MONETARY THEORY.** (3) Selected topics in monetary theory, the theory of monetary policy, and the history of monetary institutions.

**ECON 724 INTERNATIONAL ECONOMICS.** (3) Selected problems in international trade, foreign exchange and international movements of capital.

**ECON 734 ECONOMIC DEVELOPMENT.** (3) Problems of economic growth and planning in selected underdeveloped countries. Topics covered vary from year to year in response to student interests; growth, poverty and income distribution, LDC labour markets and institutions, trade and development, international debt problems, issues in trade policy.

**ECON 737 INDUSTRIAL ORGANIZATION AND REGULATION SEMINAR.** (3) Builds on material covered in ECON 637. Problems are examined in greater depth with specific topics varying from year to year.

**ECON 741 ADVANCED LABOUR ECONOMICS.** (3)

**ECON 742 EMPIRICAL MICROECONOMICS.** (3) (Prerequisite: First term of ECON 662 and either ECON 634 or ECON 641, or consent of the instructor) Surveys the empirical techniques used in applied microeconomic fields, particularly development and labour economics. Focus is on the formulation of empirical models derived from economic theory, and on various estimation methodologies, including panel data econometrics, limited dependent variable models, and duration analysis. A "hands on" approach is emphasized.

**ECON 744 HEALTH ECONOMICS.** (3)

**ECON 750 SELECTED TOPICS: MICROECONOMICS.** (3)

**ECON 752 TOPICS IN FINANCIAL ECONOMICS.** (3)

**ECON 761 ECONOMETRICS: TIME SERIES ANALYSIS.** (3) (Not open to students who have taken ECON 762) (Offered only in some years)

**ECON 762 ECONOMETRICS - ASYMPTOTIC AND FINITE - SAMPLE.** (3) Exact and asymptotic distribution theory in econometrics: basic results for estimation and inference in regression models, extensions and other selected topics including nonparametric and distribution-free methods for econometric models.

**ECON 762D1 (1.5), ECON 762D2 (1.5) ECONOMETRICS - A SYMPTOTIC AND FINITE-SAMPLE.** (Students must register for both ECON 762D1 and ECON 762D2) (No credit will be given for this course unless both ECON 762D1 and ECON 762D2 are successfully completed in consecutive terms) (ECON 762D1 and ECON 762D2 together are equivalent to ECON 762)

**ECON 763 FINANCIAL ECONOMETRICS.** (3) This course covers advanced time series methods used in the analysis of financial data and other potentially non-stationary time series. Topics: integrated time series, co-integration, unit root testing, conditional heteroscedasticity, long memory, non-parametric and neural network models. Applications include market efficiency, stochastic volatility and predictability of asset returns.

**ECON 799 PH.D.COMPREHENSIVE EXAMINATION.** (0)

**ECON 799D1 (0), ECON 799D2 (0) PH.D. COMPREHENSIVE EXAMINATION.** (Students must register for both ECON 799D1 and ECON 799D2) (No credit will be given for this course unless both ECON 799D1 and ECON 799D2 are successfully completed in consecutive terms) (ECON 799D1 and ECON 799D2 together are equivalent to ECON 799)

## 26 Educational and Counselling Psychology

Department of Educational and Counselling Psychology  
Education Building, Room 513  
3700 McTavish Street  
Montreal, QC H3A 1Y2

Telephone – Program Information: (514) 398-4241

Fax: (514) 398-6968

Web site: [www.mcgill.ca/edu-ecp](http://www.mcgill.ca/edu-ecp)

Chair — Susanne P. Lajoie

*Program Directors:*

*Professional Psychology Program Grouping*  
*Counselling Psychology* — Theodore J. Maroun  
*School/Applied Child Psychology* — Ingrid Sladeczek  
*Associate Program Director* — Jacob A. Burack (Applied Developmental Psychology)

*Professional Education Program Grouping*  
*Family Life Education* — Theodore J. Maroun  
*General Educational Psychology* — F. Gillian Bramwell  
*Inclusive and Gifted Education* — Nancy Heath

*Cognition and Instruction Program Grouping* —  
Alenoush Saroyan

*Associate Program Director* — Lynn McAlpine (Adult Education)

### 26.1 Staff

*Emeritus Professors*

Eigil Pedersen; B.A.(Sir G. Wms.), M.A.(McG.), Ed.D.(Harv.)  
Howard A. Stutt; B.A.(Queen's), B.Ed., M.Ed.(Montr.), F.C.C.T.

*Professors*

Mark W. Aulls; B.S.(Ball St.), M.Ed.(Ind.), Ed.D.(Georgia)  
Jacob A. Burack; B.A.(Col.), M.S., M.Phil., Ph.D.(Yale)  
Glenn F. Cartwright; B.A.(Sir G. Wms.), M.A.(McG.), Ph.D.(Alta.),  
F.A.A.S.P., F.C.C.T.

Jeffrey L. Derevensky; B.A.(C. W. Post), M.A., Ph.D.(McG.)  
Janet G. Donald; B.A., M.A.(W. Ont.), Ph.D.(Tor.) (*joint appoint.*  
*with the Centre for University Teaching and Learning*)

Florent R. Dumont; A.B.(Col.), M.S.(S. Conn. St.), Ed.D.(Mass.)  
Carl H. Frederiksen; B.A.(Harv.), M.A., Ph.D.(Ill.)  
Susanne P. Lajoie; B.A., M.A.(McG.), Ph.D.(Stan.) (*James McGill*  
*Chair*)

Lynn McAlpine; B.A.(McG.), M.A.(C'dia), Ph.D.(Tor.) (*joint*  
*appoint. with the Centre for University Teaching and Learning*)  
Bruce M. Shore; B.Sc., M.A.(McG.), Ph.D.(Calg.)  
Cynthia B. Weston; B.A. (Georgetown), M.L.S.(S.U.N.Y.),  
D.Ed.(Wash.) (*joint appoint. with the Centre for University*  
*Teaching and Learning*)

*Associate Professors*

Antonio Bernardelli; B.Sc.(Loy. Coll. Montr.), M.Ed., Ed.D. (McG.)  
(PT)

Robert J. Bracewell; B.Sc., M.A.(McM.), Ph.D.(Tor.)

F. Gillian Bramwell; B.A., M.A.(Sask.), Ph.D.(C'dia)

Alain Breuleux; B.Sc., M.Sc., Ph.D.(Montr.)

Jack de Stefano; B.A.(Loy. Coll. Montr.), M.A., Ed.D.(McG.) (PT)

Kim Cornish; B.Sc.(Lancaster), Ph.D.(Lond.)

Janet Donin; B.A.(Tor.), M.A.(Ill.), Ph.D.(Cal.) (*joint appoint. with*  
*Integrated Studies in Education*)

James P. Hanrahan; B.A., B.Ed.(St. F. X.), M.A.(McG.),  
Ph.D.(Lond.)

Nancy L. Heath; B.A.(McG.), M.Ed.(Ott.), Ph.D.(Tor.) (Frank  
Dawson Fellow)

Michael L. Hoover; B.S.(Tulane), M.A., M.Phil., Ph.D.(Col.)  
 Robert A. Lavers; B.A.(Bishop's), M.Sc., Ph.D.(McG.)  
 Evelyn Lusthaus; B.S., M.S., Ph.D.(S.U.N.Y. Buffalo)  
 Theodore J. Maroun; B.S.(S.U.N.Y. Potsdam), M.S.(Canisius),  
 M.Ed.(S.U.N.Y. Buffalo), Ed.D.(Ind.)  
 Alenoush Saroyan; B.A.(Pahlavi), M.Ed.(Loy. U. Chic.),  
 Ph.D.(McG.) (*joint appoint. with the Centre for University  
 Teaching and Learning*)  
 Ada L. Sinacore; B.A.(Montclair St.), M.A., M.Ed., Ph.D.(Col.)  
 Ingrid E. Sladeczek; B.A., M.S., Ph.D.(Ariz.), A.A.(Maryland)  
 Renée Stevens; B.A.(U.C.L.A.), M.A., Ph.D.(McG.) (PT)

*Assistant Professors*

Marilyn Fitzpatrick; B.A.(Tor.), M.Ed., Ph.D.(McG.)  
 Robert Savage; B.A.(Oxf.), M.Sc.(Camb.), M.Sc., Ph.D.(Lond.)  
 Ronald Stringer; B.Sc., M.A., Ph.D.(Tor.)  
 Victoria Talwar; M.A.(St. Andrews), M.A., Ph.D.(Queens)

*Adjunct Professors*

Annie Alaku (Kativik School Board), H. Don Allen,  
 Joyce F. Benenson, Susan Butler, Franco Carnevale,  
 Bertha Dawang, Valentina De Krom (Nunavut Arctic College),  
 Marcia A. B. Delcourt (Western Connecticut University),  
 Michael J. Dixon (Douglas Hospital), Peter J. Doehring (Douglas  
 Hospital), Mary Elijassiapik (Kativik School Board),  
 Micki Lane (MVM Communications), Elsa Lo, Henry Markovits,  
 Judith A. MacArthur (Kativik School Board), Leonard Shenker,  
 Anastassios Stalikas, Michael Thomas

*Associate Members*

Terry Gandell, Mary H. Maguire, Joseph Rochford, Lalit K.  
 Srivastava, Claire-Dominique Walker, Laura Winer, Vicki Zack

*Part-time Instructors*

Diane Bateman, Andrew Chiarella, Scott Conrod, Dawn Cruchet,  
 Adam Finkelstein, Cindy Finn, Karen Gazith-Cohen,  
 Pheleshia Hudson, Andrew Hum, Denise Maroun, Judy McBride,  
 Sharon Miller, Stephanie Mitelman, Judith Norton,  
 Margaret O'Byrne, Rosemary Reilly, Lisa Reisinger,  
 Andre Renaud, Kieron Rogan, Tina Roth, Christina Rudd,  
 Joan Stafford, Diana Tabatabai, Gerry Weintraub

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## 26.2 Programs Offered

The Department offers M.A. (Non-thesis), M.A. (Thesis), and  
 Ph.D. programs in Counselling Psychology and in Educational  
 Psychology, as well as an M.Ed. in Educational Psychology.

Also offered is a Graduate Diploma in School/Applied Child  
 Psychology (Ph.D. Respecialization); see section 26.5.3 in aectictu\it Tc -0.08dpo,

for Student Disabilities (McGill University Student Services); and the High Ability and Inquiry Research Group concerned with giftedness, creativity, and the role of inquiry in teaching and learning. Students considering participation in the activities of any Centre or research group should contact the researchers responsible,



**Other Requirements**

Most applicants to the Ph.D. program enter with previous supervised fieldwork and with considerable educational and clinical counselling experience. Candidates must coordinate with their academic supervisors an appropriate setting for their fieldwork (pre-doctoral practicum and internship) before entering the formal studies of the program. All students attend weekly case conferences.

A minimum of two years full-time study is required following the Master's degree; three or four are commonly required.

**26.5.2 Graduate Degrees in Educational Psychology – M.Ed., M.A. (Non-thesis), M.A., Ph.D.**

(see also section 26.5.1 "Graduate Degrees in Counselling Psychology – M.A. (Non-thesis), M.A., Ph.D.")

**M.Ed. EDUCATIONAL PSYCHOLOGY**

The aim of the M.Ed. is to offer educators advanced professional training in areas where educational psychology can make a practical contribution to teaching, such as (a) the application of the results of educational research, (b) evaluation of student learning, teaching, programs, and educational experimentation and innovation, (c) a greater understanding of human development, individual differences, and the learning process, and (d) a greater understanding of classroom processes and strategies for teaching diverse learners. Courses will be offered at times that enable part-time study. The program is directed toward the innovative teacher at any level. Applicants may choose the general program or one of several concentrations.

The program offers six M.Ed. areas of concentration of studies:

- (a) Adult Education  
(admission to this concentration has been suspended),
- (b) Computer Applications  
(admission to this concentration has been suspended),
- (c) Education of the Gifted,
- (d) Family Life Education,
- (e) General Educational Psychology,
- (f) Inclusive Education.

Students may design their studies around the Major/Minor areas outlined under the Ph.D. listings. This is especially recommended for students contemplating an application to the Ph.D. (Educational Psychology) following the M.Ed.

**Admission Requirements**

1. An undergraduate degree in education, psychology, or another field relevant to the proposed studies in Educational Psychology.
2. CGPA of 3.0 out of 4.0 or higher in undergraduate studies.
3. Statements of academic and research experience, relevant professional training and experience.
4. Letters of reference from at least two professional colleagues, or from at least two former university instructors, and any others the applicant wishes should be submitted.

**Program Requirements**

The program contains three main parts: (a) 3 required courses (9 credits), (b) two required courses (12 credits) constituting a Special Activity, the student's major project intended to demonstrate by performance that the student has succeeded in the program – the Special Activity may be one large project or two smaller ones, and (c) optional courses, totalling 27 credits that allow the student to design an individualized program or specialize in one or more areas of concentration.

Some courses are offered in alternating years. Students should take EDPE602 early in their program. Pre- or corequisite to EDPE602: EDPE575 Educational Measurement or its equivalent; this course may be included as an elective within the 48 credits of the M.Ed. and should be taken first. The program director or advisor for the M.Ed. area of concentration should be consulted about the specific sequence to be followed

**Required Courses (21 credits)****Elective Courses (27 credits)**

tor or advisor for the M.Ed. area62 of s4Tc -0.268 Tw (outlianother field relevant







**Applied Developmental Psychology**

Applications to the Ph.D. are normally only accepted from the thesis M.A. to Ph.D. route (see the M.A. in Educational Psychology). Other entrance requirements are the same as for School/Applied Child Psychology.

Applicants with exceptional strength in academic studies who do not meet the above requirements may apply for admission to the doctoral program. Such students may be required to complete a qualifying year or term prior to applying for Ph.D. admission.

**Program Requirements**

All students are required to elect and follow a Major and a Minor sequence. Students who are making satisfactory progress in their studies may be permitted to fulfil the requirements of a second Minor within the programs. Courses from Major and Minor sequences taken during M.A. and M.Ed. studies are counted toward the total. A Major consists of five courses (15 credits), except in School/Applied Child Psychology, and a Minor consists of three courses (9 credits). Each Major and Minor is specified below and the degree of choice of courses within each is indicated separately.

Candidates admitted into Ph.D.2 are required to complete a minimum of two full years of study. Candidates admitted into Ph.D.1 are required to complete a minimum of one full year of study.

A dissertation must be submitted displaying original scholarship expressed in satisfactory literary form and constituting a distinct contribution to knowledge on a problem in educational psychology. Work on the thesis normally begins in the Ph.D.2 year and becomes the major concern in the Ph.D.3 year of a student's program of study.

Each student will be supervised by an advisor who will chair the student's doctoral committee. This committee will have a minimum of three members. It will assist the student and advisor in planning the student's program. It will also be consulted in the nomination of external examiners for the thesis.

**Ph.D. Educational Psychology Core Courses**

These requirements apply to all Majors and except for EDPE708 (Comprehensive Examination) they may partly or wholly be completed in the M.A. or M.Ed.

Students may be required to demonstrate proficiency in a second language. Subject to approval by the Program Director.

Research on the cognitive processes and knowledge structures of different backgrounds assess and knowledge structure partly 0 - but anyone-

Language Requirement

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Language Requirement

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**Major Sequences in the Ph.D.(Educational Psychology)**

The following sequences are in addition to the Ph.D. Educational Psychology Core courses.

**(a) Applied Cognitive Science**

Research on the cognitive processes and knowledge structures of different backgrounds assess and knowledge structure partly 0 - but anyone-





3 field experiences; placement in a school covering all grades may be applied to either EDPE721 or EDPE722):

**Internship**

**EDPC 609 PSYCHOLOGICAL TESTING 1.** (3) (Prerequisite: a basic statistics course.) For Counselling Psychology and School/Applied Child Psychology students. History of psychological testing, theoretical aspects of individual and group testing, basic theories of intelligence, and ethical and legal issues in testing. An introduction to tests of intelligence (particularly the WISC-R), aptitude, personality, and interests, including issues of validity, reliability, and construction.

**EDPC 610 PSYCHOLOGICAL TESTING 2.** (3) (Prerequisite: EDPC 609) (Required in School/Applied Psychology. Optional in Counselling Psychology, but recommended for students specializing in school or child counselling.) Theory and interpretation of intelligence tests, particularly the Wechsler and Binet scales. Practice in writing test reports, particularly as a part of a case study. The use of intelligence test results in conjunction with other types of tests.

**EDPC 615 ASSESSMENT AND DIAGNOSIS IN COUNSELLING.** (3) An introduction to differential assessment and diagnosis for counsellors in educational and mental health settings. The clinical interview, the assessment process, the DSM-IV, relevant test

**EDPC 719 ADVANCED SMALL GROUP COUNSELLING.** (3) (Prerequisite: EDPC 709)

**EDPC 720D1 (3), EDPC 720D2 (3) SEMINAR VOCATIONAL PSYCHOLOGY AND CAREER DEVELOPMENT THEORY.** (Students must register for both EDPC 720D1 and EDPC 720D2) (No credit will be given for this course unless both EDPC 720D1 and EDPC 720D2 are successfully completed in consecutive terms) Review and critique of vocational psychology theories and contributions of contemporary career development theories to the understanding of the processes and the determinants of career choice, life stages, adjustment, and career patterns in personal and vocational development. Study of selected problems, designs and outcomes of research in vocational psychology and career development.

**EDPC 770 INDIVIDUAL READING COURSE.** (6)

**EDPC 770D1 (3), EDPC 770D2 (3) INDIVIDUAL READING COURSE.** (Students must register for both EDPC 770D1 and EDPC 770D2) (No credit will be given for this course unless both EDPC 770D1 and EDPC 770D2 are successfully completed in consecutive terms) (EDPC 770D1 and EDPC 770D2 together are equivalent to EDPC 770)

**EDPC 780 PROFESSIONAL DEVELOPMENT.** (6) (For Ph.D. students in Counselling Psychology and, with permission, in School/Applied Child Psychology.)

**EDPC 780D1 (3), EDPC 780D2 (3) PROFESSIONAL DEVELOPMENT.** (Students must register for both EDPC 780D1 and EDPC 780D2) (No credit will be given for this course unless both EDPC 780D1 and EDPC 780D2 are successfully completed in consecutive terms) (EDPC 780D1 and EDPC 780D2 together are equivalent to EDPC 780) Individually planned and developed (1) supervision of Master's practicum or internship students, (2) co-teaching with a McGill staff member, and (3) diversified research experiences utilizing different techniques and instrumentation.

**EDPC 782 DOCTORAL FIELD EXPERIENCE.** (6) (Corequisite: EDPC 780)

**EDPC 782D1 (3), EDPC 782D2 (3) DOCTORAL FIELD EXPERIENCE.** (Corequisite: EDPC 780D1) (Students must register for both EDPC 782D1 and EDPC 782D2) (No credit will be given for this course unless both EDPC 782D1 and EDPC 782D2 are successfully completed in consecutive terms) (EDPC 782D1 and EDPC 782D2 together are equivalent to EDPC 782) A 2-day/week, 2-term (minimum 500 hours) doctoral practicum integrating research, theory, and supervised practica to provide a perspective for clinical work within the field of counselling psychology. Skill development in counselling intervention, assessment, treatment plans, etc. Clientele will be individuals, families, and groups with a variety of concerns.

**EDPC 786 SEMINAR: RESEARCH PROBLEMS IN COUNSELLING.** (6)

**EDPC 786D1 (3), EDPC 786D2 (3) SEMINAR: RESEARCH PROBLEMS IN COUNSELLING.** (Students must register for both EDPC 786D1 and EDPC 786D2) (No credit will be given for this course unless both EDPC 786D1 and EDPC 786D2 are successfully completed in consecutive terms) (EDPC 786D1 and EDPC 786D2 together are equivalent to EDPC 786)

**EDPC 795 SUPERVISED FIELDWORK: COUNSELLING.** (24) (Prerequisites: EDPC 679, EDPC 680, EDPC 682, EDPC 685)

**EDPC 795D1 (12), EDPC 795D2 (12) SUPERVISED FIELDWORK: COUNSELLING.** (Students must register for both EDPC 795D1 and EDPC 795D2) (No credit will be given for this course unless both EDPC 795D1 and EDPC 795D2 are successfully completed in consecutive terms) (EDPC 795D1 and EDPC 795D2 together are equivalent to EDPC 795) A 5-day, 10 to 11-month supervised internship (minimum 1200 hours). Study, observation, assessment and diagnosis, and practice in Counselling Psychology settings.





**EDPE 676 INTERMEDIATE STATISTICS 2.** (3) (Prerequisite: EDPE 675 or equivalent.) Analysis of variance and covariance, fixed, random and mixed effects, crossed and nested designs; regression models. Computer data processing using existing packages.

**EDPE 682 UNIVARIATE/MULTIVARIATE ANALYSIS.** (3) (Prerequisite: EDPE 676) General linear model as a unified data analytic system for estimation and hypothesis testing that subsumes regression, analysis of variance, and analysis of covariance for single dependent variables. Introduction to generalizations involving multiple dependent (criterion) variables. Applications oriented toward education, educational psychology and counselling psychology. Experience with data-analysis tools.

**EDPE 684 APPLIED MULTIVARIATE STATISTICS.** (3) (Prerequisite: EDPE 682 or equivalent.) Principal methods, models, and hypothesis-testing procedures for the prediction and analysis of patterns, structure, and relationships in multivariate data, e.g., discriminant, principal components, canonical correlation, profile analyses, measurement models, factor and path analysis, repeated measures. Applications oriented toward education and educational and counselling psychology. Experience with data-analysis tools.

**EDPE 687 ADVANCED QUALITATIVE METHODS.** (3) (Prerequisite: EDEM 692 or the equivalent.) Origins of qualitative methodologies in sociology, psychology, and education in relation to ideology, epistemology, and methodology. Focus on data reduction and field methods.

**EDPE 691 READING COURSE.** (3)

**EDPE 691D1 (1.5), EDPE 691D2 (1.5) READING COURSE.** (Students must register for both EDPE 691D1 and EDPE 691D2) (No credit will be given for this course unless both EDPE 691D1 and EDPE 691D2 are successfully completed in consecutive terms) (EDPE 691D1 and EDPE 691D2 together are equivalent to EDPE 691)

**EDPE 692 READING COURSE.** (6)

**EDPE 692D1 (3), EDPE 692D2 (3) READING COURSE.** (Students must register for both EDPE 692D1 and EDPE 692D2) (No credit will be given for this course unless both EDPE 692D1 and EDPE 692D2 are successfully completed in consecutive terms) (EDPE 692D1 and EDPE 692D2 together are equivalent to EDPE 692)

**EDPE 693 THESIS 3.** (3) Thesis research under supervision of a research director.

**EDPE 694 THESIS 4.** (3) Thesis research under supervision of a research director.

**EDPE 695 THESIS 5.** (6) Thesis research under supervision of a research director.

**EDPE 695D1 (3), EDPE 695D2 (3) THESIS 5.** (Students must register for both EDPE 695D1 and EDPE 695D2) (No credit will be given for this course unless both EDPE 695D1 and EDPE 695D2 are successfully completed in consecutive terms) (EDPE 695D1 and EDPE 695D2 together are equivalent to EDPE 695) Thesis research under supervision of a research director.

**EDPE 696 THESIS 6.** (6) Thesis research under supervision of a research director.

**EDPE 696D1 (3), EDPE 696D2 (3) THESIS 6.** (Students must register for both EDPE 696D1 and EDPE 696D2) (No credit will be given for this course unless both EDPE 696D1 and EDPE 696D2 are successfully completed in consecutive terms) (EDPE 696D1 and EDPE 696D2 together are equivalent to EDPE 696) Thesis research under supervision of a research director.

**EDPE 697 SPECIAL ACTIVITY 1.** (6)

**EDPE 697D1 (3), EDPE 697D2 (3) SPECIAL ACTIVITY 1.** (Students must register for both EDPE 697D1 and EDPE 697D2) (No credit will be given for this course unless both EDPE 697D1 and EDPE 697D2 are successfully completed in consecutive terms) (EDPE 697D1 and EDPE 697D2 together are equivalent to EDPE 697)

**EDPE 698 SPECIAL ACTIVITY 2.** (6)

**EDPE 698D1 (3), EDPE 698D2 (3) SPECIAL ACTIVITY 2.** (Students must register for both EDPE 698D1 and EDPE 698D2) (No credit will be given for this course unless both EDPE 698D1 and EDPE 698D2 are successfully completed in consecutive terms) (EDPE 698D1 and EDPE 698D2 together are equivalent to EDPE 698) A project relevant to improving educational practice. It may be an internship, a research project, or an innovation in teaching supervised by the student's advisor and with the approval of the department. It is completed by the submission of a project report, monograph, or production. For M.Ed. students only.

**EDPE 708 COMPREHENSIVE EXAMINATION.** (6) A four-part evaluation which is normally taken at the end of the Ph.D. 2 year. A detailed description of the examination is provided to all students.

**EDPE 708D1 (3), EDPE 708D2 (3) COMPREHENSIVE EXAMINATION.** (Students must register for both EDPE 708D1 and EDPE 708D2) (No credit will be given for this course unless both EDPE 708D1 and EDPE 708D2 are successfully completed in consecutive terms) (EDPE 708D1 and EDPE 708D2 together are equivalent to EDPE 708) A four-part evaluation which is normally taken at the end of the Ph.D. 2 year. A detailed description of the examination is provided to all students.

**EDPE 710 CONSULTATION IN SCHOOL PSYCHOLOGY.** (3) (Corequisites: EDPE 625, EDPE 626 or equivalent.) Open only to students within 50027A, 50027AB, 50027AC, 50027AD, 50027AE, 50027AF, 50027AG, 50027AH, 50027AI, 50027AJ, 50027AK, 50027AL, 50027AM, 50027AN, 50027AO, 50027AP, 50027AQ, 50027AR, 50027AS, 50027AT, 50027AU, 50027AV, 50027AW, 50027AX, 50027AY, 50027AZ, 50027BA, 50027BB, 50027BC, 50027BD, 50027BE, 50027BF, 50027BG, 50027BH, 50027BI, 50027BJ, 50027BK, 50027BL, 50027BM, 50027BN, 50027BO, 50027BP, 50027BQ, 50027BR, 50027BS, 50027BT, 50027BU, 50027BV, 50027BW, 50027BX, 50027BY, 50027BZ, 50027CA, 50027CB, 50027CC, 50027CD, 50027CE, 50027CF, 50027CG, 50027CH, 50027CI, 50027CJ, 50027CK, 50027CL, 50027CM, 50027CN, 50027CO, 50027CP, 50027CQ, 50027CR, 50027CS, 50027CT, 50027CU, 50027CV, 50027CW, 50027CX, 50027CY, 50027CZ, 50027DA, 50027DB, 50027DC, 50027DD, 50027DE, 50027DF, 50027DG, 50027DH, 50027DI, 50027DJ, 50027DK, 50027DL, 50027DM, 50027DN, 50027DO, 50027DP, 50027DQ, 50027DR, 50027DS, 50027DT, 50027DU, 50027DV, 50027DW, 50027DX, 50027DY, 50027DZ, 50027EA, 50027EB, 50027EC, 50027ED, 50027EE, 50027EF, 50027EG, 50027EH, 50027EI, 50027EJ, 50027EK, 50027EL, 50027EM, 50027EN, 50027EO, 50027EP, 50027EQ, 50027ER, 50027ES, 50027ET, 50027EU, 50027EV, 50027EW, 50027EX, 50027EY, 50027EZ, 50027FA, 50027FB, 50027FC, 50027FD, 50027FE, 50027FF, 50027FG, 50027FH, 50027FI, 50027FJ, 50027FK, 50027FL, 50027FM, 50027FN, 50027FO, 50027FP, 50027FQ, 50027FR, 50027FS, 50027FT, 50027FU, 50027FV, 50027FW, 50027FX, 50027FY, 50027FZ, 50027GA, 50027GB, 50027GC, 50027GD, 50027GE, 50027GF, 50027GG, 50027GH, 50027GI, 50027GJ, 50027GK, 50027GL, 50027GM, 50027GN, 50027GO, 50027GP, 50027GQ, 50027GR, 50027GS, 50027GT, 50027GU, 50027GV, 50027GW, 50027GX, 50027GY, 50027GZ, 50027HA, 50027HB, 50027HC, 50027HD, 50027HE, 50027HF, 50027HG, 50027HH, 50027HI, 50027HJ, 50027HK, 50027HL, 50027HM, 50027HN, 50027HO, 50027HP, 50027HQ, 50027HR, 50027HS, 50027HT, 50027HU, 50027HV, 50027HW, 50027HX, 50027HY, 50027HZ, 50027IA, 50027IB, 50027IC, 50027ID, 50027IE, 50027IF, 50027IG, 50027IH, 50027II, 50027IJ, 50027IK, 50027IL, 50027IM, 50027IN, 50027IO, 50027IP, 50027IQ, 50027IR, 50027IS, 50027IT, 50027IU, 50027IV, 50027IW, 50027IX, 50027IY, 50027IZ, 50027JA, 50027JB, 50027JC, 50027JD, 50027JE, 50027JF, 50027JG, 50027JH, 50027JI, 50027JJ, 50027JK, 50027JL, 50027JM, 50027JN, 50027JO, 50027JP, 50027JQ, 50027JR, 50027JS, 50027JT, 50027JU, 50027JV, 50027JW, 50027JX, 50027JY, 50027JZ, 50027KA, 50027KB, 50027KC, 50027KD, 50027KE, 50027KF, 50027KG, 50027KH, 50027KI, 50027KJ, 50027KK, 50027KL, 50027KM, 50027KN, 50027KO, 50027KP, 50027KQ, 50027KR, 50027KS, 50027KT, 50027KU, 50027KV, 50027KW, 50027KX, 50027KY, 50027KZ, 50027LA, 50027LB, 50027LC, 50027LD, 50027LE, 50027LF, 50027LG, 50027LH, 50027LI, 50027LJ, 50027LK, 50027LL, 50027LM, 50027LN, 50027LO, 50027LP, 50027LQ, 50027LR, 50027LS, 50027LT, 50027LU, 50027LV, 50027LW, 50027LX, 50027LY, 50027LZ, 50027MA, 50027MB, 50027MC, 50027MD, 50027ME, 50027MF, 50027MG, 50027MH, 50027MI, 50027MJ, 50027MK, 50027ML, 50027MM, 50027MN, 50027MO, 50027MP, 50027MQ, 50027MR, 50027MS, 50027MT, 50027MU, 50027MV, 50027MW, 50027MX, 50027MY, 50027MZ, 50027NA, 50027NB, 50027NC, 50027ND, 50027NE, 50027NF, 50027NG, 50027NH, 50027NI, 50027NJ, 50027NK, 50027NL, 50027NM, 50027NN, 50027NO, 50027NP, 50027NQ, 50027NR, 50027NS, 50027NT, 50027NU, 50027NV, 50027NW, 50027NX, 50027NY, 50027NZ, 50027OA, 50027OB, 50027OC, 50027OD, 50027OE, 50027OF, 50027OG, 50027OH, 50027OI, 50027OJ, 50027OK, 50027OL, 50027OM, 50027ON, 50027OO, 50027OP, 50027OQ, 50027OR, 50027OS, 50027OT, 50027OU, 50027OV, 50027OW, 50027OX, 50027OY, 50027OZ, 50027PA, 50027PB, 50027PC, 50027PD, 50027PE, 50027PF, 50027PG, 50027PH, 50027PI, 50027PJ, 50027PK, 50027PL, 50027PM, 50027PN, 50027PO, 50027PP, 50027PQ, 50027PR, 50027PS, 50027PT, 50027PU, 50027PV, 50027PW, 50027PX, 50027PY, 50027PZ, 50027QA, 50027QB, 50027QC, 50027QD, 50027QE, 50027QF, 50027QG, 50027QH, 50027QI, 50027QJ, 50027QK, 50027QL, 50027QM, 50027QN, 50027QO, 50027QP, 50027QQ, 50027QR, 50027QS, 50027QT, 50027QU, 50027QV, 50027QW, 50027QX, 50027QY, 50027QZ, 50027RA, 50027RB, 50027RC, 50027RD, 50027RE, 50027RF, 50027RG, 50027RH, 50027RI, 50027RJ, 50027RK, 50027RL, 50027RM, 50027RN, 50027RO, 50027RP, 50027RQ, 50027RR, 50027RS, 50027RT, 50027RU, 50027RV, 50027RW, 50027RX, 50027RY, 50027RZ, 50027SA, 50027SB, 50027SC, 50027SD, 50027SE, 50027SF, 50027SG, 50027SH, 50027SI, 50027SJ, 50027SK, 50027SL, 50027SM, 50027SN, 50027SO, 50027SP, 50027SQ, 50027SR, 50027SS, 50027ST, 50027SU, 50027SV, 50027SW, 50027SX, 50027SY, 50027SZ, 50027TA, 50027TB, 50027TC, 50027TD, 50027TE, 50027TF, 50027TG, 50027TH, 50027TI, 50027TJ, 50027TK, 50027TL, 50027TM, 50027TN, 50027TO, 50027TP, 50027TQ, 50027TR, 50027TS, 50027TT, 50027TU, 50027TV, 50027TW, 50027TX, 50027TY, 50027TZ, 50027UA, 50027UB, 50027UC, 50027UD, 50027UE, 50027UF, 50027UG, 50027UH, 50027UI, 50027UJ, 50027UK, 50027UL, 50027UM, 50027UN, 50027UO, 50027UP, 50027UQ, 50027UR, 50027US, 50027UT, 50027UU, 50027UV, 50027UW, 50027UX, 50027UY, 50027UZ, 50027VA, 50027VB, 50027VC, 50027VD, 50027VE, 50027VF, 50027VG, 50027VH, 50027VI, 50027VJ, 50027VK, 50027VL, 50027VM, 50027VN, 50027VO, 50027VP, 50027VQ, 50027VR, 50027VS, 50027VT, 50027VU, 50027VV, 50027VW, 50027VX, 50027VY, 50027VZ, 50027WA, 50027WB, 50027WC, 50027WD, 50027WE, 50027WF, 50027WG, 50027WH, 50027WI, 50027WJ, 50027WK, 50027WL, 50027WM, 50027WN, 50027WO, 50027WP, 50027WQ, 50027WR, 50027WS, 50027WT, 50027WU, 50027WV, 50027WW, 50027WX, 50027WY, 50027WZ, 50027XA, 50027XB, 50027XC, 50027XD, 50027XE, 50027XF, 50027XG, 50027XH, 50027XI, 50027XJ, 50027XK, 50027XL, 50027XM, 50027XN, 50027XO, 50027XP, 50027XQ, 50027XR, 50027XS, 50027XT, 50027XU, 50027XV, 50027XW, 50027XX, 50027XY, 50027XZ, 50027YA, 50027YB, 50027YC, 50027YD, 50027YE, 50027YF, 50027YG, 50027YH, 50027YI, 50027YJ, 50027YK, 50027YL, 50027YM, 50027YN, 50027YO, 50027YP, 50027YQ, 50027YR, 50027YS, 50027YT, 50027YU, 50027YV, 50027YW, 50027YX, 50027YY, 50027YZ, 50027ZA, 50027ZB, 50027ZC, 50027ZD, 50027ZE, 50027ZF, 50027ZG, 50027ZH, 50027ZI, 50027ZJ, 50027ZK, 50027ZL, 50027ZM, 50027ZN, 50027ZO, 50027ZP, 50027ZQ, 50027ZR, 50027ZS, 50027ZT, 50027ZU, 50027ZV, 50027ZW, 50027ZX, 50027ZY, 50027ZZ

students in School/Applied Child Psychology. Field experience. Two days or 16 hours per week supervised by faculty members and a field supervisor in a school providing secondary education. Weekly class meetings. Students must also register for either EDPE 721 or EDPE 723 in the same academic year.

**EDPE 725 INTERNSHIP 1 - SCHOOL PSYCHOLOGY.** (12) (Prerequisites: EDPE 708 and two of EDPE 721, EDPE 722 or EDPE 723)

**EDPE 725D1 (6), EDPE 725D2 (6) INTERNSHIP 1 - SCHOOL PSYCHOLOGY.** (Prerequisites: EDPE 708 and two of EDPE 721, EDPE 722 or EDPE 723) (Students must register for both EDPE 725D1 and EDPE 725D2) (No credit will be given for this course unless both EDPE 725D1 and EDPE 725D2 are successfully completed in consecutive terms) (EDPE 725D1 and EDPE 725D2 together are equivalent to EDPE 725) Open only to Ph.D. students in School/Applied Child Psychology. A 2 1/2 day, 10 to 12-month supervised internship (minimum 600 hours) including assessment and diagnosis normally in a school-based setting. This also includes group supervision to discuss cases that arise in internship settings. May be combined with EDPE 726 in a single full-time year long internship; this full-time pattern is typical in accredited sites.

**EDPE 726 INTERNSHIP 2 - SCHOOL PSYCHOLOGY.** (12) (Prerequisites: EDPE 708 and two of EDPE 721, EDPE 722 or EDPE 723)

**EDPE 726D1 (6), EDPE 726D2 (6) INTERNSHIP 2 - SCHOOL PSYCHOLOGY.** (Prerequisites: EDPE 708 and two of EDPE 721, EDPE 722 or EDPE 723) (Students must register for both EDPE 726D1 and EDPE 726D2) (No credit will be given for this course unless both EDPE 726D1 and EDPE 726D2 are successfully completed in consecutive terms) (EDPE 726D1 and EDPE 726D2 together are equivalent to EDPE 726) Open only to Ph.D. students in School/Applied Child Psychology. A 2 1/2 day, 10 to 12-month supervised internship (minimum 600 hours) including assessment and diagnosis normally in an educationally relevant community-based center (e.g., hospital, clinic), group supervision, case discussions. May be combined with EDPE 725 in a single full-time year long internship; this full-time pattern is typical in accredited sites.

## 26.6.4 EDPH – Ed Psych & Couns (Collegial)

### Courses currently scheduled for 2004-05:

**EDPH 681 HIGHER EDUCATION DEVELOPMENT.** (3) (Corequisite: EDPH 582 or permission of instructor) Analysis of program and curriculum development across disciplines and multidisciplinary areas of study at the postsecondary level. Program organization and planning in particular disciplinary areas and in relation to that of other disciplines.

**EDPH 689 TEACHING AND LEARNING IN HIGHER EDUCATION.** (3) Students will develop an understanding of teaching and learning as a process in which instruction is based on the learning to be accomplished. Students will design, develop, and evaluate a university course of their choice, and will develop facility and confidence in using teaching methods appropriate to their domains.

## 26.6.5 EDPI – Ed Psych & Couns (Inclusive)

### Courses currently scheduled for 2004-05:

**EDPI 526 TALENTED AND GIFTED STUDENTS.** (3) (Offered through Continuing Education.) The psychology and education of exceptionally able children. Definitions, assessment, classroom adaptations, technology, educational programs and educational issues. The course combines theoretical background and practical concerns. Application component: application of teaching methods with exceptionally able students.

**EDPI 527 CREATIVITY AND ITS CULTIVATION.** (3) (Offered through Continuing Education.) Recent research, theory, and educational practice concerning creativity, with special attention to creativity in students and educational settings.

**EDPI 536 PRACTICUM GIFTED EDUCATION 1.** (3) (Prerequisite: EDPI 526) (Normally available in July only during the Explorations Gifted Summer School) (Permission to register is required from Explorations)

**EDPI 537 PRACTICUM GIFTED EDUCATION 2.** (3) (Prerequisite: EDPI 526) (Normally taken with EDPI 536. Permission is required to register)

**EDPI 539 FIELD WORK 1: EXCEPTIONAL STUDENTS.** (3) (Permission of Program Director required.) Supervised experience with exceptional students in an approved educational setting.

**EDPI 540 FIELD WORK 2: EXCEPTIONAL STUDENTS.** (3) (Prerequisite: EDPI 539) (Permission of Program Director required.) Supervised experience with exceptional students in an approved educational setting.

**EDPI 543 FAMILY, SCHOOL AND COMMUNITY.** (3) (Formerly 414-443) (Offered through Summer Studies.)

**EDPI 642 EDUCATIONAL OF LEARNERS/SPECIAL NEEDS 1.** (3) Introduction to learners with different types of special needs. Emphasis on current research and practice of educating students with special needs.

**EDPI 643 EDUCATION OF LEARNERS/SPECIAL NEEDS 2.** (3) Contemporary issues in the education of students with special needs: assessment and identification; service delivery models; instructional methods; parent/professional relationships; research priorities; legislative policies; adult education; employment training.

**EDPI 645 DIAGNOSIS AND ASSESSMENT IN SPECIAL EDUCATION.** (3) Purposes of diagnosis and assessment; formal and informal assessment procedures; issues in traditional testing procedures; emerging trends in assessment.

**EDPI 654 INSTRUCTION/CURRICULUM ADAPTION.** (3)

**EDPI 656 CLINIC PRACTICUM IN SPECIAL EDUCATION.** (6)

**EDPI 656D1 (3), EDPI 656D2 (3) CLINIC PRACTICUM IN SPECIAL EDUCATION.** (Students must register for both EDPI 656D1 and EDPI 656D2) (No credit will be given for this course unless both EDPI 656D1 and EDPI 656D2 are successfully completed in consecutive terms) (EDPI 656D1 and EDPI 656D2 together are equivalent to EDPI 656) Participation as a special education professional in a field setting. Opportunity to plan, implement and evaluate curriculum for students with special needs, and participate as a team member.

**EDPI 657 PRACTICUM: LEARNING DISABILITIES.** (3) (Prerequisite: a course in learning difficulties or permission of the instructor.)

**EDPI 658 INTERNSHIP: LEARNING DISABILITIES.** (3) (Prerequisite: EDPE 657)

**EDPI 663 INSTRUCTION: INTEGRATED SETTINGS.** (3)

**EDPI 664 LEADERSHIP AND CHANGE IN SPECIAL EDUCATION.** (3)

**EDPI 665 RESEARCH AND THEORY IN LEARNING DISABILITIES.** (3) Review of recent research and literature in the field of learning disabilities; examination of research and theory as it relates to current practices.

**EDPI 667 BEHAVIORAL AND EMOTIONAL PROBLEMS.** (3) (Prerequisite: EDPE 615 or EDPI 643)

**EDPI 680 SELECTED TOPICS IN SPECIAL EDUCATION 1.** (3)

**EDPI 681 SELECTED TOPICS IN SPECIAL EDUCATION 2.** (3)

**EDPI 743 SEMINAR ON SPECIAL NEEDS.** (3) (Prerequisite: EDPI 643) Contemporary issues in the education of students with special needs. Professional and research issues.

**EDPI 756 INTERNSHIP/SPECIAL NEEDS EDUCATION.** (3) (Prerequisite: EDPI 656)

**EDPI 756D1 (1.5), EDPI 756D2 (1.5) INTERNSHIP/SPECIAL NEEDS EDUCATION.** (Students must register for both EDPI 756D1 and EDPI 756D2) (No credit will be given for this course unless both EDPI 756D1 and EDPI 756D2 are successfully completed in consecutive terms) (EDPI 756D1 and EDPI 756D2 together are equivalent to EDPI 756) Supervised internship in special needs education in a field setting tailored to the needs and interests of individual students.

## COURSES IN OTHER DEPARTMENTS

Students are encouraged to broaden their perspectives with elective courses from elsewhere in the Faculty of Education and the

University as a whole. Eligibility to enrol in a specific course should  
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The research interests and facilities of the Department are very extensive, involving more than 30 faculty members and 200 post-graduate students. The major activities are divided into the following groups: Biomedical Engineering, Communications Systems, Computer Vision and Robotics, Computational Analysis for Engineering Design, Software Systems for Intelligent Design, Electronic Devices and Materials, High Frequency Electromagnetics and Optics, Power Engineering, Systems and Control, Microelectronics and Computer Systems, and Photonics.

**Research Facilities**

The Department has extensive laboratory facilities for all its main research areas. In addition, McGill University often collaborates with other Institutions for teaching and research.

- The laboratories for research in Robotics, Control and Vision are in the Centre for Intelligent Machines (CIM).
- Telecommunications laboratories focus their work on signal compression and wireless communications. These laboratories form part of the Canadian Institute for Telecommunications Research (CITR). This is a federally funded network of Centers of Excellence.
- The Microelectronics and Computer System (MACS) Laboratory supports research in VLSI, mixed signal circuits, design for testability, formal methods telecommunications, computing and optical systems.
- Antenna and microwave research, and optical fiber and integrated optics research are carried out in a fully equipped facility.
- The Photonics Systems laboratory includes continuous wave and femtosecond Ti:Sapphire lasers, diode lasers, extensive optics and optomechanics, and sophisticated electronic and imaging equipment.
- Solid state facilities include measurement equipment for magnetic and electric fields, current, voltage, power, and temperature. The Centre for neutron and x-ray scattering is also available.

The Department accepts most of its graduate students for September; the chance of acceptance for January is significantly lower.

Application deadlines:

September admission:

February 1 - all applicants.

January admission:

July 15 - International applicants

October 15 - Canadian citizens and Permanent Residents.

All documents must be received by the Department's Admissions Committee by the above deadlines.

McGill's on-line application form for graduate program candidates is available at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

## 27.5 Program Requirements

A student may satisfy the M.Eng. degree requirements by completing one of the following options:

### M.Eng. Thesis Option (46 credits)

The Thesis option requires satisfactory completion of six graduate level courses (with a grade of B or better) of which four courses must be chosen from the Department (ECSE5xx or ECSE6xx), plus research leading to a Master's thesis (28 credits), the total amounting to at least 46 credits. Students who are required to take more than two non-departmental courses must bring a letter of recommendation from their supervisors outlining the reason for such an action. There are no circumstances under which the maximum number of non-departmental courses will be raised above three.

The following are the thesis component courses:

ECSE691 Thesis Research 1	4 credits
ECSE692 Thesis Research 2	4 credits
ECSE693 Thesis Research 3	4 credits
ECSE694 Thesis Research 4	4 credits
ECSE695 Thesis Research 5	4 credits
ECSE696 Thesis Research 6	4 credits
ECSE697 Thesis Research 7	4 credits
Total credit weight of thesis:	28 credits

Students who choose the thesis option must register for all 28 credits during the course of study. Students in the thesis option must carry a full load (minimum of 12 credits) during the three terms of the residency requirement.

### M.Eng. Thesis - Computational Science and Engineering (CSE) Option (47 credits)

**Required Courses** (29 credits)

ECSE670D1 (.5) CSE Seminar	
ECSE670D2 (.5) CSE Seminar	
ECSE691 (4) Thesis Research 1	
ECSE692 (4) Thesis Research 2	
ECSE693 (4) Thesis Research 3	
ECSE694 (4) Thesis Research 4	
ECSE695 (4) Thesis Research 5	
ECSE696 (4) Thesis Research 6	
ECSE697 (4) Thesis Research 7	

**Complementary Courses** (minimum 18 credits)

Six courses at the graduate level (500 or above) are required (minimum 18 credits), with a grade of B or better. Two courses (minimum 6 credits) from List A, and two courses (minimum 6 credits) from List B. At least two of the courses taken from Lists A and B must be from outside the Department of Electrical and Computer Engineering.

*List A - Scientific Computing Courses:*

CIVE602 (4) Finite Element Analysis	
COMP522 (4) Modelling and Simulation	
COMP540 (3) Matrix Computations	
COMP566 (3) Discrete Optimization 1	
MATH578 (4) Numerical Analysis 1	
MATH579 (4) Numerical Differential Equations	

*List B - Applications and Specialized methods Courses:*

ATOC512 (3) Atmospheric and Oceanic Dynamics	
ATOC513 (3) Waves and Stability	
ATOC515 (3) Turbulence in Atmosphere and Oceans	
CIVE514 (3) Structural Mechanics	
CIVE572 (3) Computational Hydraulics	
CIVE603 (4) Structural Dynamics	
CIVE613 (4) Numerical Methods: Structural Engineering	
COMP505 (3) Advanced Computer Architecture	
COMP557 (3) Fundamentals of Computer Graphics	
COMP558 (3) Fundamentals of Computer Vision	
COMP567 (3) Discrete Optimization 2	
COMP621 (4) Optimizing Compilers	
COMP642 (4) Numerical Estimation	
COMP767 (4) Advanced Topics: Applications 2	
ECSE507 (3) Optimization and Optimal Control	
ECSE532 (3) Computer Graphics	
ECSE547 (3) Finite Elements in Electrical Engineering	
ECSE549 (3) Expert Systems in Electrical Design	
MATH555 (4) Fluid Dynamics	
MATH560 (4) Optimization	
MATH651 (4) Asymptotic Expansion and Perturbation Optimization Methods	
MATH761 (4) Topics in Applied Mathematics 1	
MECH533 (3) Subsonic Aerodynamics	
MECH537 (3) High-Speed Aerodynamics	
MECH538 (3) Unsteady Aerodynamics	
MECH539 (3) Computational Aerodynamics	
MECH541 (3) Optimization	

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 ECSE549 Optimization  
 MATH Optimization 3) MECH541 4) M

Students who choose the thesis option must register for all 29 credits during the course of study. Students in the thesis option must carry a full load (minimum of 12 credits) during the three terms of the residency requirement.

### M.Eng. Non-Thesis (Project) Option (47 credits)

The Project option requires satisfactory completion of at least nine graduate level courses (with a grade of B or better) of which six courses must be chosen from the Department (ECSE5xx or ECSE6xx), plus a project (up to 20 credits), the total amounting to 47 credits. Students who are required to take more than three non-departmental courses must bring a letter of recommendation from their supervisors outlining the reason for such an action. There are no circumstances under which the maximum number of non-departmental courses will be raised above four.

The following are the project component courses:

ECSE651 M. Eng. Project 1	1 credit
ECSE652 M.Eng. Project 2	2 credits
ECSE653 M.Eng. Project 3	3 credits
ECSE654 M.Eng. Project 4	4 credits
ECSE655 M.Eng. Project 5	5 credits
ECSE656 M.Eng. Project 6	5 credits
Total number of project credits:	20 credits

The credits assigned to the project can vary between 11 and 20 depending on the number of course credits taken. A part-time program is possible.

Non-thesis option students have an oral presentation and two examiners grade their project.





nect analysis. Complex frequency response. Analysis of radio frequency circuits.

**ECSE 610 WIRELESS TELECOMMUNICATIONS** (4) (3-0-9) (Prerequisite: ECSE 511) An introduction to the theory and technology of wireless networks, with the emphasis on networking. Topics include channel modelling, cellularity and frequency reuse, the multiple access problem, service differentiation, network mobility, smart antennas and aspects of network management. First and second generation systems are described in detail.

**ECSE 615 DIGITAL SIGNAL PROCESSING 2** (4) (3-0-9) (Prerequisites: ECSE 509 and ECSE 512)

**ECSE 617 ARRAY SIGNAL PROCESSING** (4) (3-0-9) (Prerequisite: ECSE 412 or ECSE 511, ECSE 510)

**ECSE 618 HAPTICS** (4) (3-0-9) (Prerequisite: permission of instructor.)

**ECSE 620 INFORMATION THEORY AND CODING** (4) (3-0-9) (Prerequisites: ECSE 411 or ECSE 511, and ECSE 510) Point-to-point communications: source and channel codes, lossless source coding (prefix codes, Ziv-Lempel algorithm). Performance limits for channel codes, source codes, and prefix codes. Error-prone channel end performance limits. Error-correcting codes, convolutional codes, linear codes. The effects of fading on reliable communications, TDMA, CDMA, secure communications.

**ECSE 621 STAT. DETECTION AND ESTIMATION** (4) (3-0-9) (Prerequisites: ECSE 411 or ECSE 511, ECSE 510)

**ECSE 623 DIGITAL COMMUNICATION 2** (4) (3-0-9) (Prerequisites: ECSE 510, ECSE 521) Channel coding: convolutional codes, Viterbi algorithm, recursive LDPC codes, turbo codes, iterative decoding. Multipath fading channels: Rayleigh fading and models, diversity techniques for slowly fading channels, detection techniques for frequency selective channels. Spread Spectrum Communications: direct sequence and frequency hopping, multiple access techniques, single and multi-user demodulation techniques. Multicarrier systems.

**ECSE 625 TELECOMMUNICATIONS NETWORKS** (4) (3-0-9) (Prerequisites: ECSE 511, ECSE 510, ECSE 512) Design of communication systems for telecommunication systems. Design of communication systems for telecommunication systems. Design of communication systems for telecommunication systems.

Program Catalog: telecomm, telecomm, sg7, twok, T9, slowly, f36user, demo071, Spectrf, 0.of, vig, chanE

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## 29.2 Programs Offered

The Department of Epidemiology and Biostatistics offers four programs of study: Diploma, M.Sc. (thesis), M.Sc. (non-thesis) and Ph.D.

Students in M.Sc. and Ph.D. degree programs may choose to follow a program of study in either of two streams: epidemiology or biostatistics. The differences between the streams are in the specific course requirements and the focus of the thesis research.

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## 29.3 Admission Requirements

Candidates for the Diploma and the M.Sc. degree must hold a bachelor's degree or equivalent, and those for a Ph.D. must hold a Master's degree in epidemiology and biostatistics or its equivalent.

Epidemiology as it is practiced today is a highly quantitative field and requires a reasonable level of mathematical competency. Therefore, good knowledge of differential and integral calculus at the level of a first year undergraduate course is highly recommended. Students who would benefit from refreshing their calculus knowledge are encouraged to take a calculus course prior to admission in the department.

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## 29.4 Application Procedures

When application is made to the Department at the M.Sc. level, students should clearly identify the M.Sc. degree program for which they wish to be considered.

Completed applications, with all supporting documents, must reach the Department by February 1st of the year to which candidate is applying.

Please download required documents from our Web site: [www.mcgill.ca/epi-biostat](http://www.mcgill.ca/epi-biostat), click: Graduate Studies to link to degree programs.

McGill's on-line application form for graduate program candidates is available at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

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## 29.5 Program Requirements

### Diploma

Students must complete 30 credits, 21 of them in course work. Students must take (or be exempted from) EPIB606 and EPIB607. The remaining courses, to an overall total of 21 credits, should be chosen in consultation with the student's advisor. In addition, students must submit a Diploma dissertation (EPIB650: 9 credits) on an approved topic.

### M.Sc. Degrees

The Department offers two programs of study towards an M.Sc. degree, the M.Sc. (thesis) and the M.Sc. (non-thesis). Both require completion of a minimum of 48 credits. The same courses are available to students in both programs, and only the breadth and depth of knowledge acquired differs between the thesis and non-thesis options.

Students in the non-thesis option must take (or be exempted from) EPIB606, EPIB607\*, EPIB611, EPIB640, EPIB695 and EPIB621\*. The remaining credits must include a project (EPIB630).

Students in the thesis option must take (or be exempted from) EPIB606, EPIB607\*, EPIB611, EPIB640, EPIB695 and EPIB621\*. The remaining credits must include a 24-credit thesis (EPIB690) on an approved subject of research.

NB: Both options: The remaining course work must be in graduate courses chosen in consultation with the student's academic advisor or supervisor.

\* Students (either option) in the biostatistics stream will be required to take MATH 556 (4 credits) and MATH 557 (4 credits) in place of EPIB 607/621/681. EPIB 611 is not required of students in the biostatistics stream. A description of the MATH courses can be found in the Department of Mathematics and Statistics entry.

### Ph.D. Degree

Students must complete EPIB 604D1/EPIB 604D2(Graduate Seminar)(Awaiting University Approval) and may choose other courses in consultation with their supervisors. Students must pass

iate and multivariate statistical techniques for continuous categorical and survival data. Topics include generalized linear models, multiple linear and logistic regression, introductory survival analysis, model selection. Maximum likelihood and Bayesian approaches will be presented.

**EPIB 622 SEMINAR: APPLICATIONS OF STATISTICS IN HEALTH SCIENCES.** (3) (Prerequisites: EPIB 607 and EPIB 621)

**EPIB 623 RESEARCH DESIGN IN HEALTH SCIENCES.** (3) (Prerequisite: EPIB 606. Restrictions: Diploma/Degree students in Epidemiology and Biostatistics) Lectures and discussions plus oral and written presentations by students, to provide guidance and experience in the development of objectives, for the formulation and constructive peer criticism of designs for research in the health sciences, including etiologic and evaluative, cross-sectional, case-reference and cohort studies.

**EPIB 626 RISKS AND HAZARDS IN EPIDEMIOLOGY.** (3) (Prerequisites: EPIB 621 and EPIB 681) Classical and modern methods of analysis for survival, cohort, and case-control studies. Emphasis on the similarity of models used in the analyses of these studies. Hazard functions. Relative-risk functions. Regression modelling. Likelihood function. Interpretation of statistical parameters.

**EPIB 630 RESEARCH PROJECT IN EPIDEMIOLOGY.** (6) (Restricted to non-thesis M.Sc. students who have completed requirements) Students will critically assess research and summarize the findings in a research paper on a health related topic from an epidemiologic perspective. Topic to be approved by faculty member who will direct student and evaluate the paper.

**EPIB 630D1 (3), EPIB 630D2 (3) RESEARCH PROJECT IN EPIDEMIOLOGY.** (Students must register for both EPIB 630D1 and EPIB 630D2) (No credit will be given for this course unless both EPIB 630D1 and EPIB 630D2 are successfully completed in consecutive terms) (EPIB 630D1 and EPIB 630D2 together are equivalent to EPIB 630) Students will critically assess research and summarize the findings in a research paper on a health related topic from an epidemiologic perspective. Topic to be approved by faculty member who will direct student and evaluate the paper.

**EPIB 631 PHARMACOEPIDEMIOLoGY 2.** (2) (Offered only in Summer term.) (Prerequisites: EPIB 633, or instructor's permission, and basic knowledge of epidemiology and biostatistics)

**EPIB 631D1 (1), EPIB 631D2 (1) PHARMACOEPIDEMIOLoGY 2.** (Students must register for both EPIB 631D1 and EPIB 631D2) (No credit will be given for this course unless both EPIB 631D1 and EPIB 631D2 are successfully completed in consecutive terms) (EPIB 631D1 and EPIB 631D2 together are equivalent to EPIB 631)

**EPIB 633 PHARMACOEPIDEMIOLoGY 1.** (2) (Offered only in Summer Term)

**EPIB 635 CLINICAL TRIALS.** (3) (Prerequisites: EPIB 606, EPIB 607) Lectures and discussions on issues, approaches and techniques of clinical trials including assessment of feasibility, ethics,

than is given in the main courses on statistical methods. The topics to be offered may vary from year to year.

**EPIB 659 TOPICS IN BIostatISTICS 2.** (1) The purpose of this 1-credit course is to cover specific methodologic topics in more detail than is given in the main courses on statistical methods. The topics to be offered may vary from year to year.

**EPIB 660 PRACTICAL ASPECTS: PROTOCOL DEVELOPMENT.** (3)

### 30 Food Science and Agricultural Chemistry

Department of Food Science and Agricultural Chemistry  
Macdonald Campus  
21,111 Lakeshore Road  
Sainte-Anne-de-Bellevue, QC H9X 3V9  
Canada

Telephone: (514) 398-7898  
Fax: (514) 398-7977  
E-mail: [foodscience@macdonald.mcgill.ca](mailto:foodscience@macdonald.mcgill.ca)  
Web site: [www.agrenv.mcgill.ca/foodscience](http://www.agrenv.mcgill.ca/foodscience)

Chair — W.D. Marshall

Chair of Graduate Program — B.K. Simpson

#### 30.1 Staff

##### Professors

I. Alli; B.Sc.(Guy.), M.Sc., Ph.D.(McG.)  
W.D. Marshall; B.Sc.(U.N.B.), Ph.D.(McM.)  
H. Ramaswamy; B.Sc.(B'lore), M.Sc., Ph.D.(Br.Col.)  
J.P. Smith; B.Sc., M.Sc.(Strath.), Ph.D.(Alta.)  
F.R. van de Voort; B.Sc., M.Sc., Ph.D.(Br.Col.)

##### Associate Professors

A.A. Ismail; B.Sc., Ph.D.(McG.)  
S. Kermasha; B.Sc.(Baghdad), DEAD, D.Sc.(Nancy)  
B.K. Simpson; B.Sc.(Ghana), Ph.D.(Nfld.)  
V. Yaylayan; B.Sc.(Beirut), M.Sc., Ph.D.(Alta.)

##### Adjunct Professors

J.W. Austin, Y. Konishi, B.Lee, M.Marcotte, A.Morin, J.R.J.Pare

#### 30.2 Programs Offered

##### M.Sc and Ph.D.

The Department has laboratory and research facilities required for research leading to the degree of Master of Science and Doctor of Philosophy in the field of food science, specifically in the chemical, biochemical and analytical aspects thereof.

#### 30.3 Admission Requirements

Applicants must be graduates of a university of recognized reputation and hold a B.Sc. in Food Science or a related discipline such as Chemistry, Biochemistry, or Microbiology with a minimum cumulative grade point average (CGPA) of 3.0/4.0 (second class-upper division) or 3.2/4.0 during the last two years of full-time university study. High grades are expected in courses considered by the academic unit to be preparatory to the graduate program.

#### 30.4 Application Procedures

Applicants for graduate studies must forward supporting documents to:

Department of Food Science and Agricultural Chemistry  
Macdonald Campus of McGill University  
21,111 Lakeshore  
Sainte-Anne-de-Bellevue, QC H9X 3V9  
Canada

Telephone: (514) 398-7898  
Fax: (514) 398-7977  
E-mail: [lise.stiebel@mcgill.ca](mailto:lise.stiebel@mcgill.ca)

Applications will be considered upon receipt of a completed application form, \$60 application fee, and the following supporting documents:

**Transcripts** - Two official copies of all university level transcripts with proof of degree(s) granted. Transcripts written in a language other than English or French must be accompanied by a certified translation. An explanation of the grading system used by the

applicant's university is essential. It is the applicant's responsibility to arrange for transcripts to be sent.

It is desirable to submit a list of the titles of courses taken in the major subject, since transcripts often give code numbers only. Applicants must be graduates of a university of recognized reputation and hold a Bachelor's degree equivalent to a McGill Honours degree in a subject closely related to the one selected for graduate work. This implies that about one-third of all undergraduate courses should have been devoted to the subject itself and another third to cognate subjects.

**Letters of Recommendation** - Two letters of recommendation on letterhead (official paper) of originating institution or bearing the university seal and with original signatures from two instructors familiar with the applicant's work, preferably in the applicant's area of specialization. It is the applicant's responsibility to arrange for these letters to be sent.

**Competency in English** - Non-Canadian applicants whose mother tongue is not English must provide evidence of English proficiency on a separate page.

**Qualifying Students** – Some applicants whose academic degrees and standing entitle them to serious consideration for admission to graduate studies, but who are considered inadequately prepared in the subject selected may be admitted to a *Qualifying Program* if they have met the Graduate and Postdoctoral Studies Office minimum CGPA of 3.0/4.0. The course(s) to be taken in a *Qualifying Program* will be prescribed by the academic unit concerned. *Qualifying students* are registered in graduate studies, **but not as candidates for a degree**. Only one qualifying year is permitted. **Successful completion of a qualifying program does not guarantee admission to a degree program.**

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### 30.5 Program Requirements

#### M.Sc.

For candidates entering the M.Sc. program without restrictions, (i.e., those not requiring a qualifying term/year), the M.Sc. degree consists of 45 graduate credits. These credits are obtained through a combination of graduate courses and a research thesis.

**Course Requirements** (15 credits)

**Thesis Requirements** (30 credits)

The residence time for an M.Sc. degree is three academic terms based on unqualified entry into the M.Sc. program and students are encouraged to complete their studies within this time frame.

Each student must be registered for a minimum of 12 credits per term to qualify as a full-time graduate student. This limits the approach that one can take in taking courses within the three terms allotted. Listed below are two common options in terms of course selection which a student may take to meet the three-term, 45-credit M.Sc. program requirements.

The program outlined above does not preclude students from taking more than 45 credits.

#### Ph.D.

Candidates will be judged principally on their ability in research. Course work will be arranged in consultation with the departmental graduate advisory committee. Candidates should be prepared to take the Comprehensive Preliminary Examination by the end of the second year in which they are candidates for the Ph.D. degree.

**Course Requirements**

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### 30.6 Courses

**Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.**

The course credit weight is given in parentheses after the title.

Denotes courses taught only in alternate years.

Denotes courses not offered in 2004-05.

**FDSC 500 FOOD ENZYMOLOGY.** (3) (Winter) (3 lectures) (Prerequisite: FDSC 305) (Course offered in odd years. Check with Graduate Advisor.) Enzymes as they pertain to the deteriorative processes, as processing aids and their use as analytical tools in food systems.

**FDSC 510 Food H**



**FDSC 690 M.Sc. LITERATURE REVIEW.** (8) Master of Science literature review.

**FDSC 691 M.Sc. RESEARCH PROTOCOL.** (7) Master of Science research protocol.

**FDSC 692 M.Sc. THESIS.** (15) Master of Science research portion of the M.Sc. thesis based on results obtained from the research phase of the M.Sc. thesis. Satisfactory completion of the M.Sc. Thesis, its approval by reviewers and acceptance by the Graduate and Postdoctoral Studies Office is required to pass the course.

**FDSC 695 GRADUATE SEMINAR 1.** (3) Presentation on a selected topic, research proposal or research results based on progress in degree work (M.Sc.1).

**FDSC 695D1 (1.5), FDSC 695D2 (1.5) GRADUATE SEMINAR 1.** (Students must register for both FDSC 695D1 and FDSC 695D2) (No credit will be given for this course unless both FDSC 695D1 and FDSC 695D2 are successfully completed in consecutive terms) (FDSC 695D1 and FDSC 695D2 together are equivalent to FDSC 695) Presentation on a selected topic, research proposal or research results based on progress in degree work (M.Sc.1).

**FDSC 695N1 GRADUATE SEMINAR 1.** (1.5) (Students must also register for FDSC 695N2) (No credit will be given for this course unless both FDSC 695N1 and FDSC 695N2 are successfully completed in a twelve month period) (FDSC 695N1 and FDSC 695N2 together are equivalent to FDSC 695) Presentation on a selected topic, research proposal or research results based on progress in degree work (M.Sc.1).

**FDSC 695N2 GRADUATE SEMINAR 1.** (1.5) (Prerequisite: FDSC 695N1) (No credit will be given for this course unless both FDSC 695N1 and FDSC 695N2 are successfully completed in a twelve month period) (FDSC 695N1 and FDSC 695N2 together are equivalent to FDSC 695) See FDSC 695N1 for course description.

**FDSC 696 GRADUATE SEMINAR 2.** (3) Presentation on a selected topic, research proposal or research results based on progress in degree work (M.Sc.2).

**FDSC 696D1 (1.5), FDSC 696D2 (1.5) GRADUATE SEMINAR 2.** (Students must register for both FDSC 696D1 and FDSC 696D2) (No credit will be given for this course unless both FDSC 696D1 and FDSC 696D2 are successfully completed in consecutive terms) (FDSC 696D1 and FDSC 696D2 together are equivalent to FDSC 696) Presentation on a selected topic, research proposal or research results based on progress in degree work (M.Sc.2).

**FDSC 696N1 GRADUATE SEMINAR 2.** (1.5) (Students must also register for FDSC 696N2) (No credit will be given for this course unless both FDSC 696N1 and FDSC 696N2 are successfully completed in a twelve month period) (FDSC 696N1 and FDSC 696N2 together are equivalent to FDSC 696) Presentation on a selected topic, research proposal or research results based on progress in degree work (M.Sc.2).

**FDSC 696N2 GRADUATE SEMINAR 2.** (1.5) (Prerequisite: FDSC 696N1) (No credit will be given for this course unless both FDSC 696N1 and FDSC 696N2 are successfully completed in a twelve month period) (FDSC 696N1 and FDSC 696N2 together are equivalent to FDSC 696) See FDSC 696N1 for course description.

**FDSC 700 COMPREHENSIVE PRELIMINARY EXAMINATION.** (0) (See Faculty Regulations)

**FDSC 700D1 (0), FDSC 700D2 (0) COMPREHENSIVE PRELIMINARY EXAMINATION.** (Students must register for both FDSC 700D1 and FDSC 700D2) (No credit will be given for this course unless both FDSC 700D1 and FDSC 700D2 are successfully completed in consecutive terms) (FDSC 700D1 and FDSC 700D2 together are equivalent to FDSC 700)

**FDSC 700N1 COMPREHENSIVE PRELIMINARY EXAMINATION. CO-REQUISITE**

G. Di Stefano; Dr. ès L.(Turin), Dipl.Phil., Dr. 3e Cy.(Paris - Sorbonne)  
J.-P. Duquette; L. ès L.(Montr.), Dr. 3e Cy.(Paris X - Nanterre)  
Y. Lamonde; M.A.(Montr.), M.A., Ph.D.(Laval)  
F. Ricard; M.A.(McG.), Dr. 3e Cy.(Aix-Marseille), M.S.R.C. (James McGill Professor)  
Y. Rivard; M.A.(McG.), Dr. 3e Cy.(Aix-Marseille)  
J. Terrasse; L. Phil. Romane, Dipl. Phil., Dr. Phil. & Lettres (Bruxelles)

*Professeurs agrégés*

M. Biron; M.A.(Montr.), Dr.Phil & Lettres(Liège) (*Chaire de recherche du Canada en littérature québécoise et littératures francophones*)  
C. Bouchard; M.A.(Montr.), Dr. 3<sup>e</sup> Cy.(Paris VII - Jussieu)  
J.-P. Boucher; M.A.(McG.) Dr. 3<sup>e</sup> Cy.(Besançon)  
A. Chapdelaine; M.A., Dr. 3<sup>e</sup> Cy.(Paris VII - Jussieu)  
D. Desrosiers-Bonin; M.A., Ph.D.(Montr.) (*William Dawson Scholar*)  
N. Doiron; M.A., Ph.D.(Montr.)  
J. Everett; M.A.(Carl.), Ph.D.(McG.)  
G. Lane-Mercier; M.A.(Montpellier), Ph.D.(McG.)

*Professeur adjoint*

F. Charbonneau; M.A., Ph.D.(Montr.)

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### 31.2 Programmes

M.A. avec mémoire et sans mémoire, et Ph.D.

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### 31.3 Conditions d'admission

#### Propédeutique

Peuvent être admis en Propédeutique les étudiants titulaires d'un B.A. avec concentration en littérature française, québécoise ou francophone ("Major"), qui sont alors tenus de s'inscrire à temps complet à un programme de 8 cours de premier cycle, établi lors de leur inscription.

#### M.A.

Pour être admis directement en M.A. I, le candidat doit être titulaire d'un B.A. avec spécialisation en littérature française, québécoise ou francophone, ou en traduction ("Honours"), ou d'un B.A. avec double spécialisation ("Joint Honours"). Le candidat doit également présenter un très bon dossier académique; le B.A. ne donne pas automatiquement droit à l'admission.

#### Ph.D.

Pour être admis au programme de Ph.D. le candidat doit satisfaire aux conditions suivantes:

- 1) Être titulaire d'un M.A. en littérature française, québécoise ou francophone, ou l'équivalent; avoir obtenu au cours de sa scolarité de maîtrise une moyenne d'au moins 75 %.
- 2) Présenter un projet d'étude, en français, indiquant avec une certaine précision le domaine et la méthodologie de la recherche qu'il envisage de poursuivre pour sa thèse de doctorat et le nom du professeur sous la direction duquel il souhaite travailler. La Commission des admissions sera mieux à même de juger, d'après ce projet, du sérieux du candidat et de ses aptitudes à la recherche littéraire avancée.

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### 31.4 Demande d'admission

En plus de deux lettres de recommandation et des relevés de notes officiels, les étudiants de l'extérieur du Département doivent soumettre un dossier de candidature complet comprenant:

une lettre de motivation et un curriculum vitae.



**FREN 706N1 ÉLABORATION DU SUJET DE THÈSE.** (4.5) (Les étudiants doivent aussi s'inscrire au cours FREN 706N2) (Aucun crédit ne sera accordé pour ce cours à moins de réussir les deux cours FREN 706N1 et FREN 706N2 à l'intérieur d'une période de douze mois) (FREN 706N1 et FREN 706N2 ensemble sont équivalents à FREN 706)

**FREN 706N2 ÉLABORATION DU SUJET DE THÈSE.** (4.5) (Préalable: FREN 706N1) (Aucun crédit ne sera accordé pour ce cours à moins de réussir les deux cours FREN 706N1 et FREN 706N2 à

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### 32.3 Admission Requirements

#### M.A. and M.Sc. Degrees

Attention is directed to the Graduate and Postdoctoral Studies Office admission regulations outlined in the General Information section of the Calendar, headed "Admission".

Applicants not satisfying these conditions, but with primary undergraduate specialization in a cognate field, may be admitted to the M.A. or M.Sc. degree in Geography in certain cases. Applicants who have completed a degree in a cognate field may be admitted to the M.A. or M.Sc. degree in Geography in certain cases. Attention is directed to the Graduate and Postdoctoral Studies Office admission regulations outlined in the General Information section of the Calendar, headed "Admission".

undergraduate specialization in a cognate field, may be admitted to the M.A. or M.Sc. degree in Geography in certain cases.

5. pass a comprehensive examination (GEOG700, GEOG701, GEOG702) the form of which is detailed in a document available from the Department; and,
6. submit a thesis based on original research in an appropriate area.

### 32.6 Courses and Seminars for Advanced Undergraduates and Graduates

Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.

Term(s) offered (Fall, Winter, Summer) may appear after the credit weight to indicate when a course would normally be taught. Please check Class Schedule to confirm this information.

**Note:** All undergraduate courses administered by the Faculty of Science (courses at the 100- to 500-level) have limited enrolment.

The course credit weight is given in parentheses after the title.

Denotes courses not offered in 2004-05.

**GEOG 500 GEOGRAPHY OF REGIONAL IDENTITY.** (3) (Fall) (3 hours) (Restriction: Graduate students and final year undergraduates and/or those who have taken GEOG 408)

**GEOG 501 MODELLING ENVIRONMENTAL SYSTEMS.** (3) (Fall) (1.15 hours lecture, 0.58 hours seminar, 0.69 hours project, 0.58 hours laboratory) (Restriction: open only to U2 or U3 students who have completed six or more credits from courses at the 300 level of Atmospheric and Oceanic Sciences, Biology, Chemistry, Earth and Planetary Sciences, Geography, Natural Resource Sciences, or a McGill School of Environment domain, or permission of the instructor) (Prerequisites: MATH 139 or MATH 140, MATH 141, and MATH 203, or equivalent) (Enrolment limited to 20 students by availability of workstations) Most problems in environmental science deal with weak relationships and poorly defined systems. Model development and simulation will be used in this course to help improve understanding of environmental systems. Simulation of environmental systems is examined, focusing on problem definition, model development and model validation.

**GEOG 502 GEOGRAPHY OF NORTHERN DEVELOPMENT.** (3) (Fall) (3 hours) (Undergraduate Prerequisite: GEOG 301 or GEOG 436, or permission of instructor) Analysis of the evolution of development policies and their spatial implications in circumpolar areas with an emphasis on the application of geographical concepts. Special attention is given to indigenous peoples and new immigrant populations in northern North America.

**GEOG 503 METHODS OF REGIONAL ANALYSIS.** (3) (Winter) (3 hours) (Prerequisite: GEOG 311)

**GEOG 504 INDUSTRIAL RESTRUCTURING - GEOGRAPHIC IMPLICATIONS.** (3) (Fall) (Prerequisites: GEOG 311 or permission of instructor)

**GEOG 505 GLOBAL BIOGEOCHEMISTRY.** (3) (Winter) (2 hours and research) (Prerequisite: GEOG 305 or GEOG 322 and permission of instructor) An examination of the storage, transfers and cycling of major elements and substances, with an emphasis on the global scale and the linkages between the atmosphere, hydrosphere, lithosphere and biosphere.

**GEOG 506 PERSPECTIVES ON GEOGRAPHIC INFORMATION ANALYSIS.** (3) (Winter) (2 hours and laboratory) (Undergraduate Prerequisite: GEOG 201 and GEOG 306 and permission of instructor) Examination of a range of applications in automated processing of spatial data. Discussion will focus on both theoretical and practical aspects of Geographic Information Systems. Topics such as resource data base structure, methods of spatial interpolation and data quality and errors are covered. The application of Geographic Information Systems such as GRASS and digital image processing routines are used to answer questions in geographical research. Individual student projects will be emphasized.

**GEOG 508 RESOURCES, PEOPLE AND POWER.** (3) (Fall) (3 hours) (Prerequisite: GEOG 408 or GEOG 410 or permission of instructor)

**GEOG 510 HUMID TROPICAL ENVIRONMENTS.** (3) (Winter) (3 hours) (Prerequisite: GEOG 203 or equivalent and written permission of the instructor) Focus on the environmental and human spatial relationships in tropical rain forest and savanna landscapes. Human adaptation to variations within these landscapes through time and space. Biophysical constraints upon "development" in the modern era.

**GEOG 513 BEHAVIOURAL GEOGRAPHY.** (3) (3 hours) (Undergraduate Prerequisite: a course in introductory statistics)

**GEOG 522 ADVANCED ENVIRONMENTAL HYDROLOGY.** (3) (2 hours and 1 tutorial) (Prerequisite: GEOG 322, or permission of instructor) (Cross-listed with CASN 300)

**GEOG 535 REMOTE SENSING AND EARTH DATA (D) Tj 4.5 0 ATD /F1 7.5 Tf 0.165 Tc ( Ee TD**

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### 33.5 Program Requirements

**M.A. with thesis** (48 credits)

**Thesis – Required Courses** (30 credits)

**GERM 575 HONOURS THESIS.** (6) (Fall or Winter) (For students in the Honours Program only.)

**GERM 605 MEDIEVAL GERMAN LITERATURE 1.** (3)

**GERM 619 TOPICS IN LITERARY THEORY.** (3)

**Complementary Courses** (18 credits)

Originality of research is not required for the thesis, but the student must show a critical understanding of the subject as demonstrated by the logical development of an argument which is supported by adequate documentation. Students are normally permitted to take a maximum of 3 credits in another department with the approval of the Graduate Studies Committee.

Students are expected to complete degree requirements in two years. They are expected to begin work on their thesis before the end of the first session. The thesis should demonstrate ability to organize the material under discussion, and should be succinct and relevant.

**M.A. without thesis** (45 credits)

**Required Courses** (18 credits)

**Complementary Courses** (27 credits)

**Ph.D.**

**Requirements:**

Coursework – 8 three-credit courses (24 credits)

Comprehensive examination (oral and written)

French Language examination or Latin (if specializing in German Literature before 1600)

Thesis

Thesis Defence

Students may take up to 6 credits in another department with the approval of the Graduate Studies Committee.

Original research leading to new insights is a prerequisite for the acceptance of a Ph.D. thesis.

As a rule, it will take a candidate at least three years after the M.A. degree to complete the requirements for the Ph.D. degree. Students who have not spent an appreciable length of time in a German-speaking country are advised to spend one year at a university in such a country, for which credit may be given in the above program.

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### 33.6 Courses

**Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.**

The course credit weight is given in parentheses after the title.

Courses are normally given in the form of seminars. Each year, the Department publishes a list of those offerings which will be available in the ensuing session. These lists are available from the Graduate Coordinator or from the Graduate and Postdoctoral Studies Office, normally in the month of May.

**GERM 511 MIDDLE HIGH GERMAN LITERATURE.** (3) (Fall) (Given in German) (Prerequisite: Germ 325 or equivalent)

**GERM 561 GERMAN LITERATURE: BAROQUE.** (3)

**GERM 570 JOINT HONOURS THESIS.** (3) (Fall or Winter) (For students in the Joint Honours Program only.)



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### 34.1 Staff

*Emeritus Professor*

S. Lipp; M.S.(C.C.N.Y.), Ph.D.(Harv.)

*Professors*

J. Pérez-Magallón; Lic.Fil.(Barcelona), Ph.D.(Penn.)

K. Sibbald; M.A.(Cantab.), M.A.(Liv.), Ph.D.(McG.)

*Associate Professor*

D.A. Boruchoff; A.B., A.M., Ph.D.(Harv.)

*Assistant Professor*

A. Holmes; B.A.(McG.), M.A., Ph.D.(Oregon)

J.R. Juvé-Martin; Lic.Fil. (Madrid), PhD (Georgetown)

F. Macchi; Lic.Lit. (Buenos Aires), MA (Oregon), PhD (Yale)

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### 34.2 Programs Offered

M.A. and Ph.D. in Hispanic Studies.

The Department of Hispanic Studies is committed to the disciplined study of all aspects of the literature, intellectual history and culture of Spain and Latin America, as well as the Spanish and Portuguese languages.

M.A. and Ph.D. in Hispanic Studies. The Department of Hispanic Studies is committed to the disciplined study of all aspects of the literature, intellectual history and culture of Spain and Latin America, as well as the Spanish and Portuguese languages.

do not take at least 12 credits per term are considered to proceed toward their degree on a part-time basis.

**Ph.D. Degree Requirements**

1. Six 3-credit courses.
2. Proficiency in Spanish, and when appropriate in Portuguese, as well as a functional ability in French and English. A reading knowledge of a fourth language will be determined according to the needs of the candidate's research program.
3. HISP 701 Comprehensive Examinations, Oral and Written.
4. HISP 713 Research Seminar in Hispanic Studies.
5. Doctoral dissertation on an appropriate area of original research.

All courses, comprehensive examinations and language requirements will normally be completed before the dissertation topic is formally approved. A dissertation proposal should be submitted to the Graduate Committee of the Department of Hispanic Studies for approval no later than the end of the second year of full-time doctoral studies.

All general regulations of the Graduate and Postdoctoral Studies Office regarding the Ph.D. degree shall apply.

**Required Academic Activities:** All candidates preparing their dissertation are required to give an annual formal presentation of their research to the Department, normally beginning in their third year of full-time doctoral studies.

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**34.6 Courses**

Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.

days, times, locations, and names of instructors.

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## 35 History

Department of History  
 Stephen Leacock Building, Room 608  
 855 Sherbrooke Street West  
 Montreal, QC H3A 2T7  
 Canada

Telephone: (514) 398-3977  
 Fax: (514) 398-8365  
 E-mail: graduate.history@mcgill.ca  
 Web site: www.arts.mcgill.ca/programs/history

Chair — Brian Lewis

Chair of Graduate Programs — TBA

Kevin Kee; B.A.(E.Ont.), M.A., Ph.D.(Qu.) (*joint appoint. with Integrated Studies in Education*)

Margaret Kuo; Ph.D. (UCLA)

Lorenz Lüthi; Lic.Phil.I(Zürich), M.A., M.Phil., Ph.D.(Yale)

R. Jarrett Rudy; B.A., M.A.(Ott.), Ph.D.(McG.)

Daviken Studnicki-Gizbert; B.A.(Montr.), M.Phil., Ph.D.(Yale)

### 35.1 Staff

#### *Emeritus Professors*

Michael P. Maxwell; B.A.(Sir G.Wms.), M.A., Ph.D.(McG.)

Albert Schachter; B.A.(McG.), D.Phil.(Oxon) (*Hiram Mills Emeritus Professor of Classics*)

#### *Professors*

Valentin J. Boss; B.A.(Cantab.), Ph.D.(Harv.)

Gwyn Campbell; B.Soc.S., M.Soc.Sc.(Birm.), Ph.D.(Wales, Swansea)

Myron J. Echenberg; M.A.(McG.), Ph.D.(Wis.) (*on leave Winter 2005*)

John W. Hellman; B.A.(Marq.), M.A., Ph.D.(Harv.) (*on leave Winter 2005*)

Peter Hoffmann; Ph.D.(Munich), F.R.S.C. (*William Kingsford Professor of History*)

Gershon D. Hundert; B.A., M.A.(Ohio St.), Ph.D.(Col.) (*Leonor Segal Professor of Jewish Studies*) (*joint appoint. with Jewish Studies*) (*on leave 2004-05*)

Carman I. Miller; B.A. B.ED.(Acadia), M.A.(Dal.), Ph.D.(Lond.)

Desmond Morton; B.A.(R.M.C.), B.A. M.A.(Oxon), Ph.D.(Lond.) (*Hiram Mills Professor of History*)

Yuzo Ota; B.A., M.A., Ph.D.(Tokyo)

Nancy F. Partner; B.A., M.A., Ph.D.(Calif.)

T. Wade Richardson; B.A.(McG.), M.A., Ph.D.(Harv.)

Hereward Senior; M.A., Ph.D.(McG.)

Andrea Tone; B.A.(Qu.), M.A., Ph.D.(Emory) (*joint appoint. with Social Studies of Medicine*)

Gil E. Troy; A.B., A.M., Ph.D.(Harv.)

Robin D.S. Yates; B.A., M.A.(Oxon), M.A.(Calif.), Ph.D.(Harv.) (*James McGill Professor*) (*joint appoint. with East Asian Studies*)

Brian J. Young; B.A.(Tor.), M.A., Ph.D.(Queen's) (*James McGill Professor*) (*on leave winter 2005*)

John E. Zucchi; B.A. M.A. Ph.D.(Tor.)

#### *Associate Professors*

Paula Clarke; B.A.(Mem.), B.A.(Oxon), M.A.(Tor.), Ph.D.(Lond.)

Brian Cowan; B.A.(Reed), M.A., Ph.D.(Prin.)

Catherine Desbarats; B.A.(Queen's), D.Phil.(Oxon), Ph.D.(McG.)

Nicolas Dew; B.A., M.Sc., D.Phil.(Oxf.)

Elizabeth Elbourne; B.A., M.A.(Tor.), D.Phil.(Oxon)

Michael P. Fronda; B.A.(C'nell), M.A. Ph.D.(Ohio St.)

Catherine LeGrand; B.A.(Reed), M.A., Ph.D.(Stan.)

Brian Lewis; B.A., M.A.(Oxon), A.M., Ph.D.(Harv.)

Leonard Moore; A.B., M.A., Ph.D.(Calif.)

Suzanne Morton; B.A.(Trent), M.A., Ph.D.(Dal.)

Laila Parsons; B.A.(Exe.), D.Phil.(Oxf.) (*joint appoint. with Institute of Islamic Studies*)

Griet VanKeerberghen; Licence(Catholic U. of Louvain), Ph.D.(Prin.) (*joint appoint. with East Asian Studies*)

Faith Wallis; B.A., M.A.(McG.), Ph.D.(Tor.) (*joint appoint. with Social Studies of Medicine*)

#### *Assistant Professors*

James Delbourgo; B.A.(East Anglia), M.Phil.(Camb.), Ph.D.(Col.)

Elsbeth Heaman; B.A., M.A.(McG.), Ph.D.(Tor.)



**HIST 594D1 (3), HIST 594D2 (3) TOPICS: TUDOR AND STUART ENGLAND.** (Prerequisite: any university course in British history or consent of instructor) (Students must register for both HIST 594D1 and HIST 594D2.) (No credit will be given for this course unless both HIST 594D1 and HIST 594D2 are successfully completed in consecutive terms) Topics will vary from year to year and may cover any aspect of early modern British history. Topics for the class presentation and seminar paper (also discussed in class) are assigned to each student according to student interest and availability of sources.

**HIST 595D1 (3), HIST 595D2 (3) SEMINAR: EARLY MODERN WESTERN EUROPE.** (Undergraduate Prerequisite: permission of the instructor) (Students must register for both HIST 595D1 and HIST 595D2.) (No credit will be given for this course unless both HIST 595D1 and HIST 595D2 are successfully completed in consecutive terms) This course is intended to offer advanced analytical and research training in a selected theme in western European history during the period from the Italian Renaissance to the French Revolution.

**HIST 612D1 (3), HIST 612D2 (3) GERMAN NATIONAL SOCIALISM.** (Students must register for both HIST 612D1 and HIST 612D2) (No credit will be given for this course unless both HIST 612D1 and HIST 612D2 are successfully completed in consecutive terms)

**HIST 613D1 (3), HIST 613D2 (3) TOPICS: CANADIAN SOCIAL HISTORY.** (Students must register for both HIST 613D1 and HIST 613D2) (No credit will be given for this course unless both HIST 613D1 and HIST 613D2 are successfully completed in consecutive terms) A seminar covering topics in Canadian Social History which vary from year to year.

**HIST 614D1 (3), HIST 614D2 (3) TOPICS: LATIN AMERICAN HISTORY.** (Students must register for both HIST 614D1 and HIST 614D2) (No credit will be given for this course unless both HIST 614D1 and HIST 614D2 are successfully completed in consecutive terms)

**HIST 615D1 (3), HIST 615D2 (3) TOPICS IN ITALIAN HISTORY.** (Students must register for both HIST 615D1 and HIST 615D2) (No credit will be given for this course unless both HIST 615D1 and HIST 615D2 are successfully completed in consecutive terms)

**HIST 618 READINGS IN EAST ASIAN HISTORY.** (3)

**HIST 619 ANCIENT MEDICINE SEMINAR 1.** (3)

**HIST 620 ANCIENT MEDICINE SEMINAR 2.** (3)

successfully completed in consecutive terms) (HIST 699D1 and HIST 699D2 together are equivalent to HIST 699)

**HIST 702 COMPREHENSIVE EXAMINATION - MAJOR FIELD. (0)**

**HIST 702D1 (0), HIST 702D2 (0) COMPREHENSIVE EXAMINATION - MAJOR FIELD.** (Students must register for both HIST 702D1 and HIST 702D2) (No credit will be given for this course unless both HIST 702D1 and HIST 702D2 are successfully completed in consecutive terms) (HIST 702D1 and HIST 702D2 together are equivalent to HIST 702)

**HIST 703 COMPREHENSIVE EXAMINATION - FIRST MINOR FIELD. (0)**

**HIST 703D1 (0), HIST 703D2 (0) COMPREHENSIVE EXAMINATION - FIRST MINOR FIELD.** (Students must register for both HIST 703D1 and HIST 703D2) (No credit will be given for this course unless both HIST 703D1 and HIST 703D2 are successfully completed in consecutive terms) (HIST 703D1 and HIST 703D2 together are equivalent to HIST 703)

**HIST 704 COMPREHENSIVE EXAMINATION - SECOND MINOR FIELD. (0)**

**HIST 704D1 (0), HIST 704D2 (0) COMPREHENSIVE EXAMINATION - SECOND MINOR FIELD.** (Students must register for both HIST 704D1 and HIST 704D2) (No credit will be given for this course unless both HIST 704D1 and HIST 704D2 are successfully completed in consecutive terms) (HIST 704D1 and HIST 704D2 together are equivalent to HIST 704)

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## 36 Human Genetics

Department of Human Genetics

ences (basic biology, cell and molecular, biochemistry, principles of human genetics or basic genetics with a significant "human" component); and a *minimum* of two Social Sciences (social psychology, abnormal psychology).

**Prerequisites or corequisites:** Recent (5 years or less) university-level course in statistics.

Applicants must have obtained some experience (either paid or volunteer) working in a counselling or advisory capacity, ideally in a health care setting.

The Test of English as a Foreign Language (TOEFL) is

required of students who have graduated from a non-English language university outside of Canada. A score of 600 on the TOEFL paper-based test (250 on the computer-based test) is the **minimum** standard for admission.

### M.Sc. and Ph.D. in Human Genetics

**Prerequisites:** B.Sc. – minimum CGPA 3.0/4.0 or 3.2/4.0 for the last two full-time academic years. Applicants must have a minimum of 6 credits in cellular and molecular biology or biochemistry, 3 credits in mathematics or statistics and 3 credits in genetics. Graduate Record Examination (GRE) scores are not required, but may be submitted. The Test of English as a Foreign Language (TOEFL) is required of students who have graduated from a non-English language university outside of Canada. A score of 600 on the TOEFL paper-based test (250 on the computer-based test) or 7 on the IELTS, is the minimum standard for admission.

Admission is based on an evaluation by the Graduate Training Committee and on acceptance by a research director who can provide adequate funding for personal and research expenses.

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**Ph.D. Qualifying Examination** – The Qualifying exam is a format of evaluation of the student's ability to proceed to the attainment of the Ph.D. Students must pass the Qualifying Examination (HGEN701) no later than 15 months from the date of registration in the program. Students who transfer from the Master's program must take the exam before doing so. Students who enter the Ph.D. program after completing an M.Sc. in Human Genetics at McGill must take the exam after 12 months.

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### 36.6 Courses

Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.

**Courses with numbers ending D1 and D2** are taught in two consecutive terms (most commonly Fall and Winter). Students must register for both the D1 and D2 components. No credit will be given unless both components (D1 and D2) are successfully completed in consecutive terms.

The course credit weight is given in parentheses after the title.

Denotes courses not offered in 2004-05.

#### M.Sc. in Genetic Counselling Courses

**HGEN 600 GENETIC COUNSELLING PRACTICUM.** (6) Designed for students enrolled in the M.Sc. in Genetic Counselling. Students will be taught how to take family histories, read pedigrees and the basic skills required for interviewing patients. Discussions with example cases. Attendance at Genetics Rounds is compulsory.

**HGEN 600D1 (3), HGEN 600D2 (3) GENETIC COUNSELLING PRACTICUM.** (Students must register for both HGEN 600D1 and HGEN 600D2) (No credit will be given for this course unless both HGEN 600D1 and HGEN 600D2 are successfully completed in consecutive terms) (HGEN 600D1 and HGEN 600D2 together are equivalent to HGEN 600) Designed for students enrolled in the M.Sc. in Genetic Counselling. Students will be taught how to take family histories, read pedigrees and the basic skills required for interviewing patients. Discussions with example cases. Attendance at Genetics Rounds is compulsory.

**HGEN 616 GENETIC COUNSELLING PRACTICUM.** (6) Designed for students enrolled in the M.Sc. in Genetic Counselling. Students will be taught how to take family histories, read pedigrees and the basic skills required for interviewing patients. Discussions with example cases. Attendance at Genetics Rounds is compulsory.



**HGEN 680 M.Sc. THESIS RESEARCH 1.**

Teresa Strong-Wilson; B.A.(Calg.), B.A.(McG.), M.A., Ph.D.(Vic. B.C.)

#### Associate Members

Michael Doxtater; B.A. (McMaster), M.Sc., Ph.D. (Cornell)  
Richard Harris, Lynn McAlpine

#### Faculty Lecturers

Linda Cooper, Carolyn Pittenger

#### Adjunct Professors

Abigail Anderson, Noel C. Burke, Gretta Chambers, Scott Conrod, Charley Levy, Daniel Michael Mason, Marianna McVey, Kenneth Robertson, Howard Simpkin, Vikki Zack

### 37.2 Programs Offered

The Department offers M.A. thesis and non-thesis degree programs (45 credits) in the following areas:

- Culture and Values in Education
- Second Language Education
- Educational Studies (Curriculum or Leadership concentration)

The Department also offers two 15-credit Graduate Certificates in Educational Leadership and an *ad hoc* Ph.D.

Applicants should take note that, unlike the Department's Bachelor of Education programs, these graduate programs do not lead to teacher certification.

### 37.3 Admission Requirements

#### M.A. and Certificate Programs

1. Applicants to the M.A. and Certificate programs must hold a Bachelor's degree from a recognized university. A minimum standing equivalent to a CGPA of 3.0 on 4.0, or 3.2 out of 4.0 for the last two full-time academic years, is required. A concentration of courses related to the area chosen for graduate work is usually required. (See #5, below.) Applicants who lack some requirements may be admitted as Qualifying or Special Students to take relevant courses. All course selection is made in consultation with a program advisor.
2. International students who have not completed their undergraduate studies at an English-speaking university must have a TOEFL score of at least 580 on the paper-based test (237 on the computer-based test). The Department reserves the right to evaluate the applicant's language proficiency before initial registration.
3. A letter of intent specifying academic and professional experience and interests (specifically, research interests for the thesis option; project interests, for the non-thesis option).
4. Two letters of recommendation, at least one of which must be from a university-level instructor; the other may be from an administrator in an educationally relevant context.
5. Further requirements applicable to specific options:

**Master of Arts in Second Language Education.** Normally, a minimum of 36 credits including a combination of relevant courses in education and language studies.

Normally, at least two years of relevant professional experience in education.

**Master of Arts in Educational Studies.** Normally, at least two years of relevant educational experience (teaching or related professional experience).

**Graduate Certificates in Educational Leadership I and II.** Normally, at least two years of relevant educational experience (teaching or related professional experience).

#### *Ad hoc* Ph.D

Applicants to the *ad hoc* Ph.D must contact the Graduate Program Coordinators (514) 398-6985, for more detailed and current information.

The designation of *ad hoc* in the Ph.D. program indicates that there are no required courses common to all doctoral candidates in the Department of Integrated Studies in Education. Instead, requirements for each student are determined by the Department according to the area of research and the background of the applicant.

In the absence of a more structured program, considerable independence is expected of *ad hoc* Ph.D. students and demonstration of certain research skills is thus prerequisite to admission. For this reason, the submission of a five-page proposal and identification of a prospective supervisor are part of the application procedure.

The deadline for applications to the *ad hoc* Ph.D. is February 1.

### 37.4 Application Procedure

McGill's on-line application form is available to all graduate program candidates at [www.mcgill.ca/web-apply](http://www.mcgill.ca/web-apply).

Applicants must submit, **before the application deadline**, the following:

1. Completed Web application form
2. \$60 application fee
3. Letter of intent (1 to 2 pages)
4. Curriculum vitae
5. TOEFL score (if applicable)

Applicants must arrange to have the following documents sent directly to the Department from the institutions involved:

6. Official transcripts of all previous undergraduate and graduate studies.
7. Two letters of recommendation. (At least one of the letters must be from a university-level instructor; the other may be from an administrator qualified to assess the applicant's professional qualities. Both letters must be on institutional letterhead paper with original signatures; no standard evaluation form is available for this purpose.)

The deadlines for submitting applications are:

Fall admission:

February 1st – Ph.D., M.A., and Certificate applicants

Winter admission:

October 1st – Certificate applicants

All documentation is to be submitted directly to the Graduate Program Coordinator in the Department of Integrated Studies in Education.

### 37.5 Program Requirements

#### 37.5.1 M.A. in Culture and Values in Education

This program encourages research into educational issues that have a culture and/or values orientation as a key investigative focus on more specific topics covered in the Department.

#### MASTER OF ARTS IN CULTURE AND VALUES IN EDUCATION (ThesisOption) (45credits)

##### Required Courses (6 credits)

EDEM609 (3) Issues in Educational Studies  
EDER615 (3) Culture, Values and Education

##### Complementary Courses (12 credits)

9 credits to be selected from the following courses:

EDEM620 (3) Meanings of Literacy  
EDER600 (3) Globalization, Education & Change  
EDER606 (3) Philosophy of Moral Education  
EDER607 (3) Values Education: Contemporary Approaches  
EDER614 (3) Sociology of Education  
EDER617 (3) Aesthetics and Education  
EDER625 (3) Topics: Culture in Education  
EDER626 (3) Topics: Value in Education  
EDER649 (3) Education: Multicultural Societies

3 credits to be selected from the following courses:

EDEC706 (3) Textual Approaches to Research

- EDEM690 (3) Research Methods  
 EDEM692 (3) Qualitative Research Methods  
 EDSL630 (3) Qualitative/Ethnographic Methods

**Elective Course** (3 credits)

Students are required to take 3 additional credits at the 500- or 600-level, inside or outside the Department. These are to be approved by the Graduate Program Director.

**Thesis Component – Required** (24 credits)

- EDER690 (6) Thesis Preparation 1  
 EDER691 (6) Thesis Preparation 2  
 EDER692 (12) Thesis Preparation 3

**MASTER OF ARTS IN CULTURE AND VALUES IN EDUCATION (Non-thesis Option)** (45credits)

**Required Courses** (18 credits)

- EDEM609 (3) Issues in Educational Studies  
 EDER615 (3) Culture, Values and Education  
 EDER633 (12) Special Project

**Complementary Courses** (12 credits)

9 credits to be selected from the following courses:

- EDEM620 (3) Meanings of Literacy  
 EDER600 (3) Globalization, Education & Change  
 EDER606 (3) Philosophy of Moral Education  
 EDER607 (3) Values Education: Contemporary Approaches  
 EDER614 (3) Sociology of Education  
 EDER617 (3) Aesthetics and Education  
 EDER625 (3) Topics: Culture in Education  
 EDER626 (3) Topics: Value in Education  
 EDER649 (3) Education: Multicultural Societies

3 credits to be selected from the following courses:

- EDEC706 (3) Textual Approaches to Research  
 EDEM690 (3) Research Methods  
 EDEM692 (3) Qualitative Research Methods  
 EDSL630 (3) Qualitative/Ethnographic Methods

**Elective Courses** (15 credits)

Students are required to take 15 additional credits at the 500- or 600-level, inside or outside the Department. These are to be approved by the Graduate Program Director.

**MASTER OF ARTS IN CULTURE AND VALUES IN EDUCATION (Non-thesis Option – Jewish Education)** (45credits)

This program is designed to offer a graduate-level point of entry into the teaching profession for students who typically will have completed a B.A. with minor or major in Jewish studies. The M.A. will not provide Quebec Government teacher certification (in Quebec certification is at the B.Ed. level) but Jewish schools presently have the right to hire non-certified teachers of Jewish studies.

Students interested in doing a research-focused M.A. in the area of Jewish education should follow one of the other graduate degree offerings within the area of Culture and Values in Education.

**Required Courses** (21 credits)

- EDEM690 (3) Research Methods  
 EDER520 (3) Issues in Jewish Education  
 EDER529 (0) Hebrew Language Requirement  
 EDER610D1 (7.5) Internship  
 EDER610D2 (7.5) Internship

**Complementary Courses** (24 credits)

24 credits at the 500 level or above, selected in consultation with the program advisor. Students will normally follow this profile:

9 credits from the course offerings of the Department of Jewish Studies, Faculty of Arts.

9 credits from among the following:

- EDER521 (3) Teaching Judaism: Yiddish  
 EDER522 (3) Teaching Judaism: Hebrew  
 EDER523 (3) Teaching Judaism: Bible

- EDER524 (3) Teaching Judaism: History  
 EDER525 (3) Teaching Judaism: Holidays  
 EDER526 (3) Teaching Judaism: Liturgy  
 EDER527 (3) Teaching Judaism: Special Topics  
 EDER528 (3) Teaching Judaism: The Holocaust

6 credits from among the following:

- EDPI526 (3) Talented and Gifted Studies  
 EDPI642 (3) Education of Learners/Special Needs 1  
 EDPI654 (3) Instruction/Curriculum Adaptation  
 EDPI666 (3) Methods: Learning Disabilities  
 EDPE510 (3) Learning and Technology  
 EDPE535 (3) Instructional Design  
 EDPE616 (3) Cognitive Development

**37.5.2 M.A. in Second Language Education**

From a range of pedagogical, linguistic, cognitive, political, and sociocultural perspectives, this program combines theoretical and applied studies of how second and foreign languages are learned and used. The M.A. Thesis option is a research-oriented degree, approximately half of which consists of thesis research. The M.A. Non-thesis option, consisting entirely of course work, is less research-oriented and suitable for practitioners interested in professional development with a theoretical orientation.

**MASTER OF ARTS IN SECOND LANGUAGE EDUCATION (Thesis Option)** (45 credits)

**Required Courses** (12 credits)

- EDEM609 (3) Issues in Educational Studies  
 EDPE575 (3) Educational Measurement  
 EDSL623 (3) Second Language Learning  
 EDSL664 (3) Second Language Research Methods

**Complementary Courses** (9 credits)

9 credits chosen from the following:

- EDSL617 (3) Special Topic in Second Language Education  
 EDSL620 (3) Critical Issues in Second Language Education  
 EDSL624 (3) Educational Sociolinguistics  
 EDSL627 (3) Classroom-Centred Second Language Research  
 EDSL629 (3) Second Language Testing and Evaluation  
 EDSL630 (3) Qualitative/Ethnographic Methods  
 EDSL631 (3) Second Language Curriculum  
 EDSL632 (3) Second Language Literacy Development

**Thesis Component – Required** (24 credits)

- EDSL666 (6) Thesis Research 1  
 EDSL667 (6) Thesis Research 2  
 EDSL668 (6) Thesis Research 3  
 EDSL669 (6) Thesis Research 4

**MASTER OF ARTS IN SECOND LANGUAGE EDUCATION (Non-thesis)** (45 credits)

**Required Courses** (12 credits)

- EDEM609 (3) Issues in Educational Studies  
 EDPE575 (3) Educational Measurement  
 EDSL623 (3) Second Language Learning  
 EDSL664 (3) Second Language Research Methods

**Complementary Courses** (15 credits)

15 credits chosen from the following:

- EDSL617 (3) Special Topic in Second Language Education  
 EDSL620 (3) Critical Issues in Second Language Education  
 EDSL624 (3) Educational Sociolinguistics  
 EDSL627 (3) Classroom-Centred Second Language Research  
 EDSL629 (3) Second Language Testing and Evaluation  
 EDSL630 (3) Qualitative/Ethnographic Methods  
 EDSL631 (3) Second Language Curriculum  
 EDSL632 (3) Second Language Literacy Development

**Elective Courses** (18 credits)

Elective courses at the 500- or 600-level may be selected in consultation with the advisor. The following are suggested courses for the program. The advisor will determine the appropriate courses for the student's interests and background.

**37.5.3 M.A. in Educational Studies**

This program enables graduate students to explore areas of education with special concern for the relationship between curriculum and educational leadership. The program includes the social, cultural and ideological factors that influence formal and informal contexts for learning. Particular attention is paid to the content and activity of the curriculum and to the ways in which leadership at local, national, and international levels affects the nature and practice of education. There are two possible concentrations from which a student may choose: Curriculum or Leadership.

**MASTER OF ARTS EDUCATIONAL STUDIES (Thesis Option) – Curriculum Concentration** (45 credits)

**Required Courses** (9 credits)

**Complementary Courses** (6 credits)

**Elective Courses** (6 credits)

**Thesis Component – Required** (24 credits)

**MASTER OF ARTS EDUCATIONAL STUDIES (Non-thesis Option) – Curriculum Concentration** (45 credits)

**Required Courses** (12 credits)

**Complementary Courses** (15 credits)

**Elective Courses** (6 credits)

**Project Component – Required** (12 credits)

**MASTER OF ARTS EDUCATIONAL STUDIES (Thesis Option) – Leadership Concentration** (45 credits)

**Required Courses** (9 credits)

**Complementary Courses** (6 credits)

**Elective Courses** (6 credits)

Elective courses at the 500- or 600-level may be selected in consultation with the advisor. The following are suggested courses for the program. The advisor will determine the appropriate courses for the student's interests and background.

**MASTER OF ARTS EDUCATIONAL STUDIES (Non-Thesis Option) – Leadership Concentration** (45 credits)

**Required Courses** (12 credits)

**Complementary Courses** (15 credits)

**Elective Courses** (6 credits)

**Project Component – Required** (12 credits)

**37.5.4 Graduate Certificate in Educational Leadership1**

This 15-credit program addresses the needs of experienced and aspiring school leaders who are taking increased responsibility for the students and communities they serve. The management of schools is increasingly seen as making a major contribution to the learning and personal development of students. The professional development of school leaders, educational reform and school partnership form the basis for the program.

**Required Courses** (9 credits)

**Complementary Courses** (6 credits)

**37.5.5 Graduate Certificate in Educational Leadership2**

This 15-credit program explores deeper leadership theory and educational issues and applications in a practicum. Candidates for the Graduate Certificate in Educational Leadership 2 should normally have completed the first certificate. In combination, the two certificates allow school administrators to acquire the 30 graduate credits in the field of educational leadership required by the Quebec Ministry of Education.

**Required Courses** (9 credits)

**Complementary Courses** (6 credits)













- a) five 6-credit courses (or equivalent) for a total of 30 credits beyond the M.A. level, including two 700-level seminars (total of 12 credits) offered by the Institute;
- b) Higher Intermediate Arabic (ISLA523D1/ISLA523D2), or equivalent;
- c) knowledge of an Islamic language, other than Arabic, at the second year level;
- d) knowledge of a European language at the second year level (i.e., French, German, Russian, Spanish, Dutch, Italian)
- e) comprehensive examinations in four specified fields: (ISLA701D1/ISLA701D2);
- f) a dissertation judged to contain original research. Upon approval of the dissertation, "pass" must be received at the final oral examination.

#### **Graduate Diploma in Islamic Studies**

With a B.A. in Islamic Studies (or its equivalent), applicants may be admitted to this non-degree program, which requires the completion of 30 credits of course work *in one academic year*. Candidates will choose a minimum of 18 credits from graduate courses in Islamic Studies and a maximum of 12 credits from graduate courses in related fields. If awarded this Diploma with high standing, they may be allowed to proceed to a higher degree in Islamic Studies.

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### **38.6 Courses for Higher Degrees**

**Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.**

**Courses with numbers ending D1 and D2** are taught in two consecutive terms (most commonly Fall and Winter). Students must register for both the D1 and D2 components. No credit will be given unless both components (D1 and D2) are successfully completed in one Winter. Studf 96 com-

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A maximum of 6 credits of graduate courses may be taken outside the Italian Studies Department, upon the advice of the Supervisor and with the permission of the Graduate Studies Director.

In exceptional cases, when program requirements cannot be fulfilled otherwise, students may take ITAL606 Individual Reading Course 1 and ITAL607 Individual Reading Course 2 offered as tutorials.

Typically, the first year program will consist of: Literary Theory course, ITAL610, three Complementary courses, and ITAL690. The second year will include ITAL602, ITAL680, two Complementary courses and ITAL691.

**39.6 Courses**

**Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.**

**Note:** All undergraduate courses administered by the Faculty of Arts (courses at the 100- to 500-level) have limited enrolment.

The course credit weight is given in parentheses after the title.

Denotes courses not offered in 2004-05.

**ITAL 530 17TH-18TH CENTURY CULTURE.** (3)

**ITAL 542 HISTORY OF ITALIAN LANGUAGE.** (3) (Fall) (Undergraduate Prerequisite: permission of the Department)

**ITAL 551 BOCCACCIO AND THE ITALIAN NOVELLA.** (3) (Undergraduate Prerequisite: ITAL 215D1/ITAL 215D2, ITAL 216, or equivalent) A study of Boccaccio's "Decameron" and of Italian narrative prose up to the 16th century.

**ITAL 560 TOPICS IN 19TH & 20TH CENTURY LITERATURE.**(3) (Prerequisite: Permission of the Department.) Exploration of individual authors, genres, and literary or cultural movements that have

marked the century. Ltr 0133 Tw (C) Tj 8.25 0 TD 0.168 T8 Tc (N) Tj 5.25 0 TD 0084 Tc (T) Tj 3.5 Tf -0.082

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competence in Hebrew. Those pursuing a program in East European Jewish Studies, or the non-thesis option, must demonstrate fluency in either Yiddish or Hebrew.

Applicants are also required to submit samples of their academic work in Jewish Studies as well as the appropriate references, transcripts and examination scores. A personal interview is strongly recommended but not required.

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**40.4**

added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.

Note: All undergraduate courses administered by the Faculty of Arts (courses at the 100- to 500-level) have limited enrolment.

Denotes courses not offered in 2004-05.

The course credit weight is given in parentheses after the title.

JWST 502 CONTEMPORARY HEBREW LITERATURE (3) (Prequisite: JWST 340 or permission of instructor) (Knowledge of Hebrew required) 4 0 T D / F 4 0 T j 4 . 5 ( 6 j 4 . 5 0  
0.2929 Tc -0.1279 Tw (3) R Tj 4.5 0 E5 Tw (1.) Tj 11.25 0 TD 0.168 0 7.5 Tf 0.25 Tc -0.0825 Tw (1.) Tj 11.25 0 TDU/F0 7.5 Tf 0.2 0.168 0 7.5 Tf 0R 1.

JWST 510 JEWISH BIBLE INTERPRETATION 1. (3) (Not open to stu-

0 Tc (l)ish IT 5rature; i 0.3a3Mishnah, Tosefta, Targumimj 4.5 Talmt tm; 1192 Tw (A597D10 J) Tj94.25 0 early Samaritan.in84 25 t by t, Bib23.in84 25 t by t i 0mesinstrsyn-1192 Tw (A6TW) T2 Tc 00 Twoe  
odern(T)mes. In84 25 t by t 2 01192 Tw (A964-159.75 693 TD 0.3.3a3Geonic, Ash.5 azi, Sefardic, North Africrnj Italirnj Eur TDrnj 1192 Tw (A75TD10 J) T20c (l) TjYemenT 5, North Americrn 4.5 Israeli ce- reof ) Jewish Learning9  
midrashic8rext09 TD 6 (l) f -0.2c -0Tj 4.5 0 TD 0.628 4.5 04.5978TD 0.3 TD /F35 E/F0 7.5 on of instruct0.252 w ( B) Tj 8.25 0 X.16

### 41.3 Admission Requirements

1. An undergraduate degree with a Major in Kinesiology or in a related biological science or behavioral science or in Physical Education or equivalent from a recognized university is required.
2. A minimum academic standing equivalent to a CGPA of 3.0 out of 4.0.

### 41.4 Application Procedure

McGill's on-line application form is available to all graduate program candidates at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

Applications will be considered upon receipt of:

1. application form,
2. official transcripts from previous undergraduate/graduate programs of study,
3. two letters of reference,
4. \$60 application fee,
5. TOEFL score (where applicable).

The deadlines for Canadians to submit applications are:

- Fall session – March 1
- Winter session – November 1

For International students, applications must be submitted at least six months prior to the official deadline indicated above.

All documentation is to be submitted directly to the Graduate Program Director in the Department of Kinesiology and Physical Education.

### 41.5 Program Requirements

#### M.A. Kinesiology and Physical Education (Thesis Option) (45 credits)

Areas of concentration: Adapted Physical Activity, Psychology of Sport and Motor Behavior or Pedagogy

##### Required Courses (6 credits)

- EDKP605 (3) Research Methods 1
- EDPE676 (3) Intermediate Statistics 2 or equivalent

##### Complementary Courses (15 credits)

Students must take a minimum of 9 credits of coursework in a classroom setting in the area of concentration selected in consultation with the graduate student advisor.

- EDKP504 (3) Health and Lifestyle Education
- EDKP505 (3) Sport in Society
- EDKP550 (3) Analyzing Instructional Behaviors
- EDKP603 (6) Individual Reading Course 1
- EDKP607 (3) Curriculum Innovation and Change
- EDKP616 (3) Individual Reading Course 2
- EDKP650 (3) Teaching in Physical Education
- EDKP654 (3) Sport Psychology
- EDKP655 (3) Program Development/Adapted Physical Activity
- EDKP664 (3) Motor Learning
- EDKP665 (3) Motor Performance of Disabled Persons
- EDKP671 (3) Experimental Problems
- EDKP672 (6) Experimental Problems
- EDKP695 (3) Thesis Research 5 or complementary course
- EDKP696 (3) Thesis Research 6 or complementary course
- EDKP603 may be replaced by any of the following: EDPE603, EDPE604, EDPE605, EDPE606, EDPE607, EDPE608, EDPE609, EDPE610, EDPE611, EDPE612, EDPE613, EDPE614, EDPE615, EDPE616, EDPE617, EDPE618, EDPE619, EDPE620, EDPE621, EDPE622, EDPE623, EDPE624, EDPE625, EDPE626, EDPE627, EDPE628, EDPE629, EDPE630, EDPE631, EDPE632, EDPE633, EDPE634, EDPE635, EDPE636, EDPE637, EDPE638, EDPE639, EDPE640, EDPE641, EDPE642, EDPE643, EDPE644, EDPE645, EDPE646, EDPE647, EDPE648, EDPE649, EDPE650, EDPE651, EDPE652, EDPE653, EDPE654, EDPE655, EDPE656, EDPE657, EDPE658, EDPE659, EDPE660, EDPE661, EDPE662, EDPE663, EDPE664, EDPE665, EDPE666, EDPE667, EDPE668, EDPE669, EDPE670, EDPE671, EDPE672, EDPE673, EDPE674, EDPE675, EDPE676, EDPE677, EDPE678, EDPE679, EDPE680, EDPE681, EDPE682, EDPE683, EDPE684, EDPE685, EDPE686, EDPE687, EDPE688, EDPE689, EDPE690, EDPE691, EDPE692, EDPE693, EDPE694, EDPE695, EDPE696, EDPE697, EDPE698, EDPE699, EDPE700, EDPE701, EDPE702, EDPE703, EDPE704, EDPE705, EDPE706, EDPE707, EDPE708, EDPE709, EDPE710, EDPE711, EDPE712, EDPE713, EDPE714, EDPE715, EDPE716, EDPE717, EDPE718, EDPE719, EDPE720, EDPE721, EDPE722, EDPE723, EDPE724, EDPE725, EDPE726, EDPE727, EDPE728, EDPE729, EDPE730, EDPE731, EDPE732, EDPE733, EDPE734, EDPE735, EDPE736, EDPE737, EDPE738, EDPE739, EDPE740, EDPE741, EDPE742, EDPE743, EDPE744, EDPE745, EDPE746, EDPE747, EDPE748, EDPE749, EDPE750, EDPE751, EDPE752, EDPE753, EDPE754, EDPE755, EDPE756, EDPE757, EDPE758, EDPE759, EDPE760, EDPE761, EDPE762, EDPE763, EDPE764, EDPE765, EDPE766, EDPE767, EDPE768, EDPE769, EDPE770, EDPE771, EDPE772, EDPE773, EDPE774, EDPE775, EDPE776, EDPE777, EDPE778, EDPE779, EDPE780, EDPE781, EDPE782, EDPE783, EDPE784, EDPE785, EDPE786, EDPE787, EDPE788, EDPE789, EDPE790, EDPE791, EDPE792, EDPE793, EDPE794, EDPE795, EDPE796, EDPE797, EDPE798, EDPE799, EDPE800, EDPE801, EDPE802, EDPE803, EDPE804, EDPE805, EDPE806, EDPE807, EDPE808, EDPE809, EDPE810, EDPE811, EDPE812, EDPE813, EDPE814, EDPE815, EDPE816, EDPE817, EDPE818, EDPE819, EDPE820, EDPE821, EDPE822, EDPE823, EDPE824, EDPE825, EDPE826, EDPE827, EDPE828, EDPE829, EDPE830, EDPE831, EDPE832, EDPE833, EDPE834, EDPE835, EDPE836, EDPE837, EDPE838, EDPE839, EDPE840, EDPE841, EDPE842, EDPE843, EDPE844, EDPE845, EDPE846, EDPE847, EDPE848, EDPE849, EDPE850, EDPE851, EDPE852, EDPE853, EDPE854, EDPE855, EDPE856, EDPE857, EDPE858, EDPE859, EDPE860, EDPE861, EDPE862, EDPE863, EDPE864, EDPE865, EDPE866, EDPE867, EDPE868, EDPE869, EDPE870, EDPE871, EDPE872, EDPE873, EDPE874, EDPE875, EDPE876, EDPE877, EDPE878, EDPE879, EDPE880, EDPE881, EDPE882, EDPE883, EDPE884, EDPE885, EDPE886, EDPE887, EDPE888, EDPE889, EDPE890, EDPE891, EDPE892, EDPE893, EDPE894, EDPE895, EDPE896, EDPE897, EDPE898, EDPE899, EDPE900, EDPE901, EDPE902, EDPE903, EDPE904, EDPE905, EDPE906, EDPE907, EDPE908, EDPE909, EDPE910, EDPE911, EDPE912, EDPE913, EDPE914, EDPE915, EDPE916, EDPE917, EDPE918, EDPE919, EDPE920, EDPE921, EDPE922, EDPE923, EDPE924, EDPE925, EDPE926, EDPE927, EDPE928, EDPE929, EDPE930, EDPE931, EDPE932, EDPE933, EDPE934, EDPE935, EDPE936, EDPE937, EDPE938, EDPE939, EDPE940, EDPE941, EDPE942, EDPE943, EDPE944, EDPE945, EDPE946, EDPE947, EDPE948, EDPE949, EDPE950, EDPE951, EDPE952, EDPE953, EDPE954, EDPE955, EDPE956, EDPE957, EDPE958, EDPE959, EDPE960, EDPE961, EDPE962, EDPE963, EDPE964, EDPE965, EDPE966, EDPE967, EDPE968, EDPE969, EDPE970, EDPE971, EDPE972, EDPE973, EDPE974, EDPE975, EDPE976, EDPE977, EDPE978, EDPE979, EDPE980, EDPE981, EDPE982, EDPE983, EDPE984, EDPE985, EDPE986, EDPE987, EDPE988, EDPE989, EDPE990, EDPE991, EDPE992, EDPE993, EDPE994, EDPE995, EDPE996, EDPE997, EDPE998, EDPE999, EDPE1000.

##### Thesis Component – Required (24 credits)

#### M.A. Kinesiology and Physical Education (Non-thesis Option) (45 credits)

Areas of concentration: Adapted Physical Activity, Psychology of Sport and Motor Behavior or Pedagogy)

##### Project Component – Required (15 credits)

##### Complementary Courses (18 credits)

##### Elective Courses (12 credits)

#### M.Sc. Kinesiology and Physical Education (Thesis Option) (45 credits)

Areas of concentration: Exercise Physiology and Biomechanics

##### Required Courses (6 credits)

##### Complementary Courses (15 credits)

##### Thesis Component – Required (24 credits)

#### M.Sc. Kinesiology and Physical Education (Non-thesis Option) (45 credits)

Areas of concentration: Exercise Physiology and Biomechanics

##### Project Component – Required (15 credits)





**EDKP 667 SPORT SCIENCE - SEMINAR.** (3) Students will review selected research papers regarding the physiological and biomechanical factors affecting exercise and sport. Students will be required to prepare literature precis, critiques and lead in some group discussions.

**EDKP 671 EXPERIMENTAL PROBLEMS.** (3) Study in one area of: ergo-physiology or biomechanics or psychology of motor performance or motor performance for exceptional children. To provide an opportunity to conduct a research project and develop an awareness of the problems involved in the area of concentration under departmental supervision.

**EDKP 672 EXPERIMENTAL PROBLEMS.** (6) See EDKP 671. This course, however, is more intensive and comprehensive in nature.

**EDKP 672D1 (3), EDKP 672D2 (3) EXPERIMENTAL PROBLEM**

Desmond Manderson; B.A.(Hons.), LL.B.(Hons.)(A.N.U.),  
D.C.L.(McG.) (Canada Research Chair)  
Michael Milde; LL.M., Ph.D.(Charles), Dip.Air & Space Law (McG.)  
Margaret A. Somerville; A.U.A.(Pharm.) (Adel.), LL.B.(Syd.),  
D.C.L.(McG.) F.R.S.C. (*Gale Professor of Law*) (*joint appoint.  
with the Faculty of Medicine*)  
William Tetley; Q.C., B.A.(McG.); LL.L.(Laval)  
Stephen J. Toope; A.B.(Harv.), B.C.L., LL.B.(McG.),  
Ph.D.(Cantab.)

#### *Associate Professors*

Mark Antaki; B.C.L., LL.B.(McG.), M.A.(Calif.)  
Fabien Gélinas; LL.B., LL.M.(Montr.), D.Phil.(Oxon)  
Richard Gold; B.Sc.(McG.), LL.B.(Tor.), LL.M.,  
S.J.D.(Michigan)(*B.C.E. Professor of E-Governance*)  
Richard A. Janda; B.A.(Tor.), LL.B., B.C.L.(McG.), LL.M.(Col.)  
Rosalie Jukier; B.C.L., LL.B.(McG.), B.C.L.(Oxon)  
David Lametti, B.A.(Tor.), LL.B., B.C.L.(McG.), LL.M.(Yale)  
D.Phil.(Oxon)  
Marie-Claude Prémont, B.Eng.(Sher.), LL.M., Ph.D.(Laval)  
René Provost; LL.B.(Montr.), LL.M.(Berkeley), D.Phil.(Oxon)  
Geneviève Saumier, B.Com, B.C.L., LL.B.(McG.) Ph.D.(Cantab.)  
Colleen Sheppard; B.A., LL.B.(Tor.), LL.M.(Harv.)  
Ronald B. Sklar; B.S.(N.Y.U.), LL.B.(Brooklyn),  
LL.M.(Northwestern), LL.M.(Yale)  
Lionel Smith; B.Sc.(Tor.), LL.B.(W.Ont.), LL.M.(Cantab.),  
D.Phil.(Oxon) (James McGill Professor)  
Stephen Smith; B.A.(Queen's), LL.B.(Tor.), D.Phil.(Oxon) (*William  
Dawson Scholar*)  
Shauna van Praagh; B.Sc., LL.B.(Tor.), LL.M., J.S.D.(Col.)  
Catherine Walsh; B.A.(Dal.), LL.B.(U.N.B.), B.C.L.(Oxon)

#### *Assistant Professors*

Wendy Adams; J.D.(Tor.), LL.M.(Michigan)  
Frédéric Bachand; LL.B.(Montr.), LL.M.(Cantab.)  
Adelle Blackett; B.A.(Queen's), LL.B., B.C.L.(McG.), LL.M.(Col.)  
Angela Campbell; B.A., LL.B., B.C.L.(McG.), LL.M.(Harv.)  
Jaye Ellis; B.A.(Calg.), LL.B., B.C.L.(McG.), LL.M.(U.B.C.),  
D.C.L.(McG.)  
Lara Khoury; LL.B.(Sherb.), B.C.L.(Oxon)

## 42.2 Programs Offered

Graduate programs in law are offered through the Faculty of Law and its two teaching Institutes, the Institute of Air and Space Law and the Institute of Comparative Law. The degrees offered are the LL.M. (Master of Laws) and the D.C.L. (Doctor of Civil Law). Both Institutes also offer a Graduate Certificate.

**The Institute of Air and Space Law** operates within the Faculty of Law. The Institute provides facilities for advanced study and research in Air and Space Law and related problems of international law for qualified law graduates or others with appropriate qualifications. The Institute is also responsible to the GPSO for graduate studies. The Institute offers a Graduate Certificate in Air and Space Law and the degrees of Master of Laws (LL.M.) and Doctor of Civil Law (D.C.L.).

The Graduate Certificate in Air and Space Law is a course work program with a limited research and writing requirement. It is particularly appropriate for students with a strong professional orientation who do not wish to write a thesis.

**The Institute of Comparative Law** operates within the Faculty of Law. As a centre of comparative legal studies, the Institute provides facilities for Graduate.C.L.(Mcerticularly approe Insti.M.(U.B.C.rda2laar .S.(N.Y.U.), LL.B.(Brooklyn),

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and possess sufficient professional experience to compensate for

must remain in residence for three terms. The third term, usually devoted to thesis research, may be taken the summer of the first year, making it possible to complete residence requirements within one calendar year. If the thesis is not completed in this time, students must register for additional sessions as needed. All degree requirements must be completed within three years of the date of registration.

As part of Master's Thesis 1, a thesis candidate must provide a protocol to his or her supervisor setting out details as to the thesis topic, the deadlines for the completion of the various thesis courses and the schedule of meetings with the thesis supervisor. Modifications to the protocol must be made in writing and submitted to the Associate Dean (Graduate Studies).

The thesis topic is normally determined in consultation with the supervisor early in the second term and must be approved by the Associate Dean (Graduate Studies). The submitted thesis is evaluated by the candidate's supervisor and an external examiner chosen by the Graduate and Postdoctoral Studies Office. The thesis must show familiarity with previous work in the field and demonstrate the student's capacity for solid, independent analysis and for organizing results.

### Non-Thesis Option

The non-thesis option is more suited to students who wish to have a wide exposure to a range of taught courses, and are less concerned to have the chance to do a piece of original scholarly research. The non-thesis option does require a substantial Supervised Research Project and students take more courses than students in the thesis program.

The LL.M. (non-thesis) includes a Supervised Research Project which counts for 18 credits, although it can be reduced to 15, 16 or 17 if a student wishes to take more taught course credits. The student must therefore take 27 to 30 credits of other courses.

### Institute of Air and Space Law

#### Master of Laws (LL.M.)

The student must take at least 18 credits of courses. Normally the student will take the following courses:

ASPL636	(3)	Private International Air Law
ASPL633	(3)	Public International Air Law
ASPL637	(3)	Space Law: General Principles
ASPL632*	(3)	Comparative Air Law
ASPL613*	(3)	Government Regulation of Air Transport
ASPL638*	(3)	Law of Space Applications
ASPL639*	(3)	Government Regulation of Space Activities

\* On occasion, students will be permitted to substitute for any of the asterisked courses, other courses selected from a list of Faculty or Institute of Comparative Law courses or courses offered by another department of the University.

Each student's final choice of curriculum is subject to the approval of the Associate Dean (Graduate Studies).

#### Thesis Component – Required (27 credits)

ASPL690	(3)	Master's Thesis 1
ASPL691	(3)	Master's Thesis 2
ASPL692	(6)	Master's Thesis 3
ASPL693	(12)	Master's Thesis 4
ASPL694	(3)	Master's Thesis 5

The LL.M. student must present an acceptable thesis on a subject approved by the Associate Dean (Graduate Studies). Work on the Master's thesis is divided into five courses, and is conducted under the close supervision of a member of Faculty. To be allowed to submit a thesis, a student must have obtained at least B- (65%) in each of the courses taken.

Candidates for the Master's degree must spend three terms of full-time study and research in residence at the Institute.

**The Master of Laws (LL.M.); Law - Thesis** is a 45-credit program that requires some foundational course work, but its core is

a substantial thesis (up to 100 pages) to be credited at 30 credits (or more in exceptional cases). Required courses are:

CMPL 610	(4)	Legal Research Methodology
CMPL 641	(4)	Theoretical Approaches to Law
CMPL612	(3)	Master's Thesis 1
CMPL613	(3)	Master's Thesis 2
CMPL614	(3)	Master's Thesis 3
CMPL615	(6)	Master's Thesis 4
CMPL616	(12)	Master's Thesis 5
CMPL617	(3)	Master's Thesis 6

If approved by the Associate Dean (Graduate Studies), students may reduce their elective course work by up to 3 credits by completing one or both of:

CMPL618	(2)	Master's Thesis 7
CMPL619	(1)	Master's Thesis 8

The remaining 7 credits (or fewer if more credits are earned for the Master's Thesis) are elective, with courses to be chosen from among Faculty offerings. Courses below 500 level will not normally be approved.

**The Master of Laws (LL.M.); Law - non-Thesis** is a 45-credit program that combines a significant body of course work with a substantial guided research project.

CMPL 610	(4)	Legal Research Methodology
CMPL 641	(4)	Theoretical Approaches to Law
CMPL 655	(15)	Research Project 1

If approved by the Associate Dean (Graduate Studies), students may reduce their elective course work by up to 3 credits by completing one or both of:

CMPL656	(2)	Research Project 2
CMPL657	(1)	Research Project 3

The remaining 22 credits (or fewer if more credits are earned for the research project) are elective, with courses to be chosen from among Faculty offerings. Courses below 500 level will not normally be approved.

#### The Master of Laws (LL.M.); Law; Comparative Law - Thesis

is a 45-credit program that requires some foundational course work, but its core is a substantial thesis (up to 100 pages) to be credited at 30 credits (or more in exceptional cases):

CMPL 600	(4)	Legal Traditions
CMPL 610	(4)	Legal Research Methodology
CMPL 641	(4)	Theoretical Approaches to Law
CMPL612	(3)	Master's Thesis 1
CMPL613	(3)	Master's Thesis 2
CMPL614	(3)	Master's Thesis 3
CMPL615	(6)	Master's Thesis 4
CMPL616	(12)	Master's Thesis 5
CMPL617	(3)	Master's Thesis 6

If approved by the Associate Dean (Graduate Studies), students may reduce their elective course work by up to 3 credits by completing one or both of:

CMPL618	(2)	Master's Thesis 7
CMPL619	(1)	Master's Thesis 8

The remaining 3 credits (or fewer if more credits are earned for the Master's Thesis) are elective, with courses to be chosen from among Faculty offerings. Courses below 500 level will not normally be approved.

**The Master of Laws (LL.M.); Law; Comparative Law - non-Thesis** is a 45-credit program that combines a significant body of course work with a substantial guided research project.

CMPL 600	(4)	Legal Traditions
CMPL 610	(4)	Legal Research Methodology
CMPL 641	(4)	Theoretical Approaches to Law
CMPL 655	(15)	Research Project 1

If approved by the Associate Dean (Graduate Studies), students may reduce their elective course work by up to 3 credits by completing one or both of:

CMPL656	(2)	Research Project 2
CMPL657	(1)	Research Project 3

The remaining 18 credits (or fewer if more credits are earned for the research project) are elective, with courses to be chosen from among Faculty offerings. Courses below 500 level will not normally be approved.

### COURSE SELECTION

It should be noted that not all courses are offered in each year. Students wishing to pursue research topics outside of these particular fields are welcome to do so, subject to the availability of appropriate thesis supervisors.

The graduate-level Law courses are grouped into four inter-related concentrations.

#### Legal Traditions and Legal Theory

This concentration combines two areas of strength: the co-existence of diverse legal traditions, particularly (but not exclusively) the civil and common law, and the awareness of the importance of theoretical approaches to law as a means of understanding both the internal dynamic of legal phenomena and their relationship to other social phenomena.

Courses offered within this concentration include:

- Aboriginal Peoples and the Law
- Advanced Jurisprudence
- Canadian Legal History
- Canon Law
- Comparative Modern Legal History
- Feminist Legal Theory
- Islamic Law
- Jurisprudence
- Legal Theory
- Linguistic and Literary Approaches to the Law
- Research Seminars
- Roman Law
- Social and Ethical Issues in Jewish Law
- Social Diversity and the Law
- Talmudic Law
- Tort Theory

#### International Business Law

The ICL pioneered the first graduate concentration in international business law in Canada. This field has practical significance in international business relations and also provides opportunities to apply experience derived from multiple legal systems to the development of multi-jurisdictional, "international" commercial rules.

Courses offered within this concentration include:

- Comparative Legal Institutions
- European Community Law 1
- European Community Law 2
- International Business Enterprises
- International Carriage of Goods by Sea
- International Development Law
- International and Domestic Documentary Sales
- International Maritime Conventions
- International Securities Markets
- International Taxation
- Law and Practice of International Trade
- Research Seminars
- Resolution of International Disputes

#### Human Rights and Cultural Diversity

Building on the Faculty's strength in public law, this concentration promotes the comparative study of human rights law. It provides students with opportunities to reflect critically on the emergence and institutionalization of human rights norms in both domestic and international settings and to explore complexities arising from cultural diversity.

Courses offered within this concentration include:

- Aboriginal Peoples and the Law
- Canadian Charter of Rights and Freedoms
- Children and the Law
- Civil Liberties
- Comparative Constitutional Protection of Human Rights
- Comparative and International Protection of Minorities' Rights

- Current Problems of the International Legal Order
- Discrimination and the Law
- International Law of Human Rights
- Research Seminars
- Social Diversity and Law

#### Regulation, Technology and Society

This concentration focuses on the comparative and inter-disciplinary study of legal regulation in areas of rapid technological change. It encourages critical reflection on notions of the public interest and its protection in areas as diverse as the bio-medical sciences, the environment, the growth of computer networks, and the commercial exploitation of space.

Courses offered within this concentration include:

- Administrative Process
- Communications Law
- Comparative Medical Law
- Computers and the Law
- Contemporary Private Law Problems 1
- Entertainment Law
- Environment and the Law
- Government Control of Business
- Intellectual and Industrial Property
- International Environmental Law
- Land Use Planning
- Policies, Politics and the Legislative Process
- Research Seminars

**LL.M. in Law - Bioethics option:** The curriculum is composed of required courses (for 6 credits) offered in the Biomedical Ethics Unit, bioethics courses (3credit minimum) offered by the base faculty or department (for Faculty of Law: CMPL642), and any graduate courses required or accepted by a base faculty for the granting of a Master's degree for a total of 18 to 21 credits (for Faculty of Law: CMPL641, with remaining credits chosen from Faculty of Law and Bioethics offerings at the 500 or 600 level). A minimum of 45 credits is required including the thesis. For further information regarding this program, please refer to the Bioethics section.

#### DOCTOR OF CIVIL LAW (D.C.L.) DEGREE

**The Doctor of Civil Law (D.C.L.) in Air and Space Law** is the doctoral program in the Institute of Air and Space Law of the Faculty of Law. The core of the program is a substantial thesis that makes an original contribution to legal scholarship. Students must pass a Comprehensive Exam - Air/Space Law (ASPL 701).

**The Doctor of Civil Law (D.C.L.); Law** is the doctoral program in the Faculty of Law. The core of the program is a substantial thesis that makes an original contribution to legal scholarship. Students must pass a Comprehensive Exam - Law (LAWG 701). Students are also required to take CMPL641 Theoretical Approaches to Law.

**The Doctor of Civil Law (D.C.L.) in Law; Comparative Law** is the doctoral program in the Institute of Comparative Law of the Faculty of Law. The core of the program is a substantial thesis that makes an original contribution to legal scholarship. Students must pass a Comprehensive Exam (CMPL 701). Students are also required to take CMPL641 Theoretical Approaches to Law.

The Doctor of Civil Law is a research degree offered by the Faculty of Law. Candidates who do not hold a McGill law degree may be required to take two or three courses designed to introduce them to the McGill professors and resources available in their field.

The degree will be awarded, at the earliest, after the completion of three years of residence in the Faculty. In the case of a candidate holding an LL.M. from McGill or an equivalent degree from another university, the residency requirement may be reduced to two years of study beyond the Master's degree, with the approval of the Graduate and Postdoctoral Studies Office, upon recommendation of the Graduate Studies Committee of the Faculty of Law.

All candidates are must pass the Comprehensive Examination, normally after one year in residence.

The principal basis for evaluation is a doctoral thesis of up to 400 pages. It must constitute a significant contribution to legal knowledge, evidencing in concept and execution the original work of the candidate. Its form must be suitable for publication. The thesis must be submitted within four years of completion of the residency requirement.

## 42.6 Course Descriptions

Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.

Courses with numbers ending D1 and D2 are taught in two consecutive terms (most commonly Fall and Winter). Students must register for both the D1 and D2 components. No credit will be given unless both components (D1 and D2) are successfully completed in consecutive terms.

The course credit weight is given in parentheses after the title.

Denotes courses not offered in 2004-05.

### INSTITUTE OF AIR AND SPACE LAW COURSES

#### ASPL 613 GOVERNMENT REGULATION OF AIR TRANSPORT. (3)

Economic regulation of air transport and navigation, deregulation, liberalization, open skies. Economic and regulatory theories, competition, anti-trust regulation. Status, negotiation, and implementation of international agreements on air services.

**ASPL 632 COMPARATIVE AIR LAW.** (3) Comparative approaches to air law. Selected problems of private law not codified by international conventions including product liability; government liability for certification and inspection of aircraft; ATC liability; aviation insurance; fleet financing; leasing.

**ASPL 633 PUBLIC INTERNATIONAL AIR LAW.** (3) Sources of public international law relating to the air space and its aeronautical uses. International aviation organizations and their law-making functions. Legal responses to aviation terrorism.

**ASPL 636 PRIVATE INTERNATIONAL AIR LAW.** (3) Sources of private international air law. Conflicts of laws. Unification of law of liability. Liability for damage on the surface, liability of the ATC and CNS/ATM providers. Rights in aircraft and their international recognition.

**ASPL 637 S5 09S Tj 3.75 0 TD -z0ac-**

**NT (R) 3.75 0 TD -0.16** Providers, Rights, TD 0.084 Tc (T) Tj 3.75 TD -0.252 Tc A

CU 2.00 09S Tj 3.75 0 TD -0.16 Providers, Rights, TD 0.084 Tc (T) Tj 3.75 TD -0.252 Tc A  
CO 2.00 09S Tj 3.75 0 TD -0.16 Providers, Rights, TD 0.084 Tc (T) Tj 3.75 TD -0.252 Tc A  
TI 1.00 09S Tj 3.75 0 TD -0.16 Providers, Rights, TD 0.084 Tc (T) Tj 3.75 TD -0.252 Tc A

**CMPL 524 ENTERTAINMENT LAW.** (3)

**CMPL 533 RESOLUTION OF INTERNATIONAL DISPUTES.** (3) Conflict of jurisdictions and recognition of foreign judgments, as well as arbitration between parties to international contracts, with particular reference to international conventions.

**CMPL 534 COMPARATIVE PRIVATE INTERNATIONAL LAW 1.** (2)

**CMPL 536 EUROPEAN COMMUNITY LAW 1.** (3) The Treaty of Rome establishing the European Community and current efforts to create a homogenous structure for commerce and competition in Europe.

**CMPL 537 EUROPEAN COMMUNITY LAW 2.** (2) The provisions of the Treaty of Rome dealing with the regulation of domestic and international commerce by the Community authorities, with particular emphasis on articles 85 and 86.

**CMPL 539 INTERNATIONAL TAXATION.** (3) Canadian tax treatment of subjects, including the export of goods and services, carrying on business in other countries, international employee transfers, international re-organizations, and international joint ventures and partnerships.

**CMPL 541 INTERNATIONAL BUSINESS ENTERPRISES.** (3)

**CMPL 543 LAW AND PRACTICE OF INTERNATIONAL TRADE.** (3) The fundamental aspects of international law governing international trade, and governmental regulation of international trade in Canada and Canada's major trading partners.

**CMPL 544 INTERNATIONAL TRADE.** (3)

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### 43.3 Facilities

The School is located on the street level of the McLennan Library Building. Within easy access of each other are the administrative offices, faculty offices, lecture and seminar rooms, and cataloguing and information technology laboratories. Student amenities include a well-equipped lounge and lockers.

The facilities of the School, combined with its downtown location close to public transportation, make it an attractive and convenient site for study.

#### Information Technology Laboratory

The hub of activity at GSLIS is the Information Technology Laboratory. The IT Lab is used to support, both on a formal and informal basis, the various courses taught at GSLIS. The IT Lab has access to a state-of-the-art local area network delivering Internet access using a 100 Mbps connection to the University 1 Gbps fibreoptic backbone. Students will notice a significant difference in speed over the typical dial-up modem. The IT Lab contains 24 Windows-based PC workstations and a network printer available for student use. The Cataloguing Laboratory adjacent to the IT Lab has eight PCs, all equipped with CD-R/RWs.

Several courses, including the required courses GLIS 616 and GLIS 617, have formal laboratory sessions that require use of the IT Lab's hardware and software. On an informal basis, many students use the IT Lab for researching online information, typing and printing papers, developing databases, and creating multimedia presentations for various classes.

E-mail plays an important role in the School's daily activities and students are encouraged to use this facility to communicate with colleagues, faculty and staff. In addition, students maintain an open electronic mailing list called MLISSA (McGill Library and Information Studies Student's Association) and GSLIS maintains a list called MCLIS-L (McGill Library and Information Studies List).

#### Library Facilities

##### McGill Library System

Students have access to one of the continent's major research resources in the McGill Library System, which consists of fourteen libraries organized into five administrative units: Humanities and Social Sciences Library, Branch Libraries, Law Area Library, Life Sciences Area Libraries, and the Physical Sciences and Engineering Area Libraries. Altogether these libraries house over two million volumes providing a valuable collection for research and study. Additionally, a number of important electronic journal repositories can be accessed via the Library. Further information is available in the *General Information, Regulations and Research Guidelines, Graduate and Postdoctoral Studies Calendar for 2004-05*, and on the Library Web site at [www.library.mcgill.ca](http://www.library.mcgill.ca).

##### Library and Information Studies Collection

The Library and Information Studies collection includes approximately 40,000 monographs and 700 periodical titles. The bulk of the collection is in the Humanities and Social Sciences Area Library, located in the same building as the School.

##### Archives

Located on the same floor of the McLennan Library Building as the School, the McGill University Archives preserves and makes available to researchers of all disciplines more than 4500 m of primary documentation of permanent value generated over the past 180 years. It offers laboratory conditions for students doing independent studies, practical projects for the Archival Science course and serves as a Practicum site. The Archives also possesses a working library of materials relating to archival science and records management.

### 43.4 Admission Requirements

#### Master of Library and Information Studies (M.L.I.S.)

1. Applicants must have a bachelor's degree from a recognized university. Academic standing of at least B, or second class, upper division, or a CGPA of 3.0 out of 4.0 is required.

The School will take into account the character of the appli-

cants' undergraduate studies and their suitability for a career in library and information services.

Courses in library and/or information studies taken before or as part of a B.A., or such courses taken in a school with a program not accredited by the American Library Association, cannot be accepted as credit toward the McGill M.L.I.S.

2. Applicants with a Bachelor's degree completed solely or primarily in a language other than English or French are required to submit documented proof of competency in oral and written English prior to admission. Such proof normally comprises the Test of English as a Foreign Language (TOEFL) with a minimum score of 600 (paper-based test) or 250 (computer-based test) with a written score of at least 5.0 for either test, or the International English Language Testing System (IELTS) with a minimum overall band score of 7.5. Applicants whose mother tongue is not English may be asked to demonstrate an English-language competency beyond the submission of the TOEFL or IELTS scores.
3. Competency in the use of computers is expected. Applicants should have a thorough knowledge of the Windows operating system, particularly file management and word processing, and presentation software such as PowerPoint.
4. Previous library experience, while not essential, will be given consideration in assessing an application, but this experience cannot replace academic criteria.

#### Graduate Certificate in Library and Information Studies

1. Applicants should have a Master's degree in Library and Information Studies from a program accredited by the American Library Association (or equivalent). Admission of students with overseas degrees will be guided by the M.L.I.S. equivalency standards of A.L.A. Candidates will normally have at least three years' professional experience following completion of the M.L.I.S.
2. Applicants with a Bachelor's degree completed solely or primarily in a language other than English or French are required to submit documented proof of competency in oral and written English prior to admission. Such proof normally comprises the Test of English as a Foreign Language (TOEFL) with a minimum score of 600 (paper-based test) or 250 (computer-based test) with a written score of at least 5.0 for either test, or the International English Language Testing System (IELTS) with a minimum overall band score of 7.5. Applicants whose mother tongue is not English may be asked to demonstrate an English-language competency beyond the submission of the TOEFL or IELTS scores.

#### Graduate Diploma in Library and Information Studies

1. Applicants should have a Master's degree in Library and Information Studies from a program accredited by the American Library Association (or equivalent). Admission of students with overseas degrees will be guided by the M.L.I.S. equivalency standards of A.L.A. Applicants will normally have at least three years' professional experience following completion of the M.L.I.S.
2. Applicants with a Bachelor's degree completed solely or primarily in a language other than English or French are required to submit documented proof of competency in oral and written English prior to admission. Such proof normally comprises the Test of English as a Foreign Language (TOEFL) with a minimum score of 600 (paper-based test) or 250 (computer-based test) with a written score of at least 5.0 for either test, or the International English Language Testing System (IELTS) with a minimum overall band score of 7.5. Applicants whose mother tongue is not English may be asked to demonstrate an English-language competency beyond the submission of the TOEFL or IELTS scores.

#### Ph.D. (Ad Hoc)

1. Applicants should normally have a Master's degree in Library and Information Studies (or equivalent). Master's degrees in other fields will be considered in relation to the proposed research.

An applicant with a Master's degree in Library and Information Studies (or equivalent) will normally be admitted into Ph.D.1.

An applicant with a master's degree in another field may be considered for admission as a Ph.D. 1 but will need to register for courses to upgrade background knowledge in library and information studies.

- Applicants with a Bachelor's degree completed solely or primarily in a language other than English or French are required to submit documented proof of competency in oral and written English prior to admission. Such proof normally comprises the Test of English as a Foreign Language (TOEFL) with a minimum score of 600 (paper-based test) or 250 (computer-based test) with a written score of at least 5.0 for either test, or the International English Language Testing System (IELTS) with a minimum overall band score of 7.5. Applicants whose mother tongue is not English may be asked to demonstrate an English-language competency beyond the submission of the TOEFL or IELTS scores.

### 43.5 Application Procedures

All applicants must submit, or arrange for the submission of, the following documents, directly to the School:

- A completed application form, available on the Web at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate). If Internet access is not possible, the application form may be obtained from the School by mail.
- Official transcripts of the applicant's university record showing degree(s) awarded.
- A non-refundable application fee of \$60 in Canadian funds, payable by credit card when applying on-line. Payment for a paper application may be made by credit card, bank draft, money order or certified cheque (payable to McGill University).
- A non-refundable deposit of \$200 is required for the MLIS program. Applicants must access MINERVA within 30 days of receipt of the official decision from the Office of Graduate and Postdoctoral Studies to confirm acceptance and pay the deposit. Payment is to be made by credit card or in certain circumstances, by special arrangement with the office of the Graduate School of Library and Information Studies. This amount will be credited towards the tuition fee. If payment is not received within the 30 days, the acceptance will be rescinded. The deposit will be forfeited if the student does not start the MLIS program.
 

A curriculum vitae.
- Two letters of recommendation, on letterhead.
- A covering letter outlining the reasons for wishing to undertake the program of study.

#### Master of Library and Information Studies (M.L.I.S.)

Deadline for receipt of application forms for entrance into the first year of the M.L.I.S. program is April 1 (March 1 for overseas students), but as enrolment is limited, early application is strongly recommended.

Applicants may be interviewed by a member of the Admissions Committee or a delegate.

The Admissions Committee will begin reviewing complete applications on November 1, and offers will be made on a rolling basis from that date.

#### Graduate Certificate in Library and Information Studies

Applicants must also provide a statement of areas of professional interest.

Applications will be accepted for the Fall, Winter and Summer sessions. The application deadline is four months prior to commencement of the session but earlier applications are encouraged.

#### Graduate Diploma in Library and Information Studies

Applicants must also provide a statement of areas of academic/research interest.

Applications will be accepted for the Fall, Winter and Summer sessions. The application deadline is four months prior to commencement but earlier applications are encouraged.

#### Ph.D. (*Ad Hoc*)

Applicants must also provide a brief outline (2-3 pages) of the proposed research.

The applicant's file will be considered by the Advanced Studies Committee within the School. If approved, the applicant will normally enroll as a Ph.D.I student.

A person interested in pursuing a program of study leading to the Ph.D. degree should contact the Chairperson of the Advanced Studies Committee in the Graduate School of Library and Information Studies.

## 43.6 Program Requirements

### 43.6.1 Master of Library and Information Studies (M.L.I.S.)

The M.L.I.S. degree is awarded after successful completion of the equivalent of two academic years of graduate study (48 credits). Twelve credits in each of the fall and winter terms constitute a full load. Although the program is normally taken full-time, it may be pursued part-time but must be completed within five years of initial registration.

#### Goals of the M.L.I.S. Program

- To provide the intellectual foundation for careers in library and information service.
- To foster adaptability and competence in managing information resources.
- To promote appropriate use of technologies to meet the needs of a changing world.
- To emphasize the role of research in the advancement of knowledge.
- To promote commitment to professional service for individuals, organizations and society.

#### Objectives of the M.L.I.S. Program

Students graduating from the program will be able to:

- Demonstrate an understanding of the history and intellectual foundations of librarianship and information science.
- Articulate the issues concerning access to information, privacy, censorship, and intellectual freedom.
- Analyze the flow of information through society, and the roles of libraries and information agencies in this process.
- Analyze the role of the librarian or information specialist as a mediator between users and information resources.
- Assess and respond to diverse users' information needs and wants.
-

may register for M.L.I.S. courses with the approval of the course instructor.

**Special students:** Individuals who already hold a graduate degree in library and information studies from an accredited program and who are not proceeding to a degree may register for up to 6 credits per term to a total maximum of 12 credits, for which they fulfill the necessary prerequisites. At the discretion of the Director, work experience may be substituted for such prerequisites. Enrolment is subject to the condition that regular students have priority in cases of class size restrictions.

#### Registration – M.L.I.S.

All returning and new graduate students must register on-line at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva), after completing a Minerva Course Selection Form and obtaining departmental approval.

Information concerning registration for incoming M.L.I.S. students will be sent to them prior to July of each year.

A deposit of \$200 is required when confirming an offer of acceptance. Failure to pay the deposit by the specified deadline will result in the acceptance being rescinded.

#### Introductory Program – M.L.I.S.

All incoming M.L.I.S. students are required to participate in an introductory program designed to acquaint them with the many-faceted world of information and the forward-looking leadership of the library and information professions.

The program begins in the week prior to classes with follow-up activities throughout the year. It introduces students to the profession, to information technology and to the historical, social and cultural issues associated with library and information studies. The introductory program consists of panel discussions, lectures, and tours. A number of guests from McGill and from the broader Canadian information community participate in the program. The information technology sessions include hands-on activities in the School's Information Technology Laboratory. Students have an opportunity to meet with their faculty advisors and with second-year students. A further series of seminars held throughout the year supplements the initial program.

Overseas students should plan to arrive well before the beginning of the fall term.

### 43.6.2 M.L.I.S. Program Requirements

#### Required Courses (24 credits)

#### Complementary Courses (24 credits)

Students, in consultation with their advisors, design individualized programs of instruction that take advantage of their backgrounds and interests to prepare them for specialized careers. During their first term of study while they are following the required courses, students should start to investigate their options and discuss their plans with their faculty advisors.

Many courses include visits to libraries and information centres, as well as a variety of other information-related organizations.

#### Courses outside the School

**Courses in other McGill Departments** McGill University offers a large number and variety of graduate-level courses. Students interested in taking a course outside the School must complete the following steps:

- a) contact the relevant instructional unit to establish any prerequisites and to ascertain how the unit handles outside registrants;

- b) obtain a current course outline;
- c) demonstrate in writing the value of the selected course within the context of an integrated program of study leading to the M.L.I.S. degree;
- d) gain the approval of their faculty advisor and the School's Director.

**Courses in other Quebec Universities** Students may take up to six credits at any other Quebec university provided the courses are not available at McGill University. Steps a) to d) outlined above should be followed by any student wishing to pursue this option. For more information, see section 7.1.13 "Quebec Inter-University Transfer Agreement (IUT)".

#### Transfer Credits – Advanced Standing

Students may not count credits for courses taken toward another degree as credits towards the M.L.I.S. degree. In special cases credits for appropriate courses previously taken outside the School may be transferred to the M.L.I.S. program, but only with the approval of the Director, and only if negotiated at the time of admission to the program. As a rule, no more than one-third of the McGill program course work (normally not thesis or project) can be credited with courses from another university.

Transfer credits must be approved by the Director of the School and the Director of the Graduate and Postdoctoral Studies Office. Requests for transfer credits will only be considered at the time of admission to the M.L.I.S. program.

In special cases, students may be excused from taking a required course if they have already completed an equivalent course. In such cases, however, they must obtain the permission of the instructor and the Director and will be required to substitute an additional complementary course bringing the total of their earned credits in the M.L.I.S. program to the normal 48.

#### Research Colloquia

Research Colloquia presented by guest speakers from Canada and, on occasion, other countries are open to students, as well as university staff and the Montreal information community, at various intervals throughout the year. Although not a formal part of the M.L.I.S. program, the Colloquia offer an opportunity for students to learn of current research preoccupations and developments in the field of library and information studies.

### 43.6.3 Graduate Certificate in Library and Information Studies

The program may be completed full-time in one academic term, or part-time within a maximum of five years.

Each certificate student will be assigned a faculty advisor in conjunction with whom an individualized program of study will be designed.

#### Program Requirements (15 credits)

At least 3 courses (9 credits) and as many as 5 courses (15 credits) to be chosen, in consultation with the student's advisor, from the MLIS courses listed in section 43.7 "Courses", with the exception of GLIS646, GLIS647, GLIS689, GLIS695, GLIS696 and GLIS697. NB: Students who wish to register for GLIS694 Certificate Project must first have their research proposal approved by the Committee on Student Standing and Academic Affairs.

Up to 6 credits may be taken outside the School, 3 credits of which may be taken outside McGill. All such courses must be at a graduate level and receive the prior approval of the student's advisor(s) and the School's Director.

### 43.6.4 Graduate Diploma in Library and Information Studies

**Program Requirements (30 credits)****43.6.5 Ph.D. (Ad Hoc)**

The Ph.D. program provides an opportunity to study interdisciplinary research topics within the field of library and information studies at the doctoral level. The candidate is attached to the Graduate School of Library and Information Studies and develops the usual working relationships with research supervisors. In addition to a supervisor from the School, three faculty must sit on the Advisory Committee, one of whom must be external to the School.

Admission, program planning and research progress in the Ph.D. (*Ad Hoc*) program is the responsibility of the Graduate and Postdoctoral Studies Office.

The residency is 3 years (6 terms).

**Admission to the Ph.D. (Ad Hoc) program involves a number of steps.**

1. The applicant normally is admitted as a Ph.D.1 student.
2. The applicant must provide a brief outline of the proposed research (2-3 pages) specifying as clearly as possible the research area to be investigated.
3. The Director of the Graduate and Postdoctoral Studies Office is notified that an application to enter the Ph.D. (*Ad Hoc*) program has been completed.
4. The submission includes an application form, updated curriculum vitae, the research proposal and the report of the School's Admissions Committee. The form "Requirements for Graduation of *Ad Hoc* Ph.D. Candidates" will be completed providing information on the candidate, required courses, required examinations (comprehensive, language, etc.) and the signatures of the Admissions Committee members.
5. The Graduate and Postdoctoral Studies Office endorses or rejects the recommendation of the Admissions Committee. If the applicant is accepted for admission, an Advisory Committee will be appointed which may include members of the Admissions Committee or new members as deemed necessary.

**43.7 Courses**

**Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.**

Not all courses can be offered in any academic year. In addition, courses which have a registration of fewer than five will not normally be taught. Some courses have a maximum enrolment.

The course credit weight is given in parentheses after the title.

Denotes courses which may not be offered in 2004-05.

For more information on Multi-term Courses, Course Terminology, Class Schedule and Course Catalog, see the

*General Information, Regulations and Research Guidelines, Graduate and Postdoctoral Studies Calendar for 2004-05.*

**GLIS 601 INFORMATION AND SOCIETY.** (3) Introduction to our world of information, documents and information agencies with historical and social approach. A look at how information is generated and at the role played by libraries and of all kinds and other relevant agencies. This course should provide a broad framework within which other required or elective courses could be understood.

**GLIS 607 ORGANIZATION OF INFORMATION.** (3) Theory and techniques of bibliographic control for information. Basic cataloguing and indexing principles and practices incorporating the concepts of main entry, subject analysis, and classification according to standard codes. Introduction to ISBD and MARC formats for description and automated support applications. Practical assignments in the organization of materials laboratory.

**GLIS 608 CLASSIFICATION AND CATALOGUING.** (3) (Prerequisite: GLIS 607) Cataloguing in depth with a view to such specialties as original cataloguing, catalogue maintenance, and administration of the cataloguing department. Investigation of alternative methods of library documentation. The study of developments in international cataloguing standards, codes, and formats. Includes laboratory sessions.

**GLIS 611 RESEARCH PRINCIPLES AND ANALYSIS.** (3) Fundamental aspects of reflective thinking and the methods and techniques of research appropriate to the investigation of library/information problems. Criteria helpful in evaluating published research in library/information studies by analyzing the various steps of the research process, thereby providing guidelines for planning, conducting, and reporting research.

**GLIS 612 HISTORY OF BOOKS AND PRINTING.** (3) (Prerequisite: GLIS 615 or consent of instructor.)

**GLIS 613 HISTORY OF LIBRARIES.** (3) (Prerequisite: GLIS 601 or consent of instructor)

**GLIS 614 PUBLIC LIBRARIES.** (3) A review of the Public Library Movement in English and French Canada. The development of public libraries in North America over the last twenty years with an emphasis on the library's role and responsibilities for the future. The impact of information technologies on the definition and delivery of services.

**GLIS 615 BIBLIOGRAPHIC AND FACTUAL SOURC**

appraisal supervision, staff motivation, occupational health and safety, negotiation and conflict management.

**GLIS 623 FINANCIAL MANAGEMENT.** (3) (Corequisite: GLIS 620)

**GLIS 624 MARKETING INFORMATION SERVICES.** (3)

**GLIS 631 SYSTEMS THINKING.** (3) (Prerequisite: Consent of the instructor) Introduction to general systems thinking and the use of the systems approach as an aid to problem solving and decision making. Subjective and objective factors in modelling for the definition, analysis, design, implementation and evaluation of alternative solutions.

**GLIS 632 LIBRARY SYSTEMS.** (3) (Prerequisite: GLIS 617)

**GLIS 633 MULTIMEDIA SYSTEMS.** (3) (Prerequisites: GLIS 617 and consent of instructor)

**GLIS 634 WEB SYSTEM DESIGN AND MANAGEMENT.** (3) (Prerequisites: GLIS 616, GLIS 617) Principles and practices of designing websites in the context of libraries and information centres. The course focuses on a conceptual approach to organizing information for the World Wide Web including design, implementation and management issues. Topics include Web development tools, markup languages, Internet security and Web server administration.

**GLIS 636 GOVERNMENT INF**



given unless both components (D1 and D2) are successfully completed in consecutive terms.

**Note:** All undergraduate courses administered by the Faculty of Arts (courses at the 100- to 500-level) have limited enrolment.

The course credit weight is given in parentheses after the title.

Denotes courses taught only in alternate years.

**Undergraduate courses**

Students deficient in certain areas may be required to take some of the following undergraduate courses in addition to graduate courses.

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## 45 Management

Samuel Bronfman Building  
1001 Sherbrooke Street West  
Montreal, QC, Canada H3A 1G5  
Telephone: (514) 398-4066  
Web site: www.management.mcgill.ca

*Dean — Gerald Ross*

*Associate Dean, Master Programs; Director, M.B.A. — Alfred M. Jaeger*

*Associate Dean (Academic) and Director, Ph.D. Program — Jan Jörgensen*

*Program Chair, International Masters Program in Practicing Management (IMPM) — Henry Mintzberg*

*Program Director, Master of Management (Manufacturing) — Tamer Boyaci*

*Program Director, McGill/McConnell Voluntary Sector — Frances Westley*

*Director, C.A. Program — Philippe Levy*

*Associate Director, M.B.A. — Eva Shepherd*

### 45.1 Staff

#### *Emeritus Professors*

D. Armstrong; B.A., B.Com.(Alta.), Ph.D.(McG.)  
R.N. Kanungo; B.A., M.A.(Patna), Ph.D.(McG.)  
R.J. Loulou; M.Sc., Ph.D.(Calif.); Management Science

#### *Professors*

N.J. Adler; B.A., M.B.A., Ph.D.(U.C.L.A.); Organizational Behaviour  
R. Brenner; B.Sc., M.A., Ph.D.(Hebrew Univ.) (*Repap Professor of Economics*)  
U. Böckenholt; Diploma(Oldenburger, Germany), Ph.D.(Chic.), Ph.D.(Oldenburger, Germany); Marketing (*Bell Professor in E-Marketing*)  
D.H. Drury; B.Com., M.B.A.(McM.), Ph.D.(Northwestern), R.I.A.(S.I.A.); Accounting  
V.R. Errunza; B.Sc.(Tech.)(Bombay), M.Sc., Ph.D.(Calif.); Finance  
J.L. Goffin; B.Eng., M.S.(Brussels), M.Sc., Ph.D.(Calif.); Management Science  
H. Mintzberg; B.Eng.(McG.), B.A.(Sir G.Wms.), S.M., Ph.D.(M.I.T.); Strategy and Organization (*John Cleghorn Professor of Management Studies*)  
F. Westley; B.A.(Vt.), M.A., Ph.D.(McG.); Strategy and Organization (*James McGill Professor*)  
G.A. Whitmore; B.Sc.(Man.), M.Sc., Ph.D.(Minn.); Management Science (*Samuel Bronfman Professor of Management Science*)

#### *Associate Professors*

L. Dubé; B.Sc.(Laval), M.B.A.(HEC), M.P.S., Ph.D.(C'nell); Marketing (*James McGill Professor*)  
H. Etemad; B.S.C.; M.Eng.(Tehran), M.S., M.B.A., Ph.D.(Calif.); Intern-0.1231 10)R.vain(McM.), PPitts(Cali Tw (Financ0135.75 -9 TD 0.275 Tc -0.11A.) Jaeg Brenner; Ph.D.(NorthwesteM.S., M.B.A., P Tn(Calif.);

L. Hammami; B.Com., M.B.A. (Laval); Finance  
 D. Hart; B.Sc., M.B.A. (McG.), M.Sc. (C'dia); Management Science  
 K. Leitch; B.A. (McG.); Information Systems  
 P. Levy; B.Com. (C'dia), D.P.A., M.B.A. (McG.); Accounting  
 F. Liu; B.Eng., M.Eng. (Tianjin, China), Ph.D. (C'dia); Finance  
 B. Smith; B.A., M.A. (Dublin) M.Sc. (Alta.), M.Sc.A. (McG.)  
 Ph.D. (Queen's); Management Science  
 L. Taylor; B.Sc., M.B.A., Ph.D. (Alta.); Organizational Behaviour  
 V. Vaupshas; B.Sc., M.B.A. (McG.); Marketing  
 G. Zabowski; B.Com., M.B.A. (McG.); Management Science

*Adjunct Professor*

P. Johnson; B.A. (Sir G. Wms.), C.M.C.; Entrepreneurial Studies

*Visiting Professor*

T. Kang; B.B.A. (Korea Univ.); M.B.A. (McG.); Ph.D. (pending-Illinois); Accounting

## 45.2 Programs Offered

McGill University offers eight programs which provide graduate level education in management. All programs have been tailored to meet the special needs and demands of different groups of people. Before embarking on a graduate management education, students should, therefore, be aware of the different and unique features of each program, and select the one which best suits their aspirations and abilities.

- 1) Master of Business Administration (M.B.A.)  
 may be taken on either a full-time basis (see section 45.5 "M.B.A. Program Requirements", page 252) or a part-time basis (see section 45.5.4 "M.B.A. Part-time Studies", page 253).
- 2) M.B.A./Law Program  
 offered in cooperation with the Faculty of Law (see section 45.5.12 "M.B.A./Law Program", page 254).
- 3) M.D./M.B.A.  
 offered in cooperation with the Faculty of Medicine (see section 45.5.10 "M.D./M.B.A. Program", page 254).
- 4) Post-M.B.A. Certificate  
 intended for professional managers who wish to update their skills and/or broaden the base of their education. The certificate may be taken on a full-time or part-time basis. (see section 45.7 "Post-M.B.A. Certificate", page 259)
- 5) Ph.D. in Administration  
 offered jointly by the four Montreal universities: Concordia University, École des Hautes Études Commerciales (affiliated with the Université de Montréal), McGill University, and Université du Québec à Montréal (see section 45.9 "Joint Ph.D. in Administration", page 262).
- 6) Master of Management – Manufacturing Management  
 a 12-month academic program followed by a four-month industrial internship, offered in collaboration with the Faculty of Engineering (see section "Master in Manufacturing Management", page 259).
- 7) Master of Management – International Masters Program in Practising Management (see section 45.8.2 "International Masters Programs in Practising Management (IMPM)", page 260).
- 8) Graduate Diploma in Public Accountancy (see section 45.8.3 "Diploma in Public Accountancy (Chartered Accountancy)", page 260).

## 45.3 Admission Requirements

### 45.3.1 M.B.A. Program – Admission Requirements

Applicants with strong indications of managerial potential are desired. Given below are the minimum entrance criteria. Owing to the large number of applicants to the McGill M.B.A., merely meeting the minimum requirements will not guarantee acceptance.

- a) An undergraduate degree, from an approved college or university, with a Grade Point Average of at least 3.0 out of a possible 4.0, or a B average.
- b) A score of at least 570 on the Graduate Management Admission Test (GMAT), written within the past five years.
- c) Applicants who earned a Bachelor degree outside Canada, the United States, Australia, New Zealand or the United Kingdom, are required to take the Test of English as a Foreign Language. The TOEFL is **not** waived for graduates of four-year university programs whose language of instruction is English if the university is located in a non-English speaking country. Canadian citizens or applicants with at least three years Permanent Resident status may request a TOEFL waiver. Applicants who are not Canadian citizens and whose mother tongue is not English may be asked to demonstrate an English language competency beyond the submission of the TOEFL score. A minimum score of 600 for paper-based test or 250 for computer-based test is required.  
 Applicants may write the IELTS (International English Language Testing Systems) instead. A minimum overall band of 7.0 is required.
- d) A minimum of two years of full-time work experience, following completion of an undergraduate degree.
- e) Two letters of reference.

### 45.3.2 M.B.A. Part-time Studies – Admission

The McGill M.B.A. Program may also be completed on a part-time basis. This is meant to accommodate persons with full-time employment. Admission as an M.B.A. part-time student may be made twice a year, in September and in January. Admission requirements are the same as in section 45.3.1 "M.B.A. Program – Admission Requirements".

**Note:** Students studying on a part-time basis may transfer to full-time at various stages during their studies. Students wishing to do this must meet with the Associate Director to review their schedule; see section 45.5.5 "Combined Full-time and Part-time Studies", page 253.

### 45.3.3 M.B.A. Admission – Transfer of Credits

#### OPTION 1

Candidates who have completed some portion of the first year of an M.B.A. program at another recognized institution may be granted CREDIT for equivalent courses up to a maximum of 15 credits. In most cases candidates would be admitted to the first year of the program and will complete the remaining first year courses on a part-time basis.

#### OPTION 2

Candidates who have completed the entire first year of an M.B.A. program at another recognized institution may be exempt from the entire first year and required to take 15 second-year courses.

**Note:** In both options, candidates must submit a completed application and meet the competitive entrance requirements of the M.B.A. program.

In order to be awarded an M.B.A. from McGill a minimum of 45 credits must be completed at McGill.

### 45.3.4 M.B.A. Admission – Advanced Standing

#### OPTION 1

Candidates who hold a Bachelor of Commerce degree from a recognized North American institution with a minimum cumulative grade point average of 3.2 on a four (4) point scale and possess three or more consecutive years of full-time work experience, following completion of their undergraduate degree, in a position that has allowed for interaction across a number of areas in the enterprise may be considered for advanced standing. Candidates will be required to take 15 second-year M.B.A. courses (45 credits). Applicants applying for advanced standing must complete and return the advanced standing application, accompanied by a document detailing management responsibilities and the M.B.A. application form.

**OPTION 2**

Students who have a B.Com. and subsequently complete the requirements for the McGill Graduate Diploma in Public Accountancy may choose not to receive the Diploma but instead to use those 30 credits towards the M.B.A. (with an option in Accounting). They would enter the second year of the program and complete 30 credits of M.B.A. II courses. To be accepted into the M.B.A. program such students must meet the advanced standing admission requirements as outlined above.

**Note:** Students accepted with Advanced Standing may apply for the International Exchange Program. However, the term of study spent abroad will be IN ADDITION to the 45 credits required for their M.B.A.

**45.3.5 Visiting Student Admission**

Visiting students are graduate students registered at another university taking a course in the Faculty of Management for credit at their home university.

Quebec students may apply on-line by going to [www.crepuq.qc.ca](http://www.crepuq.qc.ca). Visiting students from outside the province of Quebec must forward an application form and \$100 fee, as well as a letter of permission from their school indicating the course(s) they are permitted to follow. The letter must also confirm that they are in good standing at their home university.

The deadlines for submission of applications are the same as admission deadlines.

**45.4 Application Procedures****45.4.1 M.B.A. Application Procedure**

The McGill M.B.A. program begins in September of each year. **The deadline for receipt of application, \$100 fee and all supporting documents is February 15.**

Applications are reviewed on a rolling basis so that the earlier a file is complete, the sooner the applicant may expect to receive an answer. The undergraduate record, GMAT and TOEFL scores (where applicable), work experience, essay and letters of reference are the criteria used in making admission decisions. With the exception of a few select cases, a personal interview is not mandatory.

An on-line application form is available at [www.mcgill.ca/apply/graduate](http://www.mcgill.ca/apply/graduate) for use by those who wish to apply for entry to graduate studies at McGill. Applicants may also download the Application from the Faculty of Management Web site. Further information on using the paper application to apply is available on the Web at [www.management.mcgill.ca](http://www.management.mcgill.ca), however applicants to graduate programs in Management are strongly encouraged to apply on-line.

All other documents are to be submitted directly to:

Admissions Office  
McGill M.B.A. Program  
Faculty of Management  
McGill University  
1001 Sherbrooke Street West  
Montreal, Quebec H3A 1G5  
E-mail: [mba@management.mcgill.ca](mailto:mba@management.mcgill.ca)  
Web site: [www.management.mcgill.ca](http://www.management.mcgill.ca)

**Applicants must submit the on-line application, or the completed paper Application Form, and arrange for the submission of:**

- 1) a completed Personal Background Sheet;
- 2) duplicate official transcripts of undergraduate marks (and graduate, if any) **FORWARDED DIRECTLY BY THE APPLICANT'S UNIVERSITY**. For international applicants, the academic records must include: transcripts in the original language with official translations (into English), listing courses and grades for each year of study, verifying conferral of degree. These documents must bear the actual signature of the registrar and the official seal or stamp of the institution.

- 3) the \$100 application fee (see section 45.4.3 "Application Fee Information");
- 4) two letters of reference forwarded directly from individuals who have been responsible for evaluating the applicant's academic and/or managerial performance and potential.
- 5) the GMAT score (written within the past five years) and the TOEFL score (where applicable) forwarded directly from the Educational Testing Service (see section 45.4.4 "GMAT and TOEFL Information").

**Please note that entrance to the McGill M.B.A. is highly competitive. It is in the applicant's interest to apply as early as possible. Applicants will be notified when their file is complete and a decision will follow within 4 to 6 weeks.**

**No documents submitted as part of the application package will be returned to the applicant.**

**Note:** Students who are not admitted to the program may request a Reconsideration of Application for a fee of \$40. If the decision following the Reconsideration is not favourable, the student may then request an Admissions Appeal for a fee of \$100. The fee(s) will be credited to the student fee account if the initial admission decision is overturned. Payment must be made as per section 45.4.3 "Application Fee Information".

**45.4.2 M.B.A. Part-time Application Procedures**

Admission as an M.B.A. part-time student may be made twice a year. Deadlines for receipt of application, \$100 fee and all supporting documents are:

- February 15 for September
- October 1 for January

The application procedure is the same as that for full-time studies; see section 45.4.1 "M.B.A. Application Procedure".

**45.4.3 Application Fee Information**

The \$100 application fee must be paid using one of the following methods:

- Credit card (on-line applications must be paid for by credit card).
- Certified Personal cheque in Canadian dollars drawn on a Canadian Bank.
- Certified Personal cheque in U.S. dollars drawn on a U.S. Bank.
- Canadian Money Order in Canadian dollars.
- Money Order in U.S. dollars.
- Bank draft in Canadian dollars drawn on a Canadian Bank.
- Bank draft in U.S. dollars drawn on a U.S. Bank.

In all cases the cheque/money order should be made payable to McGill University.

**Please note that a file will not be opened until an official application with the \$100 fee is received.**

**45.4.4 GMAT and TOEFL Information****Graduate Management Admission Test (GMAT)**

The GMAT is administered by the Educational Testing Service (ETS). It is required of all M.B.A. applicants. The McGill ETS Code Number is 0935. Only a GMAT written within the last five years will be considered valid. GMAT test results must be sent to McGill directly from the ETS; photocopies will not be accepted.

All inquiries concerning testing arrangements should be addressed to: Graduate Management Admission Test, Educational Testing Service, P.O. Box 6103, Princeton, N.J. 08541-6103 U.S.A. Telephone: (609) 771-7330.

There is a learning book available to the students entitled "GMAT". This book may be obtained from many bookstores, including the McGill University Bookstore, located at 3420 McTavish Street and students may wish to buy this book prior to writing the GMAT examination.

**Test of English as a Foreign Language (TOEFL)**

The purpose of this test is to determine the English proficiency of non-Canadian individuals whose native language is not English.

For a copy of the Bulletin of Information, write directly to the Educational Testing Service, Box 6152, Princeton, New Jersey, USA 08541-6151. Copies can also be obtained from the Admissions, Recruitment and Registrar's Office in the James Administration Building.

**45.4.5 Application Procedures for other Programs**

Application procedures can be found in each program's section, as follows:

M.B.A./Law Program, see section 45.5.12.

M.D./M.B.A. Program, see section 45.5.10.

Master in Manufacturing Management, see section .

Post-M.B.A. Certificate, see section 45.7.

Joint Ph.D. in Administration, see section 45.9.

International Masters Programs in Practising Management (IMPM), see section 45.8.2.

Diploma in Public Accountancy (Chartered Accountancy), see section 45.8.3.

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**Year 2 (30 credits)**

Summer 2a – July:

Two 3-credit core courses delivered in a 5 day/week two-week session. Total credits: 6

Fall and Winter Terms – September to April:

Five 3-credit elective courses. Total credits: 15

Summer 2b – May and June:

One 3-credit elective course and one 6-credit independent study course. Total credits: 9

The entrance and course requirements for the M.B.A.<sup>3</sup> program are identical to those of the full-time program.

For further information, contact the M.B.A.<sup>3</sup> staff at (514) 398-1539.

**45.5.7 Additional M.B.A. Programs**

The following special programs are also available:

M.B.A. International Exchange, M.B.A. *Stage*, M.D./M.B.A., M.B.A./Japan, M.B.A./Law.

**45.5.8 M.B.A. International Exchange Program**

Through the McGill M.B.A. Exchange Program there are exciting opportunities to study abroad.

Participation in the program gives McGill students the opportunity to spend part of the second year of the M.B.A. studying at a business school abroad. Students successfully completing the program's requirements receive both the Master's Degree from their home university and an International Management Certificate from the foreign institution which they attended. McGill is part of the Program in International Management (PIM), a consortium of the leading business schools in North America, South America, Europe, and Asia. There are exchanges with both PIM and non-PIM schools.

The following schools may exchange students with McGill in 2003-2004:

PIM members:

- Asian Institute of Management, Manila, Philippines
- Copenhagen Business School, Denmark
- Erasmus University, Rotterdam, The Netherlands
- ESADE (Escuela Superior de Administracion y Direccion de Empresas), Barcelona, Spain
- Fundacao Getulio Vargas, Sao Paulo, Brazil
- HEC (Hautes Études Commerciales), Jouy-en-Josas, France
- Institut Supérieur des Affaires (I.S.A.), France
- ITAM, Mexico
- ITESM, Mexico
- Luigi Bocconi, Milan, Italy
- Manchester Business School, England
- Norwegian School of Economics, Norway
- Stockholm School of Economics, Sweden
- Thammasat University, Bangkok, Thailand
- University of Cologne, West Germany
- University of Louvain, Louvain-La-Neuve, Belgium
- University of Melbourne, Australia
- University of New South Wales, Australia
- University of St. Gallen, Switzerland
- University of Texas at Austin, U.S.A.
- University of Witwatersrand, South Africa

Non-PIM members:

- Bilkent University, Turkey
- Solvay Business School, Brussels, Belgium

**45.5.9 M.B.A. Stage Program**

The M.B.A. *Stage* program has been designed to provide students the opportunity to integrate their studies in a practical work situation. This program will be most appealing for students with little work experience in their field of specialization. The work experience is an essential part of the *Stage* program and students who opt for this will be required to:

1. Secure an offer from a prospective employer – the offer must be made in writing and should include the job/*Stage* description, duration and remuneration.
2. Obtain approval for this *Stage* by the M.B.A. Director.
3. Upon completion of the *Stage* and in order to obtain credit, submit a paper on the integration of the applied and academic aspects of the first year courses and the *Stage* experience

**Note:** International students will also require a work-authorization for employment from Citizenship and Immigration Canada.

**45.5.10 M.D./M.B.A. Program**

The M.D./M.B.A. program recognizes that physicians will be increasingly involved in the growing partnership between business and health/sickness care. The program will graduate a group of doctors with skills uniquely directed towards management in the health care sector. This will provide opportunity to compete for positions in a growing niche of physician-managers who will be found in all facilities from the smallest clinic to the largest tertiary health care facility, from research laboratory to university or hospital medical departments.

This is a five-year program in which the first year from September to the following July is spent in the Faculty of Management. In August the students will begin their medical studies with the first year class and elements of health management and practicums will be integrated into the elective opportunities in the regular four-year medical curriculum. At graduation, graduates will receive an M.B.A. from the Faculty of Management and an M.D., C.M. from the Faculty of Medicine.

Applicants to this program must apply separately to each program and meet the admission requirements of both the Faculty of Medicine and the Faculty of Management. Applications and all supporting documents for both M.B.A. and Medicine must be received by the respective Admissions Offices by **November 15**. Further information and application forms for the Faculty of Medicine can be located in 15

Faculty of Law, Admissions Office,  
3544 Peel Street, Montreal, Quebec H3A 1W9  
Telephone: (514) 398-6666  
E-mail: [undergradadmissions.law@mcgill.ca](mailto:undergradadmissions.law@mcgill.ca)

#### 45.5.13 Policies and Regulations of the M.B.A. (Full-time)

The following is a brief overview of the rules and regulations of the M.B.A. program. All attending students will be given a copy of the "Official Rules and Regulations" from the M.B.A. office. Students are responsible for reading and abiding by these rules and regulations.

The McGill M.B.A. (Full-time) is designed as a two-year program. The academic year begins in September and ends in May. Students admitted with advanced standing may complete the program in 15 months.

#### 45.5.14 Withdrawal from the M.B.A. Program

Students wishing to withdraw from the McGill M.B.A. program must complete a "Withdrawal Form" available from the M.B.A. office. Students will not be considered as officially withdrawn until this form is completed. Students who drop out of the program but do not complete this form will be billed for the full tuition. Refer to the General Information section of the *Graduate and Postdoctoral Studies Calendar* for further information.

#### 45.5.15 Exemptions

M.B.A. I students may be exempted up to a maximum of 15 credits excluding the Integrative Course, based on academic proof and contingent on professors' and M.B.A. Program approval. Each credit must be replaced by a second-year credit.

#### 45.5.16 Grading and Promotion Standards

The pass mark for each course is B- (65%).

##### Failures

Students are permitted one failure in the M.B.A. Program. Any subsequent failure, including an unsuccessful supplemental examination, will result in the student being asked to withdraw from the M.B.A. Program.

##### Promotion into M.B.A. II

Students must have obtained an overall average of at least B (70%) to be permitted to continue into second year and in order to graduate.

#### 45.5.17 Outside Elective Courses

An outside elective is any course which is not part of the M.B.A. program. This includes courses in other faculties within McGill University or outside McGill University.

Students wishing to take an elective offered in another department at McGill must first obtain approval from the Associate Director. Once approval is obtained, students must obtain permission from the department offering the course before registering for the elective with their Faculty.

All Quebec Universities have agreed to permit transfer of academic credit and fees among themselves up to a maximum of two courses (6 credits) in any one year. However, this agreement (for Canadians and Permanent Residents) includes only those courses not offered at the home university and which fit into the student's program. Authorization for an M.B.A. student to transfer courses must be obtained from the Associate Director.

There are, however, limitations to the number of courses an M.B.A. student can take outside the Faculty of Management during the M.B.A. Program:

- Students completing a 60-credit program may take 15 credits maximum outside the Faculty of Management. This does not include courses offered by other faculties at McGill.
- Students may not take courses outside the Faculty if they are offered within the Faculty unless there are exceptional circumstances.
- Students may not take language courses as credit toward the M.B.A.

## 45.6 M.B.A. Courses

Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.

### Single term and Multi-term Courses (D1/D2, N1/N2, J1/J2/J3)

The same course may be available as a single term offering and also as a multi-term offering. The course content and credit weight is equivalent in all modes; the only difference being the scheduling. The course credit weight is given in parentheses after the title.

Denotes courses not offered in 2004-05.

For more information on Multi-term Courses, Course Terminology, Class Schedule and Course Catalog, see the *General Information, Regulations and Research Guidelines, Graduate and Postdoctoral Studies Calendar for 2004-05*.

### 45.6.1 M.B.A. I Year: Course Descriptions

**MGCR 610 RESEARCH PAPER.** (6) The process and problems of independent research. Choice of topic may be a normative or descriptive study based on primary or secondary data. Opportunity to work on a one-to-one basis with a faculty member. Members of the Montreal business community may act as resource consultants.

**MGCR 610D1 (3), MGCR 610D2 (3) RESEARCH PAPER.** (Students must register for both MGCR 610D1 and MGCR 610D2) (No credit will be given for this course unless both MGCR 610D1 and MGCR 610D2 are successfully completed in consecutive terms) (MGCR 610D1 and MGCR 610D2 together are equivalent to MGCR 610)

**MGCR 610J1 RESEARCH PAPER.** (2) (Students must also register for MGCR 610J2 and MGCR 610J3) (No credit will be given for this course unless MGCR 610J1, MGCR 610J2 and MGCR 610J3 are all successfully completed in consecutive terms) (MGCR 610J1, MGCR 610J2 and MGCR 610J3 together are equivalent to MGCR 610)

**MGCR 610J2 RESEARCH PAPER.** (2) (Prerequisite: MGCR 610J1) (Students must also register for MGCR 610J3) (No credit will be given for this course unless MGCR 610J1, MGCR 610J2 and MGCR 610J3 are all successfully completed in consecutive terms) (MGCR 610J1, MGCR 610J2 and MGCR 610J3 together are equivalent to MGCR 610) See MGCR 610J1 for course description.

**MGCR 610J3 RESEARCH PAPER.** (2) (Prerequisite: MGCR 610J2) (No credit will be given for this course unless MGCR 610J1, MGCR 610J2 and MGCR 610J3 are all successfully completed in consecutive terms) (MGCR 610J1, MGCR 610J2 and MGCR 610J3 together are equivalent to MGCR 610) See MGCR 610J1 for course description.

**MGCR 611 FINANCIAL ACCOUNTING.** (2) The understanding and use of published financial statements as a primary source of accounting information. The conceptry ,0 Ta9 TiAccounting infvd0-0.25u0.

**MGCR 614 MANAGEMENT STATISTICS.** (2) The course aims to provide students with the appropriate skills that will allow them to use up-to-date statistical analysis to extract information from a set of data. The emphasis will be placed on the application and interpretation of results rather than on formal statistical theory; the challenge will be in the selection of the appropriate statistical methodology to address the problem and an understanding of the limitations of this answer. The course will fully integrate the use of statistical software with statistical analysis.

**MGCR 615 FINANCE.** (2)

**MGCR 616 MARKETING.** (2) The course concentrates on what may be the most scarce resource for most corporations today - the customer. The course examines how organizations research what the customer wants and needs. The course also looks at the social and psychological backgrounds of consumer choice and looks at the methods for grouping consumers into segments according to the heterogeneity of their desires. The firm's response to consumers is then considered. First, the need satisfying item is considered - the product. Following this, the elements of the marketing mix, distribution, pricing and promotion, are considered.

**MGCR 617 OPERATIONS MANAGEMENT.** (2) (Change in description awaiting University approval.) A comprehensive introduction to the fundamental decisions and tradeoffs associated with the management of a firm's production and service activities will be examined. It is a study of how production and service systems can be effectively designed, utilized and managed in order for them to compete successfully on the basis of different parameters.

**MGCR 618 HUMAN RESOURCE MANAGEMENT.** (1) (Change in description awaiting University approval.) This course investigates current theory and practice for effective people management in an increasingly competitive, international and technologically sophisticated environment. The course objective is two-fold; to develop an understanding of the relationship between managing human resources and organizational effectiveness; and to gain the knowledge and diagnostic tools needed to engage in high quality people management in a variety of business and organizational settings.

**MGCR 619 RESEARCH, DEVELOPMENT AND ENGINEERING.** (1)

**MGCR 620 INFORMATION SYSTEMS.** (2) Overview of the information systems issues that influence the management of organizations. Understanding (as opposed to computation) of the impact of information technology on firm operations and benefits and limitations of information technology, as it relates to the essential core knowledge needed for day-to-day managerial activity.

**MGCR 621 INTERNATIONAL ENVIRONMENT.** (2) Overview of the international issues that influence the management of organizations. Understanding of the international environment as it relates to the essential core knowledge needed for day-to-day managerial activity.

**MGCR 622 ORGANIZATIONAL STRATEGY.** (2) Organizational strategy concerns the process through which managers position their business or unit favorably against competitors, with customers, and in accordance with societal needs. This course emphasizes the skills that managers need to assess strategic threats and opportunities, match them with internal competencies to develop a strategy, devise action plans to realize the strategy, and continually develop capabilities to keep the organization viable.

**MGCR 623 TOPICAL COURSE 1.** (1)

**MGCR 628 INTEGRATIVE COURSE.** (6) This course provides an integrative perspective to the topics in the first year core, building on progressive stages of integrative understanding from basic management skills looking inward to basic and specialized management skills looking both inward and outward. The emphasis is on pedagogic tools which focus on a holistic view of the organization, forcing an understanding of the management of the enterprise from multiple perspectives and the resolution of conflicting viewpoints.

**MGCR 640 MANAGEMENT ACCOUNTING.** (2) The use of internally generated accounting information for decision making, planning and control purposes. The concepts and techniques involved in

developing and interpreting accounting information that is relevant and useful for managers.

**MGCR 641 ELEMENTS OF MODERN**



validity of contracts; special contracts - sale, lease and hire, agency, bailment, loans, etc.

**BUSA 640 LAUNCHING NEW VENTURES.** (3) (Restriction: Not open to students who have taken MRKT 640.) Application of the knowl-

rial and strategic topics companies face (what makes their market value increase and what makes this value diminish).

**INDR 695 TOPICS IN MANAGERIAL ECONOMICS.** (3)

**INSY 605 SYSTEMS ANALYSIS AND MODELING.** (3) Techniques for conducting systems requirements analysis and project management using structured analysis for specifying both manual and automated systems. Focuses on the role of the analyst in investigating the current organizational environment, defining information system requirements, working with technical and non-technical staff, and making recommendations for system improvement. Analysis project.

**INSY 635 TELECOMMUNICATIONS MANAGEMENT.** (3)

**INSY 636 INFORMATION SYSTEMS ADMINISTRATION.** (3) This course covers the issues relating to managing information systems resources. A combination of lecture and class discussions covers topics such as the role of the Information Systems department within the corporation, staff organization and leadership, strategic systems, planning, end user computing, and other areas of importance to information systems managers.

**INSY 637 INFORMATION SYSTEMS DESIGN.** (3)

**INSY 638 DATA & DATABASE MANAGEMENT.** (3) Focus on the management of organizational data and database management systems. Practice in database design. Examination of different models of representing data with emphasis on the relational model.

**INSY 645 MANAGING ELECTRONIC COMMERCE.** (3) This course will provide students with an understanding of e-commerce. The most important concepts, models, tools and applications related to e-commerce will be studied. The primary objective of the course is to explore the knowledge of e-commerce. **Focus on the ) Tj T**

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and inventory control and looks at various integrated models for determining replenishment quantities and production lots.

**MGSC 632 SAMPLE SURV**

Students should hold an undergraduate degree in engineering or science. Two or more years of industrial experience is preferred, but not mandatory. Students with other academic backgrounds and appropriate industrial experience will be considered, but may have to take one or two qualifying courses. The program is intended for full-time as well as part-time students. Enrolment is limited.

The MMM program is a self-funded program. Tuition is \$25,000.

#### General Business and Management – Required Courses

(11 credits)

MGCR611	(2)	Financial Accounting
MGCR612	(2)	Organizational Behaviour
MGCR616	(2)	Marketing
MGCR641	(2)	Elements of Modern Finance 1
MGSC608	(3)	Data Decisions and Models

#### General Business and Management – Complementary Courses (6 credits)

Two of the following courses:

INDR603	(3)	Industrial Relations
ORGB625	(3)	Managing Organizational Change
ORGB632	(3)	Managing Teams in Organizations
ORGB633	(3)	Managerial Negotiations
ORGB640	(3)	The Art of Leadership
ORGB685	(3)	Cross Cultural Management

#### Manufacturing and Supply Chain – Required Courses

(15 credits)

MECH524	(3)	Computer Integrated Manufacturing
MGSC602	(3)	Manufacturing Strategy
MGSC603	(3)	Logistics Management
MGSC605	(3)	Total Quality Management
MGSC631	(3)	Analysis of Manufacturing Systems

#### Manufacturing and Supply Chain – Complementary Courses

(12 credits)

Two of the following four courses (6 credits):

MECH526	(3)	Manufacturing and the Environment
MGSC601	(3)	Management of Technology in Manufacturing
MGSC615	(3)	The Internet and Manufacturing
MGSC675	(3)	Applied Time Series Analysis Managerial Forecasting

and one of the following two options (6 credits):

##### Discrete Manufacturing Option

MECH528	(3)	Product Design
MECH529	(3)	Discrete Manufacturing Systems

##### Process Manufacturing Option

CHEE571	(4)	Chemical Reaction Engineering
CHEE641	(3)	Small Computer Applications: Chemical Engineering

#### Industry – Required Courses (12 credits)

MECH627	(9)	Manufacturing Industrial Stage
MECH628	(2)	Manufacturing Case Studies
MECH629	(1)	Manufacturing Industrial Seminar

For more information, contact:

Program Coordinator, Mechanical Engineering

Telephone: (514) 398-7201

E-mail: [mmm@mecheng.mcgill.ca](mailto:mmm@mecheng.mcgill.ca)

Web site: [www.mcgill.ca/mecheng/](http://www.mcgill.ca/mecheng/)

or the Masters Program Office, Faculty of Management

Telephone: (514)398-4648

#### 45.8.2 International Masters Programs in Practising Management (IMPM)

Functioning within an authentically international context, this cooperative venture of business schools located in five different countries allows mid-career executives to study topical international business problems on site at universities in France, England, India, Japan and Canada.

For more information visit our Web site at [www.impm.com](http://www.impm.com).

#### 45.8.3 Diploma in Public Accountancy (Chartered Accountancy)

The Diploma in Public Accountancy Program is under the academic supervision of the Graduate and Postdoctoral Studies Office, and is administered by the Faculty of Management.

The faculty is made up of professionally active C.A.s with specific areas of expertise. Students benefit from a program of academic counseling, tutoring and monitoring as they progress through a program in which they are exposed to the latest concepts and practice-related issues.

Chartered Accountants play leadership roles in public practice, business, industry, government and education.

#### Admission Requirements

##### Option 1:

Students completing a Bachelor's degree from a recognized institution are required to obtain a minimum CGPA of 3.0 out of 4.0\*, and successfully complete the 14 qualifying courses listed below, or their equivalent:

ACCT351	Intermediate Financial Accounting 1
ACCT352	Intermediate Financial Accounting 2
ACCT361	Intermediate Management Accounting 1
ACCT362	Intermediate Management Accounting 2
ACCT385	Principles of Taxation
ACCT453	Product Design

\* Admission to the program is very competitive and meeting the minimum requirement does not secure admission.

##### Option 2:

Graduates of programs other than Bachelor of Commerce or graduates with foreign degrees must complete the following courses through the Centre for Continuing Education's Diploma in Accounting prior to admission to the Graduate Diploma program.

For more information, the Centre for Continuing Education can be contacted by telephone at (514) 398-6161, or by e-mail at [info@conted.lan.mcgill.ca](mailto:info@conted.lan.mcgill.ca).

#### Language Requirement for Admission

Applicants whose mother tongue is not English, and who have not completed a university program in the province of Quebec, must submit evidence of their facility in English before they can be considered for admission. Acceptable evidence would be the successful completion of one of the following:

- 1) a university program in English;
- 2) the G.C.E. Ordinary and Advanced Level Examinations in English Literature or Composition;
- 3) the University of Michigan English Language Test (Level V);
- 4) the Test of English as a Foreign Language (TOEFL) (Score: 550 on paper-based test or 213 on computer-based test);
- 5) Certificate of Proficiency in English. Arrangements for the McGill Placement Test may be made through the Department of Languages and Translation at 398-6150. Intensive English

courses are available through the Department of Languages and Translation in the Centre for Continuing Education.

**Admission Procedures**

Application forms are available on-line from our Web site. The deadline dates for admissions are as follows:

- February 1 for May (Summer term)
  - June 1 for September (Fall term)
  - October 1 for January (Winter term)
- 1) Applicants must have a university degree from a recognized institution.
  - 2) All students wishing to take courses in the Diploma in Public Accountancy must complete the Application for Admission form available on the Web at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).
  - 3) Due to audit and government requirements, all students must provide proof of Canadian citizenship and/c

**ACCT 655 AUDITING 2. (3)** (Prerequisite: ACCT 413) The role of the attest auditor. The topics covered include professional practice

- Comprehensive Examination (MGMT701, 0 credits).
- A publishable research paper (MGMT720, 3 credits)\*, equivalent to about 3 months of full-time work.

**MGSC 703 STOCHASTIC PROCESSES AND APPLICATIONS.** (3)

**MGSC 704 BUSINESS SURVEY METHODS.** (3)

**MGSC 706 MANAGEMENT RESEARCH STATISTICS.** (3) (Prerequisite: Permission of instructor.)

**MGSC 707 AVANCED RESEARCH STATISTICS.** (3) (Prerequisite: MGSC 706 or permission of the instructor.)

**MGSC 709 MANUFACTURING SYSTEMS.** (3)

**MGSC 710 APPLIED OPTIMIZATION.** (3) Algorithmic developments in optimization and advanced software applications for modeling.

#### STRATEGY AND POLICY, POLICY AND SPECIALIZATION

**MGPO 701 SEMINAR IN QUALITATIVE METHODS.** (3)

**MGPO 702 NEW PARADIGMS: STRATEGIC MANAGEMENT.** (3)

**MGPO 704 ORGANIZATIONAL THEORY SEMINAR.** (3)

**MGPO 705 SEMINAR IN POLICY.** (3)

**MGPO 706 PERSPECTIVES ON INNOVATION.** (3)

## 46 Mathematics and Statistics

Department of Mathematics and Statistics  
Burnside Hall  
805 Sherbrooke Street West  
Montreal, QC H3A 2K6  
Canada

Telephone: (514) 398-3800

Fax: (514) 398-3899

E-mail: [grad.mathstat@mcgill.ca](mailto:grad.mathstat@mcgill.ca)

Web site: [www.math.mcgill.ca/index.php](http://www.math.mcgill.ca/index.php)

*Chair* — K. GowriSankaran

*Graduate Program Director* — V. Jaksic

### 46.1 Staff

#### *Emeritus Professors*

M. Barr; A.B., Ph.D.(Penn.) (*Peter Redpath Emeritus Professor of Pure Mathematics*)

M. Bunge; M.A., Ph.D.(Penn.)

J.R. Choksi; B.A.(Cantab.), Ph.D.(Manc.)

J. Lambek; M.Sc., Ph.D.(McG.), F.R.S.C. (*Peter Redpath Emeritus Professor of Pure Mathematics*)

S. Maslowe; B.Sc.(Wayne St.), M.Sc., Ph.D.(Calif.)

A.M. Mathai; M.Sc.(Kerala), M.A., Ph.D.(Tor.)

W.O.J. Moser; B.Sc.(Man.), M.A.(Minn.), Ph.D.(Tor.)

V. Seshadri; B.Sc, M.Sc.(Madras), Ph.D.(Okl.)

J.C. Taylor; B.Sc.(Acad.), M.A.(Queen's), Ph.D.(McM.)

#### *Professors*

W.J. Anderson; B.Eng., Ph.D.(McG.)

W. Brown; B.A.(Tor.), M.A.(Col.), Ph.D.(Tor.)

H. Darmon; B.Sc.(McG.), Ph.D.(Harv.), F.R.S.C.

S. Drury; M.A., Ph.D.(Cantab.)

K. GowriSankaran; B.A., M.A.(Madr.), Ph.D.(Bomb.)

J. Jij T\* 0.2861 Tc -0.1211 ;pa49.5 527.25 m 49.52521.25 l 36T\* 0.3725 Tc 0 Tu., Ph.D.(Ca18 Tc -.hoiC Statistics

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### 46.3 Admission Requirements

In addition to the general Graduate and Postdoctoral Studies Office requirements, the Department requirements are as follows:

#### Master's Degree

The normal entrance requirement for the Master's programs is a Canadian Honours degree or its equivalent, with high standing, in mathematics, or a closely related discipline in the case of applicants intending to concentrate in statistics or applied mathematics. For applicants intending to continue in a doctoral program, an Honours degree or its equivalent is the preferred background.

Applicants wishing to concentrate in pure mathematics should have a strong background in linear algebra, abstract algebra, and real and complex analysis.

Applicants wishing to concentrate in an applied area of statistics should have a strong background in matrix algebra, advanced calculus and undergraduate statistics; some knowledge of computer programming and numerical analysis is also desirable.

Applicants wishing to concentrate in applied mathematics should have a strong background in linear algebra, real and complex analysis, ordinary differential equations and numerical analysis. Some knowledge of computer programming is also desirable.

Students whose preparation in mathematics is insufficient may have to be admitted to a Qualifying Program.

#### Ph.D. Degree

Students normally enter the Ph.D. program after completing a Master's degree program with high standing. However, the Department admits interested and excellent students directly into the Ph.D. program.

### 46.4 Application Procedures

Online application is preferred and is available at [www.mcgill.ca/applying/online](http://www.mcgill.ca/applying/online). Applicants unable to apply online can request a paper or PDF form from the department.

Applications will be considered upon receipt of:

1. application form;
2. transcripts;
3. two letters of reference;
4. \$60 application fee;
5. TOEFL test results (if applicable).

All information is to be submitted directly to the Graduate Secretary in the Department of Mathematics and Statistics.

**Deadline:** Applicants are urged to submit complete applications by March 1 for September admission, or by August 1 for January admission.

McGill's on-line application form for graduate program candidates is available at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

### 46.5 Program Requirements

#### Master's Degrees

Students must choose between the thesis option, which requires a thesis (24 credits) and 6 approved courses at the 500 and 600 level for a total of at least 22 credits, and the project option, which requires a project (15 credits) and 8 approved courses at the 500 and 600 level for at least 30 credits. Normally students must declare which option they choose to follow after one term. It is expected that the degree be completed in at most four terms.

The choice of courses must be approved by the advisor or thesis supervisor as well as by the Director of the Graduate Program.

Some suggestions for the choice of courses in the Master's programs are:

- Students in applied mathematics (excluding those in the Computational Science and Engineering option): at least two of the following course sequences: MATH 487 and MATH 560; MATH 578 and MATH 579; MATH 580 and MATH 581.

- Students in pure mathematics: at least two of the following course sequences: MATH 564, MATH 565 and MATH 566; MATH 570 and MATH 571; MATH 576 and MATH 577.
- Students in statistics are required to take MATH 556 and MATH 557. If they intend to continue in a doctoral program, they should also take MATH 587 and MATH 589, and are strongly encouraged to take MATH 685.

Master's students who wish to keep open the possibility of continuing in a doctoral program should adhere closely to these suggestions since they will provide the background necessary for the comprehensive examination which all doctoral students are required to pass.

Further courses can be chosen from the departmental list of course offerings. A comprehensive list of courses, from which annual offerings are selected, is given below.

#### M.Sc. Thesis - Computational Science and Engineering (CSE) Option (minimum 47 credits)

##### Required Courses (25 credits)

MATH600	(6)	Master's Thesis Research 1
MATH601	(6)	Master's Thesis Research 2
MATH604	(6)	Master's Thesis Research 3
MATH605	(6)	Master's Thesis Research 4
MATH669D1	(.5)	CSE Seminar
MATH669D2	(.5)	CSE Seminar

##### Complementary Courses (minimum 22 credits)

Two courses from List A, two courses from List B, and the remaining credits to be chosen from graduate (500 or 600-level) courses in the Department of Mathematics and Statistics. Two complementary courses must be taken outside the Department of Mathematics and Statistics.

##### List A - Scientific Computing Courses:

CIVE602	(4)	Finite Element Analysis
COMP522	(4)	Modelling and Simulation
COMP540	(3)	Matrix Computations
COMP566	(3)	Discrete Optimization 1
MATH578	(4)	Numerical Analysis 1
MATH579	(4)	Numerical Differential Equations

##### List B - Applications and Specialized methods Courses:

ATOC512	(3)	Atmospheric and Oceanic Dynamics
ATOC513	(3)	Waves and Stability
ATOC515	(3)	Turbulence in Atmosphere and Oceans
CIVE514	(3)	Structural Mechanics
CIVE572	(3)	Computational Hydraulics
CIVE603	(4)	Structural Dynamics
CIVE613	(4)	Numerical Methods: Structural Engineering
COMP505	(3)	Advanced Computer Architecture
COMP557	(3)	Fundamentals of Computer Graphics
COMP558	(3)	Fundamentals of Computer Vision
COMP567	(3)	Discrete Optimization 2
COMP621	(4)	Optimizing Compilers
COMP642	(4)	Numerical Estimation
COMP767	(4)	Advanced Topics: Applications 2
ECSE507	(3)	Optimization and Optimal Control
ECSE532	(3)	Computer Graphics
ECSE547	(3)	Finite Elements in Electrical Engineering
ECSE549	(3)	Expert Systems in Electrical Design
MATH555	(4)	Fluid Dynamics
MATH560	(4)	Optimization
MATH651	(4)	Asymptotic Expansion and Perturbation Methods
MATH761	(4)	Topics in Applied Mathematics 1
MECH533	(3)	Subsonic Aerodynamics
MECH537	(3)	High-Speed Aerodynamics
MECH538	(3)	Unsteady Aerodynamics
MECH539	(3)	Computational Aerodynamics
MECH541	(3)	Kinematic Synthesis
MECH545	(3)	Advanced Stress Analysis
MECH572	(3)	Introduction to Robotics

MECH573	(3)	Mechanics of Robotic Systems
MECH576	(3)	Computer Graphics and Geometrical Modelling
MECH577	(3)	Optimum Design
MECH610	(4)	Fundamentals of Fluid Dynamics
MECH620	(4)	Advanced Computational Aerodynamics
MECH632	(4)	Theory of Elasticity
MECH642	(4)	Advanced Dynamics
MECH650	(4)	Heat Transfer
MECH654	(4)	Compt. Fluid Flow and Heat Transfer

**Ph.D. Degree**

To complete a Ph.D. program students must:

- pass twelve approved courses beyond the Bachelor's level;
- pass a Comprehensive Examination consisting of a written Part A, which is concerned with their general mathematical background, and an oral Part B concerned with two topics at an advanced graduate level;
- demonstrate a reading knowledge of French;
- submit a thesis judged to be an original contribution to knowledge.

**46.6 Courses**

Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.

Approximately 15 of the 600- and 700-level courses will be given.

Term(s) offered (Fall, Winter, Summer) may appear after the credit weight to indicate when a course would normally be taught. Please check Class Schedule to confirm this information.

**Notes:**

All undergraduate courses administered by the Faculty of Science (courses at the 100- to 500-level) have limited enrolment.

With the permission of the instructor, prerequisites and corequisites for courses may be waived in individual cases.

The course credit weight is given in parentheses after the title.

**MATH 523 GENERALIZED LINEAR MODELS.** (4) (Winter) (Prerequisite: MATH 423 or EPIB 697) (Not open to students who have taken MATH 426) Modern discrete data analysis. Exponential families, orthogonality, link functions. Inference and model selection using analysis of deviance. Shrinkage (Bayesian, frequentist viewpoints). Smoothing. Residuals. Quasi-likelihood. Sliced inverse regression. Contingency tables: logistic regression, log-linear models. Censored data. Applications to current problems in medicine, biological and physical sciences. GLIM, S, software.

**MATH 524 NONPARAMETRIC STATISTICS.** (4) (Fall) (Prerequisite: MATH 324 or equivalent) (Not open to students who have taken MATH 424) Distribution free procedures for 2-sample problem: Wilcoxon rank sum, Siegel-Tukey, Smirnov tests. Shift model: power and estimation. Single sample procedures: Sign, Wilcoxon signed rank tests. Nonparametric ANOVA: Kruskal-Wallis, Friedman tests. Association: Spearman's rank correlation, Kendall's tau. Goodness of fit: Pearson's chi-square, likelihood ratio, Kolmogorov-Smirnov tests. Statistical software packages used.

**MATH 525 SAMPLING THEORY AND APPLICATIONS.** (4) (Winter) (Prerequisite: MATH 324 or equivalent) (Not open to students who have taken MATH 425)

**MATH 550 COMBINATORICS.** (4) (Intended primarily for honours and graduate students in mathematics.) (Restriction: Permission of instructor.) Enumerative combinatorics: inclusion-exclusion, generating functions, partitions, lattices and Moebius inversion. Extremal combinatorics: Ramsey theory, Turan's theorem, Dilworth's theorem and extremal set theory. Graph theory: planarity and colouring. Applications of combinatorics.

**MATH 555 FLUID DYNAMICS.** (4) (Fall) (Undergraduate prerequisites: MATH 315 and MATH 319 or equivalent) Kinematics.

Dynamics of general fluids. Inviscid fluids, Navier-Stokes equations. Exact solutions of Navier-Stokes equations. Low and high Reynolds number flow.

**MATH 556 MATHEMATICAL STATISTICS 1.** (4) (Fall) (Prerequisite: MATH 357 or equivalent) Probability and distribution theory (univariate and multivariate). Exponential families. Laws of large numbers and central limit theorem.

**MATH 557 MATHEMATICAL STATISTICS 2.** (4) (Winter) (Prerequisite: MATH 556) Sampling theory (including large-sample theory). Likelihood functions and information matrices. Hypothesis testing, estimation theory. Regression and correlation theory.

**MATH 560 OPTIMIZATION.** (4) (Winter) (Prerequisite: Undergraduate background in analysis and linear algebra, with instructor's approval) Classical optimization in  $n$  variables. Convex sets and functions, optimality conditions for single-objective and multi-objective nonlinear optimization problems with and without constraints. Duality theories and their economic interpretations. Optimization with functionals. Connections with calculus of variations and optimal control. Stability of mathematical models. Selected numerical methods.

**MATH 561 ANALYTICAL MECHANICS.** (4) (Prerequisites: MATH 354 and MATH 380 or instructor's approval)

**MATH 564 ADVANCED REAL ANALYSIS 1.** (4) (Fall) (Prerequisites: MATH 354, MATH 355 or equivalents) Review of theory of measure and integration; product measures, Fubini's theorem;  $L_p$  spaces; basic principles of Banach spaces; Riesz representation theorem for  $C(X)$ ; Hilbert spaces; part of the material of MATH 565 may be covered as well.

**MATH 565 ADVANCED REAL ANALYSIS 2.** (4) (Winter) (Prerequisite: MATH 564) Continuation of topics from MATH 564. Signed measures, Hahn and Jordan decompositions. Radon-Nikodym theorems, complex measures, differentiation in  $\mathbb{R}^n$ , Fourier series and integrals, additional topics.

**MATH 566 ADVANCED COMPLEX ANALYSIS.** (4) (Winter) (Prerequisites: MATH 466, MATH 564)

**MATH 570 HIGHER ALGEBRA 1.** (4) (Fall) (Prerequisite: MATH 371 or equivalent) Review of group theory; free groups and free products of groups. Sylow theorems. The category of  $R$ -modules; chain conditions, tensor products, flat, projective and injective modules. Basic commutative algebra; prime ideals and localization, Hilbert Nullstellensatz, integral extensions. Dedekind domains. Part of the material of MATH 571 may be covered as well.

**MATH 571 HIGHER ALGEBRA 2.** (4) (Winter) (Prerequisites: MATH 570 or consent of instructor) Completion of the topics of MATH 570. Rudiments of algebraic number theory. A deeper study of field extensions; Galois theory, separable and regular extensions. Semi-simple rings and modules. Representations of finite groups.

**MATH 574 ORDINARY DIFFERENTIAL EQUATIONS.** (4) (Prerequisites: MATH 325, MATH 354)

**MATH 575 PARTIAL DIFFERENTIAL EQUATIONS.** (4) (Prerequisite: MATH 375) A continuation of topics introduced in MATH 375.

**MATH 576 GEOMETRY AND TOPOLOGY 1.** (4) (Fall) (Prerequisite: MATH 354) Basic point-set topology, including connectedness, compactness, product spaces, separation axioms, metric spaces. The fundamental group and covering spaces. Simplicial complexes. Singular and simplicial homology. Part of the material of MATH 577 may be covered as well.

**MATH 577 GEOMETRY AND TOPOLOGY 2.** (4) (Winter) (Prerequisite: MATH 576) Continuation of the topics of MATH 576. Manifolds and differential forms. De Rham's theorem. Riemannian geometry. Connections and curvatures 2-Manifolds and imbedded surfaces.

**MATH 578 NUMERICAL ANALYSIS 1.** (4) (Fall) (Prerequisites: MATH 223 or MATH 247 or MATH 251 or MATH 270: MATH 248 or MATH 265 or MATH 314; MATH 315 or MATH 261 or MATH 325; MATH 317 or MATH 387; or the instructor's approval.) Development, analysis and effective use of numerical methods to solve problems arising in applications. Topics include linear and nonlinear systems of equations, fast Fourier transform, eigenvalue prob-

lems, interpolation, approximation, quadrature, solution of ordinary differential equations.





**Complementary Courses** (16 credits)

A minimum of 16 credits at the graduate level (500 or above), at least 8 of which must be from within the Faculty of Engineering. Two courses (minimum 6 credits) from List A, and two courses (minimum 6 credits) from List B. At least two of the courses taken from Lists A and B must be from outside the Department of Mechanical Engineering.

*List A - Scientific Computing Courses:*

CIVE602	(4)	Finite Element Analysis
COMP522	(4)	Modelling and Simulation
COMP540	(3)	Matrix Computations
COMP566	(3)	Discrete Optimization 1
MATH578	(4)	Numerical Analysis 1
MATH579	(4)	Numerical Differential Equations

*List B - Applications and Specialized methods Courses:*

ATOC512	(3)	Atmospheric and Oceanic Dynamics
ATOC513	(3)	Waves and Stability
ATOC515	(3)	Turbulence in Atmosphere and Oceans
CIVE514	(3)	Structural Mechanics
CIVE572	(3)	Computational Hydraulics
CIVE603	(4)	Structural Dynamics
CIVE613	(4)	Numerical Methods: Structural Engineering
COMP505	(3)	Advanced Computer Architecture
COMP557	(3)	Fundamentals of Computer Graphics
COMP558	(3)	Fundamentals of Computer Vision
COMP567	(3)	Discrete Optimization 2
COMP621	(4)	Optimizing Compilers
COMP642	(4)	Numerical Estimation
COMP767	(3)	Advanced Topics: Applications 2
ECSE507	(3)	Optimization and Optimal Control
ECSE532	(3)	Computer Graphics
ECSE547	(3)	Finite Elements in Electrical Engineering
ECSE549	(3)	Expert Systems in Electrical Design
MATH555	(4)	Fluid Dynamics
MATH560	(4)	Optimization
MATH651	(4)	Asymptotic Expansion and Perturbation Methods
MATH761	(4)	Topics in Applied Mathematics 1
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MECH537	(3)	High-Speed Aerodynamics
MECH538	(3)	Unsteady Aerodynamics
MECH539	(3)	Computational Aerodynamics
MECH541	(3)	Kinematic Synthesis
MECH545	(3)	Advanced Stress Analysis
MECH572	(3)	Introduction to Robotics
MECH573	(3)	Mechanics of Robotic Systems
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MECH620	(4)	Advanced Computational Aerodynamics
MECH632	(4)	Theory of Elasticity
MECH642	(4)	Advanced Dynamics
MECH650	(4)	Heat Transfer
MECH654	(4)	Compt. Fluid Flow and Heat Transfer

**M.Eng. (non-Thesis) Degree** (minimum 45 credits)

This is a course-type Master's degree which requires 12 graduate courses for completion. All candidates are required to take the following courses:

**Required Courses** (29 credits)

MECH605	(4)	Applied Mathematics 1
MECH610	(4)	Fundamentals of Fluid Mechanics
MECH632	(4)	Theory of Elasticity
MECH642	(4)	Advanced Dynamics
MECH603*	(6)	Design Project 1
MECH604*	(6)	Design Project 2
MECH609*	(1)	Seminar

\* these three courses are taken near the end of the program. In these courses, industrial liaison is encouraged.

**Complementary Courses** (16 credits)

A minimum of 16 credits at the graduate level (500 or above) from the Faculty of Engineering may be selected by the student, based on interest and the choice of area of concentration. Courses at the graduate level from other faculties may also be taken, with prior approval from the student's project supervisor and the Graduate Program Director.

**M.Eng. (Aerospace) Degree** (minimum 45 credits)

The M.Eng. Aerospace Degree is offered to the students who wish to specialize in the general area of aerospace engineering. This degree is given in conjunction with Concordia University, École Polytechnique, Université Laval, Université de Sherbrooke, and École de Technologie Supérieure. Students registered at McGill are required to take two courses from two other institutions.

Depending on their background, students would specialize in one of the three areas:

1. Aeronautics and Space Engineering;
2. Avionics and Control;
3. Aerospace Materials and Structures.

**Required Courses** (9 credits)

MECH687	(3)	Aerospace Case Studies
MECH688	(6)	Industrial Stage

**Complementary Courses** (36 credits)

The other courses, depending on the area of concentration, will be chosen in consultation with an Aerospace Engineering Advisor.

**Master in Management (Manufacturing)** (56 credits)

The Master in Manufacturing Management program (MMM) is offered to students who wish to have a career as manufacturing managers. The curriculum is a balance between manufacturing and management subjects and provides exposure to industry through case studies, seminars, tours and a paid industry internship. The MMM program is a 12-month academic program starting in September followed by a 4-month industrial internship. The program is a collaboration between the Faculties of Engineering and Management, which jointly grant the Master of Management degree.

Students should hold an undergraduate degree in engineering or science. Two or more years of industrial experience is preferred, but not mandatory. Students with other academic backgrounds and appropriate industrial experience will be considered, but may have to take one or two qualifying courses. The program is intended for full-time as well as part-time students. Enrolment is limited.

The MMM program is a self-funded program. Tuition is \$25,000.

**General Business and Management – Required Courses** (11 credits)

MGCR611	(2)	Financial Accounting
MGCR612	(2)	MECH68612 (3) uate Progr09 DirectoMarke 0.7254 Tc 0 TTW (M

**General Business and Management – Complementary Courses** (6 credits)**Manufacturing and Supply Chain – Required Courses** (15 credits)

### Manufacturing and Supply Chain – Complementary Courses (12 credits)

locus and frequency response methods. Tuning of PID controllers. State-space representation of dynamic systems. Concepts of controllability and observability. Design of state feedback controller and state observer based on state-space and polynomial methods. Introduction to digital control.

**MECH 432 AIRCRAFT STRUCTURES.** (3) (3-0-6) (Prerequisites: MECH 331 and MECH 321) Plane stress and strain. Theories of failure. Plastic and viscoelastic stress-strain relations. External and internal forces in spars. Bending, deflection of beams, plastic deformation and aeroelastic distortion of wings and fuselage. Structural characteristics of wings. Torsion of wings and related critical aeroelastic design parameters; divergence and aeroelastic twist. Energy methods. Buckling in aeronautical structures. Flutter.

### Courses Open to Graduate and Qualified Undergraduate Students

**MECH 500 SELECTED TOPICS IN MECHANICAL ENGINEERING** (3) (0-0-9) TD 0.2446 Tc

### Industry – Required Courses (12 credits)

For more information, contact:

Program Coordinator, Mechanical Engineering

Telephone: (514) 398-7201

E-mail: [mmm@mecheng.mcgill.ca](mailto:mmm@mecheng.mcgill.ca)

Web site: [www.mecheng.mcgill.ca/mmm](http://www.mecheng.mcgill.ca/mmm)

or the Masters Program Office, Faculty of Management

Telephone: (514)398-4648

**Ph.D. Degree** Candidates normally register for the M.Eng. degree in the first instance. However, in exceptional cases where the research work is proceeding very satisfactorily, or where the equivalent of the M.Eng. degree has been completed at another university, candidates may be permitted to proceed directly to the Ph.D. degree without submitting a Master's thesis as long as they have satisfied the course requirements for the M.Eng. degree.

Courses of study selected for a Ph.D. program will depend upon the existing academic qualifications of the candidate and those needed for effective research.

Candidates are required to pass a preliminary oral examination within twelve months of their initial registration for the Ph.D. degree.

The residence requirement for Ph.D. candidates is outlined in the General Information section of the *Graduate and Postdoctoral Studies Calendar*.

## 47.6 Courses

**Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.**

The course credit weight is given in parentheses after the title.

Denotes limited enrolment.

Denotes courses not offered in 2004-05.

### Undergraduate Courses Approved for Higher Degrees

The following courses, available in the undergraduate curriculum of the Mechanical Engineering Department, may be selected for graduate credit provided that both of the following conditions are met: the course is recommended by the candidate's supervisor, and no equivalent course was taken during the candidate's undergraduate program.

**MECH 413 CONTROL SYSTEMS.** (3) (3-1-5) (Prerequisite: MECH 412) Stability of Linear Systems. Controller design based on root-

fixed and stick-free) and coupled lateral and directional modes. Control response for all three modes.

**MECH 533 SUBSONIC AERODYNAMICS.** (3) (3-1-5) (Undergraduate Prerequisite: MECH 331) Kinematics: equations of motion; vorticity and circulation, conformal mapping and flow round simple bodies. Two-dimensional flow round aerofoils. Three-dimensional flows; high and low aspect-ratio wings; airscrews. Wind tunnel interference. Similarity rules for subsonic irrotational flows.

**MECH 534 AIR POLLUTION ENGINEERING.** (3) (3-0-6) (Undergraduate Prerequisites: MECH 331, MECH 341.)

**MECH 537 HIGH-SPEED AERODYNAMICS.** (3) (3-0-6) (Undergraduate Pre-/Co-requisite: MECH 533) Equations of compressible flows. Planar and conical shock waves. Expansion and shock wave interference; shock tubes. Method of characteristics. Supersonic nozzle design. Aerofoil theory in high subsonic, supersonic and hypersonic flows. Conical flows. Yawed, delta and polygonal wings; rolling and pitching rotations. Wing-body systems. Elements of transonic flows.

**MECH 538 UNSTEADY AERODYNAMICS.** (3) (3-0-6) (Undergraduate Prerequisite: MECH 533)

**MECH 539 COMPUTATIONAL AERODYNAMICS.** (3) (3-0-6) (Prerequisite: MECH 309 or MATH 317, MECH 533.) Fundamental equations. Basic flow singularities. Boundary element methods. Source, doublet and vortex panel methods for 2D and 3D incompressible and compressible flows. Method of characteristics. Euler equations for inviscid rotational flows. Finite-difference and finite-volume methods. Explicit and implicit time-integration methods.





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**48.1 Staff**

*Professors*

S.M. Lehnert; B.Sc.(Nott.), M.Sc., Ph.D.(Lond.)

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M. Rasminsky; B.A.(Tor.), M.D.(Harv.), Ph.D.(Lond.)  
 E. Silva; M.D.(Chile), F.A.C.P.  
 E. Skamene; M.D., (Charles U., Czech.), Ph.D.(Czech. Acad. of Sci.), F.R.C.P.(C), F.A.C.P.  
 A.D. Sniderman; M.D.(Tor.)  
 C.P. Stanners; B.Sc.(McM.), M.A., Ph.D.(Tor.)  
 M. Stevenson; B.A.(Hood), M.Sc., Ph.D.(Catholic U. of Amer.)  
 S.L. Tan; M.B.B.S., M.Med.(Sing.)  
 D.M.P. Thomson; M.D., (W. Ont.), Ph.D.(Lond.), F.R.C.P.(C)  
 C. Tsoukas; B.Sc.(McG.), M.Sc.(Hawaii), M.D.(Athens), F.R.C.P.(C)  
 M. Wainberg; B.Sc.(McG.), Ph.D.(Col.)  
 M. Zannis-Hadjopoulos; B.Sc., M.Sc., Ph.D.(McG.)  
 H. Zingg; M.D.(Basel), Ph.D.(McG.)

*Associate Professors*

A. Bateman; B.Sc., Ph.D.(Lond.)  
 N. Beauchemin; B.A., B.Sc., M.Sc., Ph.D.(Montr.)  
 L.F. Congote; B.Sc.(Zür.), Ph.D.(Marburg)  
 D. Cournoyer; M.D.(Sher.), F.R.C.P.(C)  
 A. Cybulsky; M.D.(Tor.), F.R.C.P.(C)  
 D. Eidelman; M.D., C.M.(McG.), F.R.C.P.(C)  
 M.S. Featherstone; B.Sc., M.Sc.(Ott.), Ph.D.(McG.)  
 R. Gagnon; B.Sc.(Montr.), M.D.(Laval), D.Phil.(Oxon)  
 A. Gagnon; M.Sc., Ph.D. (Paul Sabatier)  
 R. Germinario; B.A., M.Sc.(Seton Hall U., N.J.), Ph.D.(Dakota)  
 V. Giguere; B.Sc., Ph.D.(Laval)  
 S.B. Gottfried; M.D.(Penn.)  
 Q.A. Hamid; M.D.(Mosul, Iraq.), Ph.D.(Lond.)  
 L.J. Hoffer; B.Sc., M.D., C.M.(McG.), Ph.D.(M.I.T.)  
 N.J. Kabani; B.Sc. (Karachi), M.Sc., Ph.D. (McG.)  
 L. Kleiman; B.Sc.(Ill.), Ph.D.(Johns H.)  
 R. Kremer; M.D., Ph.D.(Paris)  
 P. Laneuville; B.Sc.(McM.), M.D.(Ott.), F.R.C.P.(C)  
 M. Laughrea; B.Sc.(Laval), M.Sc., M.Phil., Ph.D.(Yale)  
 R. Loertscher; M.D.(Basel)  
 M.S. Ludwig; M.D.(Man.), F.R.C.P.(C)  
 W.H. Miller; A.B.(Prin.), Ph.D.(Rock.), M.D.(C'neil)  
 S. Mulay; M.Sc., Ph.D.(McG.)  
 J. Nalbantoglu; B.Sc., Ph.D.(McG.)  
 A. Nepveu; B.Sc., M.Sc.(Montr.), Ph.D.(Sher.)  
 M. Newkirk; B.Sc., M.Sc.(Queen's), Ph.D.(Tor.)  
 T. Owens; B.Sc., M.Sc.(McG.), Ph.D.(Ott.)  
 R. Palfree; B.Sc., M.Sc.(Lond.), Ph.D.(McG.)  
 K. Pantopoulos; B.Sc., Ph.D.(Aristotelian, Greece)  
 A.C. Peterson; B.Sc.(Vic., B.C.), Ph.D.(Br.Col.)  
 S. Rabbani; M.B.B.S.(King Edward Med. Coll., Lahore)  
 D. Radzioch; M.Sc., Ph.D.(Jagiellonian, Cracow)  
 J. Rauch; B.Sc., Ph.D.(McG.)  
 C.P. Rose; B.Sc.(Queen's), M.D., C.M., Ph.D.(McG.)  
 E. Schurr; Diplom., Ph.D.(Al. Ludwigs U., Freiburg)  
 G. Spurril; B.Sc.(Med.), M.D.(Man.)  
 C. Srikant; M.Sc., Ph.D.(Madr.)  
 M. Trifiro; B.Sc., M.D., C.M.(McG.)  
 B. Turcotte; B.Sc., Ph.D.(Laval)  
 B.J. Ward; M.D., C.M.(McG.), M.Sc.(Oxon), F.R.C.P.(C)

*Assistant Professors*

M. Alaoui-Jamali; D.V.M.(Rabat, Morocco), Ph.D.(René-Descartes, Paris)  
 S. Ali; B.Sc.(C'dia), Ph.D.(McG.)  
 D. Baran; M.D.C.M.(McG.), F.R.C.P.(C)  
 M. Behr; B.Sc.(Tor.), M.D.(Queen's), M.Sc.(McG.)  
 N. Bernard; B.Sc.(McG.), Ph.D.(Duke)  
 V. Blank; B.Sc., M.Sc.(Konstanz, Germany), Ph.D.(Inst. Pasteur)  
 M. Blostein; M.D., C.M.(McG.)  
 L. Chalifour; B.Sc., Ph.D.(Man.), M.A.(Harv.)  
 K. Cianflone; B.Sc., Ph.D.(C'dia)  
 A.E. Clarke; M.D.(Nfld.), M.S.(Stan.), F.R.C.P.(C)  
 S.R. Cohen; B.Sc., M.Sc., Ph.D.(McG.)  
 C. Couture; B.Sc., M.Sc.(Laval), Ph.D.(McG.)  
 W. Cupples; B.Sc.(Vic., B.C.), M.Sc.(Calg.), Ph.D.(Tor.)  
 S. Daly; B.Sc.(C'dia), Ph.D.(W. Ont.)  
 J.C. Engert; B.A.(Colby), Ph.D.(Boston)

A.E. Clarke; M.D86A.E. Clarke; 2ch; M.Sc., Pe; M.D59., Ph.D.(M4  
 A.E. Clarke; 2ch; M.Sc., Pe; M.D, M.Sc., Ph.8), Ph.D-9 u), d258 65, K. Pantopoulos; , C.M.(M008), PhM Twrk

W. Cupplutur; B.Sc93

Division that all students must be financially supported either by their supervisor or through studentships or fellowships.

In addition to the documentation currently required by the Graduate and Postdoctoral Studies Office, a letter from the candidate's research director outlining the Ph.D. project is necessary.

#### **M.Sc. (Specialization in Bioethics)**

Admission to the Master's program in Bioethics, from the base discipline Medicine, shall be limited to students having degrees in Medicine, Nursing, Physical and Occupational Therapy, as well as any other professional health training degree.

For further information regarding this program, please refer to the Bioethics entry.

#### **Graduate Diploma in Clinical Research**

The diploma program is open to health care and research professionals, medical residents, pharmacists, nurses, and those with an undergraduate degree in the medical and allied sciences.

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### **49.4 Application Procedures**

Applications will be considered upon receipt of:

1. application form
2. transcripts
3. letters of reference
4. \$60 application fee
5. test results (TOEFL and GRE).

All information is to be submitted to the Departmental Office.

McGill's on-line application form for graduate program candidates is available at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

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### **49.5 Program Requirements**

#### **Ph.D.**

**Comprehensive Examination:** All students must take and pass the Comprehensive Oral Examination, listed as course EXMD701 in the second year of the Ph.D. Students shall give a 30-minute presentation of their Ph.D. project and then answer questions from the Oral Committee. This examination will test:

- (i) If the student's work is progressing satisfactorily and is of sufficiently high calibre to warrant continuation in the program, and
- (ii) If the student has a broad knowledge, not only of his/her own field of research, but also of related areas in her/his discipline.

**Course Work:** A minimum of 18 course credits is required for students entering the program with a Bachelor's or M.D. degree. Depending on their background, students with a Masters degree may be required to take only 12 course credits. The following courses are highly recommended: EXMD604D1/EXMD604D2 Recent Advances in Cellular and Molecular Biology; EXMD610 Biochemical Methods in Medical Research.

After consultation with their research supervisor and the Director of the Division, students may choose their courses from those offered by Experimental Medicine, Physiology, Biochemistry as well as other graduate and advanced undergraduate courses in the medical and allied sciences. Where necessary, students may enrol for credit in courses offered in the physical and mathematical sciences.

Students in the third year of the Ph.D. must give a 20-minute oral presentation of their work at the Annual Research Seminar.

#### **M.Sc. (Specialization in Bioethics)**

The curriculum is composed of required courses. The curriculum is Courses 0.1r 7.5

ogy including: functional anatomy of the respiratory system, pulmonary statics and dynamics, chest wall and respiratory muscles, ventilation and perfusion, control of breathing, and defense mechanisms. This course is aimed at providing a solid grounding in pulmonary biology and its research applications.

**EXMD 508 ADVANCED**

Protocol development; 4. Execution of the protocol; 5. Data analysis; 6. Generation of final report with active "clerkship" participation in each component with team leaders and experts designated for each stage.

**EXMD 627D1 (9), EXMD 627D2 (9) PRACTICUM IN CLINICAL RESEARCH.** (Students must register for both EXMD 627D1 and EXMD 627D2) (No credit will be given for this course unless both EXMD 627D1 and EXMD 627D2 are successfully completed in consecutive terms) (EXMD 627D1 and EXMD 627D2 together are equivalent to EXMD 627)

**EXMD 628 QUALITATIVE RESEARCH METHODOLOGY.** (3) (Restriction: permission of instructor) This course explores both broad and specific theoretical and methodological issues in qualitative research inquiry. It will discuss both traditional and contemporary paradigmatic thought underlying the qualitative enterprise and it will introduce the student to some qualitative techniques and strategies for collecting, analyzing and reporting data.

**EXMD 630 ECONOMIC EVALUATION OF MEDICAL TECHNOLOGIES.** (3) (Offered in conjunction with the Department of Epidemiology and Biostatistics.)

**EXMD 635D1 (3), EXMD 635D2 (3) EXPERIMENTAL/CLINICAL ONCOLOGY.** (Students must register for both EXMD 635D1 and EXMD 635D2) (No credit will be given for this course unless both EXMD 635D1 and EXMD 635D2 are successfully completed in consecutive terms) The course will deal, on a site by site basis, with the incidence of cancer, present treatment, treatment outcome, underlying causes, current research and directions for development of new treatments. Chemotherapy, surgery, radiation therapy and nutrition as therapy and treatment of cancer will be included.

**EXMD 640 EXPERIMENTAL MEDICINE TOPIC 1.** (3)

**EXMD 690 MASTER'S THESIS RESEARCH 1.** (3)

**EXMD 691 MASTER'S THESIS RESEARCH 2.** (6)

**EXMD 692 MASTER'S THESIS RESEARCH 3.** (9)

**EXMD 693 MASTER'S THESIS RESEARCH 4.** (12)

**EXMD 694 MASTER'S THESIS RESEARCH 5.** (12)

**EXMD 701 COMPREHENSIVE ORAL EXAMINATION.** (0)

**EXMD 701D1 (0), EXMD 701D2 (0) COMPREHENSIVE ORAL EXAMINATION.** (Students must register for both EXMD 701D1 and EXMD 701D2) (No credit will be given for this course unless both EXMD 701D1 and EXMD 701D2 are successfully completed in consecutive terms) (EXMD 701D1 and EXMD 701D2 together are equivalent to EXMD 701)

#### Department of Physiology

PHGY 508 Advanced Renal Physiology. (3)

PHGY 513 Cellular Immunology. (3)

PHGY 515 Physiology of Blood 1. (3)

PHGY 516 Physiology of Blood 2. (3)

PHGY 517 Artificial Internal Organs. (3)

PHGY 518 Artificial Cells. (3)

#### Department of Microbiology and Immunology

MIMM 509 Inflammatory Processes. (3)

#### Scheduled Graduate Seminars

Royal Victoria Hospital (1 hour per week):

Respiratory Research

Immunopathology

Endocrinology and Metabolism

Haematology Research

Renal and Electrolyte Seminar

Transplantation Conference

Gastroenterology Conference

Diabetes Conference

Chest-Cardiac Disease Conference

Clinical Endocrinology Conference

Steroid Biochemistry Research

Haematology Clinical Conference

Endocrinology and Metabolism Research Conference

Clinical Immunology Conference

Arthritis Conference

Internal Medicine

Dermatology Research

University Clinic Seminar

Cardiology Research

Montreal General Hospital (1 hour per week, or in some cases alternate week):

Gastroenterology Conference

Respiratory Diseases

Dermatology

Internal Medicine

Allergy and Immunology

Infectious Diseases

Combined Staff Conference

Haematology

Arthritis

Metabolic Diseases

Cardiac Disease

Neurology – Neurosurgery

University Medical Clinic Seminar

## 50 Microbiology and Immunology

Department of Microbiology and Immunology  
3775 University Street  
Montreal, QC H3A 2B4  
Canada

Telephone: (514) 398-3912

Fax: (514) 398-7052

E-mail: office.microimm@mcgill.ca

Web site: www.mcgill.ca/microimm

Chair — G.J. Matlashewski

### 50.1 Staff

#### *Emeritus Professor*

E.C.S. Chan; M.A.(Texas), Ph.D.(Maryland)

#### *Professors*

N.H. Acheson; A.B.(Harv.), Ph.D.(Rockefeller)

Z. Ali-Khan; B.Sc.(Bilar), M.Sc.(Karachi), Ph.D.(Tulane)

M.G. Baines; B.Sc., M.Sc., Ph.D.(Queen's)

J.W. Coulton; B.Sc.(Tor.), M.Sc.(Calg.), Ph.D.(W. Ont.)

J. Hiscott; B.Sc., M.Sc., Ph.D.(W. Ont.)

G.J. Matlashewski; B.Sc.(C'dia), Ph.D.(Ohio)

R.A. Murgita; B.Sc.(Maine), M.S.(Vt.), Ph.D.(McG.)

T. Owens; B.Sc., M.Sc.(McG.), Ph.D.(Ont.)

M.A. Wainberg; B.Sc.(McG.), Ph.D.(Col.)

#### *Associate Professors*

A. Berghuis; M.Sc.(The Netherl.), Ph.D.(UBC)

D.J. Briedis; B.A., M.D.(Johns H.)

#### *Assistant Professors*

B. Cousineau; B.Sc., M.Sc., Ph.D.(Montr.)

S. Fournier; Ph.D.(Montr.)

H. Le Moual; Ph.D.(Montr.)

G.J. Marczyński; B.S., Ph.D.(Ill.)

A. Moulard; Ph.D.(McG.)

M. Olivier; B.Sc.(Montr.), Ph.D.(McG.)

Ciriaco Piccirillo; B.Sc., Ph.D. (McG.)

#### *Associate Members*

*Institute of Parasitology:* G. Faubert, A. Jardim, P.Ribeiro, T.Spithill

*Division of Exp. Medicine:* C. Couture

*Microbiology and Immunology:* L. Kleiman

*Medicine:* M. Behr, A. Dascal, S.Hussain, V.Loo, J. D. Maclean,

J. Mendelson, M. A.Miller, M.Newkirk, R.G.E. Palfree,

K.Pantopoulos, J. E.Rauch, B. Turcotte, B.J.Ward.

*Neuroimmunology:* A. Bar-Or

*Neurology and Neurosurgery:* J. Antel  
*Oncology:* A. Gagnon, M. Gotte, A.E. Koromilas, A. Moulard,  
 A. Pause, S. Richard  
*Surgery:* N.V. Christou, A.R. Poole

#### *Adjunct Professors*

V. Dave, A. Descoteaux, G. Kukolj, T. Jones, P. Lau,  
 A. Makrigiannis, A. Matte, C. Rioux, R.-P. Sekaly

## 50.2 Programs Offered

The Department offers graduate programs leading to the degrees of M.Sc., M.Sc. Applied and Ph.D. Each program is tailored to fit the needs and backgrounds of individual students.

The Department concentrates on four key areas of research: cellular and molecular immunology, microbial physiology and genetics, molecular biology of viruses, and medical microbiology.

## 50.3 Admission Requirements

### Master's and Master's Applied

Candidates are required to hold a B.Sc. degree in microbiology and immunology, biology, biochemistry or another related discipline; those with the M.D., D.D.S. or D.V.M. degrees are also eligible to apply. The minimum grade point average for acceptance into the program is 3.2 (out of 4.0). All international applicants whose language of instruction is not English must have a TOEFL score of 575 on the paper-based test (230 on the computer-based test).

### Ph.D.

Students who have satisfactorily completed a M.Sc. degree in microbiology and immunology, a biological science, or biochemistry, or highly qualified students enrolled in the departmental M.Sc. program, may be accepted into the Ph.D. program provided they meet its standards.

## 50.4 Application Procedures

Applications will be considered upon receipt of:

1. application form
2. two official transcripts
3. two letters of reference
4. \$60 application fee
5. TOEFL test (GRE not required but recommended)

All information is to be submitted directly to the Student Affairs Officer in the Department of Microbiology and Immunology.

All applicants are encouraged to approach academic staff members during or before the application process since no applicants are accepted without a supervisor.

McGill's on-line application form for graduate program candidates is available at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

### Deadline(s)

All applications and documents must be submitted by the following dates:

#### Canadian Applicants

October 1	for the Winter term (January)
February 1	for the Summer term (May)
May 15	for the Fall term (September)

#### International Applicants

July 1	for the Winter Term (January)
November 1	for the Summer term (May)
February 15	for the Fall term (September)

#### Intra-departmental transfers

November 1	for the Winter Term (January)
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1. Students must register for and satisfactorily complete the requirements of courses MIMM611, MIMM612, MIMM613, MIMM614, MIMM615 and two of the following courses: MIMM616, MIMM617, MIMM618 and MIMM619 (see list below).
2. Other courses may be required to strengthen the student's background.
3. A satisfactory M.Sc. thesis (24 credits) must be presented.

### M.Sc.A. Degree (non-thesis degree) (45 credits)

The principal aim is to provide specialized training in Applied Medical Microbiology and Immunology.

Candidates must satisfy requirements (1) and (2) above. In addition, applied laboratory research projects must be pursued as a major part of the overall program. The results of each project form the basis of a formal report that is reviewed by the Department staff.

### Ph.D.

Candidates will be judged principally on their research ability and on the presentation of a satisfactory thesis.

Students must also register for and satisfactorily complete the requirements of courses MIMM701, MIMM711, MIMM712, MIMM713, MIMM714, MIMM715 and MIMM716 and three or the following courses: MIMM704, MIMM705, MIMM706, MIMM707 (see list below). Other courses may be required to strengthen the student's background.

Each Ph.D. student has an advisory committee (three professors including research advisor) that meets yearly to consider the student's progress. r5512 Tc -0.31j T\* 0.330 m1j T\* 0.33 0.2 str 0.330 m1j Tearch ad

## 50.5 Program Requirements

### M.Sc. Degree (45 credits)

The following requirements must be satisfied:



designed to be informal and to generate student discussions. Topic will change from term to term.

**MIMM 697 MASTER'S RESEARCH 1.** (8) (M.Sc. students) Independent work under the direction of a supervisor on a research problem in the student's designated area of research.

**MIMM 698 MASTER'S RESEARCH 2.** (8) (M.Sc. students) Independent work under the direction of a supervisor on a research problem in the student's designated area of research.

**MIMM 699 MASTER'S RESEARCH 3.** (8) (M.Sc. students) Independent work under the direction of a supervisor on a research problem in the student's designated area of research.

**MIMM 701 COMPREHENSIVE EXAMINATION-PH.D. CANDIDATE.** (0)

**MIMM 701D1 (0), MIMM 701D2 (0) COMPREHENSIVE EXAMINATION-PH.D. CANDIDATE.** (Students must also register for MIMM 701D2) (No credit will be given for this course unless both MIMM 701D1 and MIMM 701D2 are successfully completed in consecutive terms) (MIMM 701D1 and MIMM 701D2 together are equivalent to MIMM 701)

**MIMM 704 READING AND CONFERENCE.** (3) (Ph.D. students - three of these courses required throughout the course of their degree program.) Description as for M.Sc. students.

**MIMM 705 READING AND CONFERENCE.** (3) (Ph.D. students - three of these courses required throughout the course of their degree program.) Description as for M.Sc. students.

**MIMM 706 READING AND CONFERENCE.** (3) (Ph.D. students - three of these courses required throughout the course of their degree program.) Description as for M.Sc. students.

**MIMM 707 READING AND CONFERENCE.** (3) (Ph.D. students - three of these courses required throughout the course of their degree program.) Description as for M.Sc. students.

**MIMM 711 GRADUATE SEMINARS 3.** (3) (Ph.D. students) Presentation of a maximum of three seminars topics throughout the course of their degree program.

**MIMM 712 GRADUATE SEMINARS 4.** (3) (Ph.D. students) Presentation of a maximum of three seminars topics throughout the course of their degree program.

**MIMM 713 GRADUATE SEMINARS 5.** (3) (Ph.D. students) Presentation of a maximum of three seminars topics throughout the course of their degree program.

**MIMM 714 CURRENT TOPICS 4.** (3) (Ph.D. students) Discussion groups with guest speakers.

**MIMM 715 CURRENT TOPICS 5.** (3) (Ph.D. students) Discussion groups with guest speakers.

**MIMM 716 CURRENT TOPICS 6.** (3) (Ph.D. students) Discussion groups with guest speakers.

**MIMM 721 PH.D. RESEARCH PROGRESS REPORT 1.** (1)

**MIMM 721D1 (0.5), MIMM 721D2 (0.5) PMIMM 721D1 (0.5), MIMM 721D2 (0.5) PMIMM 721D1 (0.5), MIMM 721D2 (0.5) P 1.**

1D2 (0.5) P

### 51.1 Staff

#### *Emeritus Professors*

G.W. Smith, B.Eng., M.Eng., Ph.D.(McG.), Eng.  
W.M. Williams; B.Sc., M.Sc.(Brist.), Ph.D.(Tor.), Eng.

#### *Professors*

G.P. Demopoulos; Dipl.Eng.(NTU Athens), M.Sc., Ph.D.(McG.), Eng.  
R.A.L. Drew; B.Tech.(Brad.), Ph.D.(N'cle)  
R. Gauvin; B.Eng., Ph.D.(Montr.), Eng.  
J.A. Finch; B.Sc.(Birm.), M.Eng., Ph.D.(McG.), Eng., F.C.I.M., F.R.S.C.  
J.E. Gruzleski; B.Sc., M.Sc.(Queen's), Ph.D.(Tor.), Eng., F.C.I.M., F.A.S.M.  
R.I.L. Guthrie; B.Sc., Ph.D.(Lond.), D.I.C., Eng., A.R.S.M., F.C.I.M., R.R.S.C.  
R. Harris; B.Sc. (Qld), M.Eng., Ph.D.(McG.)  
F.P. Hassani; B.Sc., Ph.D.(Nott.), C.Eng.(U.K. Reg.)  
J.J. Jonas; B.Eng.(McG.), Ph.D.(Cantab.), Eng., F.A.S.M., F.R.S.C.  
H.S. Mitri; B.Sc.(Cairo), M.Eng., Ph.D.(McM.), Eng.  
J. Szpunar; B.Sc., M.Sc., Ph.D., D.Sc.(Krakow)  
S. Yue; B.Sc., Ph.D.(Leeds)

#### *Associate Professors*

M.L. Bilodeau; B.A.Sc.(Montr.), M.Sc.A., Ph.D.(McG.), Eng.  
M. Hasan; B.Eng.(Dhaka), M.Eng.(Dhahran), Ph.D.(McG.)  
J.A. Kozinski; B.A., M.Eng., D.Sc.(Krakow) (William Dawson Scholar)  
A. Laplante; B.A.Sc., M.A.Sc.(Montr.), Ph.D.(Tor.), Eng.  
F. Mucciardi; B.Eng., M.Eng., Ph.D.(McG.), Eng.  
J. Ouellet; B.Sc.A.(Laval), M.Sc.A., Ph.D.(École Poly.), Eng.

#### *Lecturers*

J. Mossop, F. Paray

#### *Adjunct Professors*

W. Caley, R. Dimitrakopoulos, E. Essadiqi, B. Harris, A. Hemami, M. Jahazi, J. Kapusta, E. Lifshin, M. Pugh, J.H. Root

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### 51.2 Programs Offered

Graduate programs leading to M.Eng., M.Sc. and Ph.D. research degrees are available in Rock Mechanics, Mining Environments, Mining Automation and Robotics, Operations Research, Ground Fragmentation, Mineral Economics, Materials Handling, Chemical and Process Metallurgy, Hydrometallurgy, Effluent and Waste Treatment, Mineral Processing, Metal Casting, Materials Engineering, Composites, Ceramics, Mechanical Metallurgy and Electron Microscopy.

Course programs leading to the M.Eng. (Project) degree in Mining or Materials Engineering and the Graduate Diploma in Mining Engineering are also available.

Special programs are available for those holding degrees in subjects other than Metals and Materials or Mining Engineering (e.g., Chemical or Mechanical Engineering, Chemistry, Physics, Engineering Geology).

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### 51.3 Admission Requirements

The Graduate Diploma in Mining Engineering is open to graduates with suitable academic standing in any branch of engineering

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4. they have obtained a letter of recommendation from their supervisor;
5. they have passed a preliminary examination (as per the Ph.D. program).

**M.Eng. (Project) Degree Metals and Materials Option**

The M.Eng. (Project) program (Metals/Materials Option) consists of 45 credits of course work and projects. The package of courses undertaken will provide any necessary basic training and will be selected in consultation with the Program Advisor to satisfy the desired specialization of the candidate. The project courses may be undertaken in an industrial environment as a 4- to 8-month work term.

The program consists of a minimum of 12 credits of Departmental graduate level courses, 6 to 15 credits of M.Eng Materials Engineering Project courses, the Research Seminar (MIME670) and enough additional courses chosen from within or outside the Department to complete the 45 credit requirement. The external courses and project courses undertaken in an industrial environment are subject to Departmental approval. The program is established in consultation with the Program Advisor.

**M.Eng. (Project) Degree Mining Option**

The M.Eng. (Project) program (Mining Option) consists of 45 credits of course work and projects. It is primarily designed for graduates from mining engineering programs who have received adequate academic training in modern mining technology, mineral economics, computer programming and probabilities and statistics. Students without this academic training must follow a qualifying term of courses (including MIME420 Feasibility Study) established by the Mining Program Director.

The program consists of a minimum 12 credits of Departmental graduate-level courses, 6 to 15 credits of M.Eng Mining Engineering Project courses, the Mining Engineering Seminar (MIME673) and enough additional courses chosen from within or outside the Department to complete the 45 credit requirement. The program is established in consultation with the Program Director. The external courses are subject to Departmental approval.

**Ph.D. Degree**

A candidate for this degree must pass courses assigned by the Department. These are selected on the basis of the student's previous academic training and research interests. The candidate is

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tion. Nature and pathways of pollutant streams during thermal treatment of wastes. Reduction and control of harmful products. Toxic metal encapsulation. Particulate removal. Destruction of gaseous contaminants. Use of models in system design.

**MIME 556 SUSTAINABLE MATERIALS PROCESSING.** (3) (3-1-5) (Prerequisite: Permission of Instructor.) Sustainability, population and environment impact, environmental impact indicators, materials flows, enthalpy flows, the carbon cycle, materials intensity, energy intensity, global warming potential, acidification potential, FACTOR-Two, -Four and -Ten, life-cycle-inventory/assessment, end-of-pipe strategies, supply-chain and flow-sheet redesign, recycling, waste treatment and materials case studies.

**MIME 560 JOINING PROCESSES.** (3) (3-3-3) (Prerequisite: MIME 200, MIME 360) Physics of joining; interfacial requirements; energy sources, chemical, mechanical and electrical; homogeneous hot-joining, arc-, Mig-, Tig-, gas-, thermite- and Plasma-welding; Autogeneous hot-joining, forge-, pressure-, friction-, explosive-, electron beam- and laser-welding; Heterogeneous hot-joining, brazing, soldering, difTa93 Tww ( P ) Tj0 -rogen Tw l2pyougap7oinebrazing, soldering, def0ure-, fhot-rogen Tw l2py.su(clics of Fdieertment and ; Jef0tp

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**MIME 629N1 MINERAL ENGINEERING PROJECT 2. (3)** (Students must also register for MIME 629N2) (No credit will be given for this course unless both MIME 629N1 and MIME 629N2 are successfully completed in a twelve month period) (MIME 629N1 and MIME 629N2 together are equivalent to MIME 629) Continuation of Mining Engineering Project.

**MIME 629N2 MINERAL ENGINEERING PROJECT 2. (3)** (Prerequisite: MIME 629N1) (No credit will be given for this course unless both MIME 629N1 and MIME 629N2 are successfully completed in a twelve month period) (MIME 629N1 and MIME 629N2 together are equivalent to MIME 629) See MIME 629N1 for course description.

**MIME 634 MINERAL ENGINEERING PROJECT 3. (3)** Continuation of Mining Engineering Project 1.

**MIME 634D1 (1.5), MIME 634D2 (1.5) MINERAL ENGINEERING PROJECT 3.** (Students must register for both MIME 634D1 and MIME 634D2) (No credit will be given for this course unless both MIME 634D1 and MIME 634D2 are successfully completed in consecutive terms) (MIME 634D1 and MIME 634D2 together are equivalent to MIME 634) Continuation of Mining Engineering Project 1.

**MIME 634N1 MINERAL ENGINEERING PROJECT 3. (1.5)** (Students must also register for MIME 634N2) (No credit will be given for this course unless both MIME 634N1 and MIME 634N2 are successfully completed in a twelve month period) (MIME 634N1 and MIME 634N2 together are equivalent to MIME 634) Continuation of Mining Engineering Project 1.

**MIME 634N2 MINERAL ENGINEERING PROJECT 3.**

fully completed in consecutive terms) (MIME 693D1 and MIME 693D2 together are equivalent to MIME 693)

**MIME 694 THESIS RESEARCH 5.** (6) (For Master's students only.)

**MIME 694D1 (3), MIME 694D2 (3) THESIS RESEARCH 5.** (For Master's students only.) (Students must register for both MIME 694D1 and MIME 694D2) (No credit will be given for this course unless both MIME 694D1 and MIME 694D2 are successfully completed in consecutive terms) (MIME 694D1 and MIME 694D2 together are equivalent to MIME 694)

**MIME 694N1 THESIS RESEARCH 5.** (3) (For Master's students only.) (Students must also register for MIME 694N2) (No credit will be given for this course unless both MIME 694N1 and MIME 694N2 are successfully completed in a twelve month period) (MIME 694N1 and MIME 694N2 together are equivalent to MIME 694)

**MIME 694N2 THESIS RESEARCH 5.** (3) (For Master's students only.) (Prerequisite: MIME 694N1) (No credit will be given for this course unless both MIME 694N1 and MIME 694N2 are successfully completed in a twelve month period) (MIME 694N1 and MIME 694N2 together are equivalent to MIME 694) See MIME 694N1 for course description.

**MIME 695 THESIS RESEARCH 6.** (3) (For Master's students only.)

**MIME 695D1 (1.5), MIME 695D2 (1.5) THESIS RESEARCH 6.** (For Master's students only.) (Students must register for both MIME 695D1 and MIME 695D2) (No credit will be given for this course unless both MIME 695D1 and MIME 695D2 are successfully completed in consecutive terms) (MIME 695D1 and MIME 695D2 together are equivalent to MIME 695)

**MIME 701 Ph.D. THESIS RESEARCH PROPOSAL.** (0) For students registered in a Ph.D. program in Mining or Materials Engineering. Student submits a document and takes an oral examination to demonstrate familiarity with relevant literature, define a methodology and describe a work plan.

**MIME 771 RESEARCH SEMINAR.** (6) (For students registered in a Ph.D. program in Materials Engineering.)

**MIME 776 RESEARCH SEMINAR.** (6) (For students registered in a Ph.D. program in Mining.)

## 52 Music

Faculty of Music  
Strathcona Music Building  
555 Sherbrooke Street West  
Montreal, QC H3A 1E3  
Canada

Telephone: (514) 398-4469  
Fax: (514) 398-8061  
Web site: [www.mcgill.ca/music](http://www.mcgill.ca/music)

*Dean, Faculty of Music* — Don McLean

*Director, Graduate Studies* — Peter Schubert

*Chair, Department of Theory* — Brian Cherney

*Chair, Department of Performance* — Douglas McNabney

*Associate Dean (Administration)* — Bruce Minorgan

### 52.1 Staff

#### *Emeritus Professors*

Kelsey Jones; L.Mus., B.Mus.(Mt.All.), B.Mus., Mus.Dc.(Tor.)  
Dorothy Morton; Graduate, Conservatoire de Musique de Québec

#### *Professors*

William Caplin; B.M.(S.Calif.), M.A., Ph.D.(Chic.)  
Brian Cherney; Mus.Bac., Mus.M., Ph.D.(Tor.)  
Robert Gibson; B.S., M.F.A., Ph.D.(Minn.)  
John Grew; L.T.C.L.(Lond.), B.Mus.(Mt. All.), M.Mus.(Mich.)  
D.D.(U.T.C.); LL.D.(Mt.All.); University Organist

Steven Huebner; B.A., B.Mus., L.Mus.(McG.), M.F.A., Ph.D.(Prin.)  
(*James McGill Professor*)

Alcides Lanza; Graduate, Instituto Torcuato Di Tella(Buenos Aires)

John Rea; B.Mus.(Wayne St.), M.Mus.(Tor.), M.F.A., Ph.D.(Prin.)  
Wieslaw Woszczyk; M.A., Ph.D.(F. Chopin Academy of Music, Warsaw)

#### *Associate Professors*

Theodore Baskin; B.Mus.(Curtis), M.Mus.(Auck.); Principal Oboe, Montreal Symphony

Tom Beghin; D.M.A.(C'neil.)

Denys Bouliane; B.Mus., M.Mus.(Laval)

David Brackett; D.M.A.(C'neil.)

Julie Cumming; B.A.(Col.), M.A., Ph.D.(Berkeley)

Kevin Dean; B.M.E.(Iowa), M.Mus.(Miami)

Martha de Francisco; Diploma(Musikkhochschule, Detmold)

Philippe Depalle; B.Sc.(Paris XI and ENS Cachan), D.E.A.(Le Mans and ENS Cachan), Ph.D.(Le Mans & IRCAM)

Lucile Evans; Dip.(Vincent d'Indy)

Gordon Foote; B.Sc., M.A.(Minn.)

Kyoko Hashimoto; B.A.(Tokyo)

Alexis Hauser

Timothy Hutchins; Dip. L.G.S.M.(Guildhall), B.A.Hons.Mus.(Dal.),  
Principal Flute, Montreal Symphony

Jan Jarczyk; B.A., M.A.(Academy of Music, Cracow),  
Dip.(Berklee)

Abe Kestenberg

Hank Knox; B.Mus., M.Mus.(McG.)

Sara Laimon; B.Mus.(U.B.C.), M.Mus.(Yale), D.M.A.(SUNY,  
Stony Brook)

Richard Lawton; B.Mus.(McG.), M.Mus.(Ind.)

William Martens; B.A.(Miami), Ph.D.(Northwestern)

Don McLean; Mus.Bac., M.A., Ph.D.(Tor.)

Michael McMahon; B.Mus.(McG.), Graduate, Hochschule für  
Musik(Vienna)

Douglas McNabney; B.Mus.(Tor.), M.M.(W.Ont.),  
Mus.Doc.(Montr.)

Marina Mdivani; Post-graduate Dip.(Moscow Cons.)

Bruce Minorgan; B.Mus.(Br.Col.), M.A.(Tor.)

William Neill; B.Mus., M.Mus.(Texas at Austin)

Tom Plaunt; B.A.(Tor.), Graduate, Nordwestdeutsche  
Musikakademie (Detmold, Germany)

Richard Raymond; Premier Prix (Conservatoire de Montreal),  
M.Mus.(Montr.)

Marcel Saint-Cyr; B.A.(Laval), Premier Prix(Cons.de Mus. de  
Qué.), Concert Dip.(Hochschule für Musik, Karlsruhe)

Peter Schubert; B.A., M.A., Ph.D.(Col.)

Thérèse Sevadjian; B.Mus., M.Mus.(Montr.)

Jan Simons

Eleanor Stublely; B.Mus.(Tor.), M.Mus.(Bran.), Ph.D.(Ill.)

Julian Wachner; B.Mus., Mus.Doc.(Boston)

Joel Wapnick; B.A.(N.Y.), M.A.(S.U.N.Y.), M.F.A.(Sarah L.),  
Ed.D.(Syr.)

Thomas Williams; B.Mus.(Bran.)

John Zirbel; B.Mus.(Wis.), Principal Horn, Montreal Symphony

Luba Zuk; L.Mus.(McG.), Graduate, Con. de Mus. de Qué.

#### *Assistant Professors*

James Box; B.M.(Senr0ook)Col.)M.Mus.(Montr.)

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Denise Lupien; B.M., M.M.(Juilliard)  
 Dennis Miller; Principal Tuba, Montreal Symphony  
 Christoph Neidhöfer; Graduate, Hochschule für Musik(Basel),  
 Ph.D.(Harv.)  
 Rene Quesnel; B.Mus., M.Mus., Ph.D.(McG.)  
 Richard Roberts; B.Mus.(Ind.); Concertmaster, Montreal  
 Symphony  
 Dixie Ross-Neill; B.Mus.(N. Carolina), M.Mus.(Texas)  
 André Roy; Montreal Symphony  
 Gary Scavone; B.Sc., B.A. (Syr.); M.Sc., Ph.D.(Stan.)  
 Joe Sullivan; B.A.(Ott.), M.M.(New England Cons.)  
 Marcelo Wanderley; B.Eng.(UFPR), M.Eng.(UFSC), Ph.D.(Paris  
 VI and IRCAM)  
 André White; B.A.(C'dia.), M.Mus.(McG.)  
 Lloyd Whitesell; B.A.(Minn.), M.A., Ph.D.(SUNY, Stony Brook)

*Adjunct Professor*  
 Kenneth Gilbert; D.Mus.honoris causa(McG.), O.C., F.R.S.C., Hon  
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## 52.2 Programs Offered

The Master of Arts degree (M.A.) is available as a thesis option in Music Education, Music Technology, Musicology, and Theory and as a non-thesis option in Music Education, Musicology, and Theory.

The Master of Music degree (M. Mus.) is available in Composition, Performance, and Sound Recording. Within the Performance option are offered specializations in: piano, guitar, orchestral instruments, organ, conducting, chamber music, orchestral training, piano accompaniment, vocal, opera, opera coaching, vocal pedagogy, early music, church music - organ, and jazz.

The Doctor of Music degree (D.Mus.) is offered in Composition

## ACADEMIC UNITS

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Group 1:

MUHL380 Medieval Music  
MUHL381 Renaissance Music  
MUHL382 Baroque Music  
MUHL383 Classical Music

Group 2:

MUHL398 Keyboard Literature before 1750  
MUHL 591D1/MUHL 591D2 Paleography

Organ/Harpsicord:

MUPG 272D1/MUPG 272D2 Continuo

Voice

Two of:



## Electives:

Three 3-credit graduate electives.

**M.A. in Music – Theory (thesis) (48 credits)**

Five 3-credit graduate courses approved by the Department, normally three will be Seminars in Music Theory and either MUTH658 History of Music Theory 1 or MUTH659 History of Music Theory 2.

Thesis (33 credits). The candidate will undertake supervised research leading to a thesis which will be an in-depth investigation in some specialized field of music theory.

**Non-thesis M.A. in Music (options in Music Education, Musicology, and Theory) (45 credits)**

Seven 3-credit graduate courses approved by the appropriate Area, four of which must be in the Area itself.

For students in the Musicology Area, one of the courses must be MUHL529 Proseminar in Musicology.

For students in the Theory Area, one of the courses must be MUTH658 History of Music Theory 1 or MUTH659 History of Music Theory 2.

For students in Music Education, and with the approval of the Music Education Area, two of the seven 3-credit courses may be taken in the Faculty of Education.

MUGS614 Reading Course 1 and MUGS615 Reading Course 2.  
MUGS635 Research Paper 1 and MUGS636 Research Paper 2.

**Master of Music – Performance: Solo – Guitar, Orchestral Instruments, Organ, Conducting (45 credits)**

MUPG620, MUPG621, MUPG622 Performance Tutorials.

One of MUPP690, MUPP691, MUPP692, MUPP693, MUPP694 or MUPP695 Performance Practice Seminar.

## Electives:

One graduate 3-credit seminar with the prefix MUCO, MUGS, MUGT, MUHL, MUPP, MUTH.

One additional graduate 3-credit seminar.

## Recitals:

MUPG660 Solo Recital Project 1 and MUPG667 Solo Recital 2 (one of these could optionally include some chamber music).

**Master of Music – Performance: Chamber Music (48 credits)**

(All instruments except Piano, Early Music Instruments, Organ, Harp and Double Bass.)

MUPG620, MUPG621, MUPG622 Performance Tutorials.

One of MUPP690, MUPP691, MUPP692, MUPP693, MUPP694 or MUPP695 Performance Practice Seminar.

## Electives:

One graduate 3-credit seminar with the prefix MUCO, MUGS, MUGT, MUHL, MUPP, MUTH.

One additional graduate 3-credit seminar.

## Recitals:

MUPG661 Chamber Recital Project 1 and MUPG668 Chamber Music Recital 2 (one of these could optionally include some solo music).

## Ensembles:

**Three terms** of MUEN660 Chamber Music Ensemble.

**Master of Music – Performance: Solo Piano (49 credits)**

MUPG620, MUPG621, MUPG622 Performance Tutorials.

MUPG 681 and MUPG 682 Piano Seminars.

One of MUPP690, MUPP691, MUPP692, MUPP693, MUPP694 or MUPP695 Performance Practice Seminar.

## Electives:

One graduate 3-credit seminar at the 500- or 600-level 0 TD /F0nt0.6234 or manc 6p3p3p3p36T9.75 -9t Tf 0.6234 Tc -0j 186.7PG6210Q5 Performan  
ber Music Recital 2 (one of these could optionally include some

Three terms

## Recitals:

MUPG656 Vocal Quick Study  
MUPG657 Opera Performance Project  
MUPG658 Opera Performance

**Master of Music – Performance: Vocal Opera Coach**  
(45credits)

MUPG620, MUPG621 and MUPG622 Performance Tutorials.  
MUPG646 and MUPG647 Score- and Sight-Reading.  
MUPG670 and MUPG671 Advanced Continuo.

**One** of MUPP690, MUPP691, MUPP692, MUPP693,  
MUPP694, or MUPP695 Performance Practice Seminar,  
or MUPG690 Vocal Styles and Conventions

## Electives:

**One** graduate 3-credit seminar with the prefix MUCO, MUGS,  
MUGT, MUHL, MUPP, MUTH.

**One** additional graduate 3-credit seminar (this must be one of  
MUPG690, MUPG691, MUPG692, MUPG693, or  
MUPG694).

## Recitals:

MUPG653 Opera Coach Project  
MUPG654 Opera Coach Performance  
MUPG655 Opera Coach Quick Study

**Master of Music – Performance: Vocal Performance**  
(49credits)

MUPG620, MUPG621 and MUPG622 Performance Tutorials.  
MUIN600 and MUIN601 Vocal Repertoire Coaching.

**One** of MUPP690, MUPP691, MUPP692, MUPP693,  
MUPP694, or MUPP695 Performance Practice Seminar,  
or MUPG690 Vocal Styles and Conventions.

## Electives:

**One** graduate 3-credit seminar with the prefix MUCO, MUGS,  
MUGT, MUHL, MUPP, MUTH.

**One** additional graduate 3-credit seminar (this must be one of  
MUPG690, MUPG691, MUPG692, MUPG693, or  
MUPG694).

## Recitals:

MUPG660 Solo Recital Project 1\*  
MUPG667 Solo Recital 2\*  
\* **One** of MUPG660 or MUPG667 may be replaced by  
MUPG657 Opera Performance Project or MUPG658 Opera  
Performance and MUPG656 Vocal Quick Study.

**Master of Music – Performance: Vocal Pedagogy** (47 credits)

MUPG620, MUPG621, MUPG622 Performance Tutorials.  
MUPG693 Vocal Treatises and Methods  
MUPG694 Vocal Physiology for Singers

**One** of MUPP690, MUPP691, MUPP692, MUPP693,  
MUPP694 or MUPP695 Performance Practice Seminar or  
MUPG690 Vocal Styles and Conventions.

**One** of MUIN600 or MUIN601 Vocal Repertoire Coaching.

## Electives:

**One** graduate 3-credit seminar with the prefix MUCO, MUGS,  
MUGT, MUHL, MUPP, MUTH.

## Recitals:

MUPG650 Voice Lecture - Demonstration  
MUPG660 Solo Recital Project 1  
MUPG611 Directed Voice Teaching 1  
MUPG612 Directed Voice Teaching 2

**Master of Music – Performance: Early Music** (48 credits)

(Voice, baroque flute, recorder, baroque oboe, baroque violin,  
baroque viola, baroque cello, viola da gamba, harpsichord)

MUPG620, MUPG621, MUPG622 Performance Tutorials.

**One** of MUPP690, MUPP691, MUPP692, MUPP693,  
MUPP694 or MUPP695 Performance Practice Seminar.

## Electives:

**One** graduate 3-credit seminar with the prefix MUCO, MUGS,  
MUGT, MUHL, MUPP, MUTH.

**One** additional graduate 3-credit seminar.

## Recitals:

MUPG660 Solo Recital Project 1 and MUPG662 Solo and  
Chamber Music Recital.

## Ensembles:

**Three terms** of MUEN661 Early Chamber Music Ensemble  
(harpsichord players must satisfy the corequisite of  
MUPG372D1/MUPG372D2 Continuo).

**Master of Music – Performance: Church Music - Organ**  
(45credits)

MUPG620, MUPG621, MUPG622 Performance Tutorials.

**One** of MUPP690, MUPP691, MUPP692, MUPP693,  
MUPP694 or MUPP695 Performance Practice Seminar.

## Electives:

**One** graduate 3-credit seminar with the prefix MUCO, MUGS,  
MUGT, MUHL, MUPP, MUTH.

**One** additional graduate 3-credit seminar.

## Recital:

MUPG660 Solo Recital Project 1.

## Courses:

MUPG676D1/MUPG676D2 Special Project in Performance 2

## Ensembles:

**Three terms** of MUEN693 Choral Ensemble.

**Master of Music – Performance: Jazz Performance**

(47credits) (Saxophone, Trumpet, Trombone, Drums, Piano,  
Guitar, Bass, Voice)

MUPG620, MUPG621, MUPG622 Performance Tutorials.

## Recital:

MUPG660 Solo Recital Project 1  
MUPG659 Performance in Recording Media

## Ensemble:

**Two terms** of MUEN695 Jazz Ensemble

## Courses:

MUJZ601 Jazz Pedagogy  
MUJZ640D1/MUJZ640D2 Jazz Composition and Arranging

**Courses approved as electives for M.Mus. students in  
Performance:**

MUCO623 Electronic Music Seminar 1

MUCO624 Electronic Music Seminar 2

MUCO631 Seminar in Composition 1

MUCO632 Seminar in Composition 2

MUCO633 Seminar in Composition 3

MUCO634 Seminar in Composition 4

MUCO635 Seminar in Composition 5

MUPG660 Solo Recital Project 1har (Mgy 4UCO633 Seminar inHL684 Project 1) (H

MUCO616Tj -9.75 -9 0c 0 Tw (Electives:) Tj 9.75 5 TD 0.3919 2 Twc 0 Tw (Elec



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of reading, synthesis, and reporting will be agreed upon by the supervisor and the student at the beginning of the course.

**MUGS 635 RESEARCH PAPER 1.** (9)

**MUGS 635D1 (4.5), MUGS 635D2 (4.5) RESEARCH PAPER 1.** (Students must register for both MUGS 635D1 and MUGS 635D2) (No credit will be given for this course unless both MUGS 635D1 and MUGS 635D2 are successfully completed in consecutive terms) (MUGS 635D1 and MUGS 635D2 together are equivalent to MUGS 635)

**MUGS 636 RESEARCH PAPER 2.** (9)

**MUGS 636D1 (4.5), MUGS 636D2 (4.5) RESEARCH PAPER 2.** (Students must register for both MUGS 636D1 and MUGS 636D2) (No credit will be given for this course unless both MUGS 636D1 and MUGS 636D2 are successfully completed in consecutive terms) (MUGS 636D1 and MUGS 636D2 together are equivalent to MUGS 636)

**MUGS 675 SPECIAL PROJECT.** (3) (Requires Departmental approval)

**MUGS 675D1 (1.5), MUGS 675D2 (1.5) SPECIAL PROJECT.** (Students must register for both MUGS 675D1 and MUGS 675D2) (No credit will be given for this course unless both MUGS 675D1 and MUGS 675D2 are successfully completed in consecutive terms) (MUGS 675D1 and MUGS 675D2 together are equivalent to MUGS 675)

**MUGS 676 SPECIAL PROJECT.** (6) (Requires Departmental approval)

**MUGS 676D1 (3), MUGS 676D2 (3) SPECIAL PROJECT.** (Students must register for both MUGS 676D1 and MUGS 676D2) (No credit will be given for this course unless both MUGS 676D1 and MUGS 676D2 are successfully completed in consecutive terms) (MUGS 676D1 and MUGS 676D2 together are equivalent to MUGS 676)

**MUGS 683 MASTER'S THESIS RESEARCH 1.** (3)

**MUGS 684 MASTER'S THESIS RESEARCH 2.** (6)

**MUGS 685 MASTER'S THESIS RESEARCH 3.** (9)

**MUGS 686 MASTER'S THESIS RESEARCH 4.** (12)

**MUGS 687 MASTER'S THESIS.** (12)

**MUGS 694 SPECIAL TOPIC SEMINAR.** (3) (3 hours)

**MUGS 695 SPECIAL TOPIC SEMINAR.** (3) (3 hours)

**MUGS 701 COMPREHENSIVE EXAMINATION PART 1.** (0)

**MUGS 701D1 (0), MUGS 701D2 (0) COMPREHENSIVE EXAMINATION PART 1.** (Students must register for both MUGS 701D1 and MUGS 701D2) (No credit will be given for this course unless both MUGS 701D1 and MUGS 701D2 are successfully completed in consecutive terms) (MUGS 701D1 and MUGS 701D2 together are equivalent to MUGS 701)

**MUGS 702 COMPREHENSIVE EXAMINATION PART 2.** (0)

**MUGS 702D1 (0), MUGS 702D2 (0) COMPREHENSIVE EXAMINATION PART 2.** (Students must register for both MUGS 702D1 and MUGS 702D2) (No credit will be given for this course unless both MUGS 702D1 and MUGS 702D2 are successfully completed in consecutive terms) (MUGS 702D1 and MUGS 702D2 together are equivalent to MUGS 702)

**MUGS 705 COLLOQUIUM.** (0)

**MUGS 705D1 (0), MUGS 705D2 (0) COLLOQUIUM.** (Students must register for both MUGS 705D1 and MUGS 705D2) (No credit will be given for this course unless both MUGS 705D1 and MUGS 705D2 are successfully completed in consecutive terms) (MUGS 705D1 and MUGS 705D2 together are equivalent to MUGS 705)

**MUGS 749 DOCTORAL TUTORIAL 1.** (3)

**MUGS 750 DOCTORAL TUTORIAL 2.** (3)

**MUHL 529 PROSEMINAR IN MUSICOLOGY.** (3) (3 hours) (Prerequisites: MUHL 184 and MUHL 185 and MUTH 211 OR MUCO 240 and MUSP 231) (Prerequisite: open to all students in a Major or Honours program in Music History, and to students in other pro-

grams by permission of instructor) (Normally alternates with MUHL 591)

**MUHL 570 RESEARCH METHODS IN MUSIC.** (3) (3 hours) (Prerequisites: MUHL 184 and MUHL 185 and MUTH 211 OR MUCO 240 and MUSP 231) (Additional prerequisite: one MUHL or MUPP course at the 300 level or higher, or permission of instructor) Survey and critical evaluation of research- and performance-related tools: composers' collected editions, monuments of music, bibliographies of music and music literature, discographies, directories, and databases. Topics will include: developing bibliographies, structuring written arguments, assessing academic and popular writings about music, and understanding the task of the music editor.

**MUHL 591D1 (1.5), MUHL 591D2 (1.5) PALEOGRAPHY.** (1 hour) (Prerequisites: MUHL 184 and MUHL 185 and MUTH 211 OR MUCO 240 and MUSP 231) (Restricted to U3 honours students in History) (Normally alternates with MUHL 529) (Students must register for both MUHL 591D1 and MUHL 591D2.) (No credit will be given for this course unless both MUHL 591D1 and MUHL 591D2 are successfully completed in consecutive terms)

**MUIN 600 VOCAL REPERTOIRE COACHING 1.** (2) (1 hour) A course in which the performer will have individual coaching sessions on repertoire, with emphasis on musical and linguistic nuance.

**MUIN 601 VOCAL REPERTOIRE COACHING 2.** (2) (1 hour)

**MUIN 602 VOCAL REPERTOIRE COACHING 3.** (2) Individual coaching sessions on advanced vocal repertoire, with emphasis on musical and linguistic nuance.

**MUIN 700 DOCTORAL REPERTOIRE COACHING 1.** (2) Individual tutorial coaching sessions in repertoire, with emphasis on musical and linguistic nuance.

**MUIN 701 DOCTORAL REPERTOIRE COACHING 2.** (2) Individual tutorial coaching sessions in repertoire, with emphasis on musical and linguistic nuance.

**MUIN 702 DOCTORAL REPERTOIRE COACHING 3.** (2) Individual tutorial coaching sessions in repertoire, with emphasis on musical and linguistic nuance.

**MUIN 703 DOCTORAL REPERTOIRE COACHING 4.** (2) Individual tutorial coaching sessions in repertoire, with emphasis on musical and linguistic nuance.

**MUJZ 601 JAZZ PEDAGOGY.** (3) (3 hours) A course designed to prepare students to teach jazz-related subjects at the university and professional level, with emphasis on ensemble direction and the instruction of improvisation, as well as course and curriculum development. Various pedagogical methods, philosophies, rehearsal techniques, and materials will be investigated.

**MUJZ 640 JAZZ COMPOSITION AND ARRANGING.** (4) (2 hours)

**MUJZ 640D1 (2), MUJZ 640D2 (2) JAZZ COMPOSITION AND ARRANGING.** (Students must register for both MUJZ 640D1 and MUJZ 640D2) (No credit will be given for this course unless both MUJZ 640D1 and MUJZ 640D2 are successfully completed in consecutive terms) (MUJZ 640D1 and MUJZ 640D2 together are equivalent to MUJZ 640) A course intended to guide the student towards an individual musical style. A variety of jazz compositional and arranging techniques will be explored.

**MUMT 605 DIGITAL SOUND SYNTHESIS AND AUDIO PROCESS.** (3) Basic principles of digital sound synthesis including techniques such as additive synthesis, frequency modulation, tuned resonators, waveshaping and digital audio processing techniques including simple delay systems, filters, reverberators, spatial controllers, etc. will be explored.

**MUMT 609 MUSIC, MEDIA AND TECHNOLOGY PROJECT.** (3) (3 research/project hours) Independent music technology project. Students will prepare a statement of objectives, a comprehensive project design and a schedule of work, and will undertake the project on appropriate music technology platforms.

**MUMT 610 COMPUTER MUSIC SEMINAR 1.** (3) (3 hours) Advanced topics in computer applications in music will be examined. Stu-

dents will be expected to 1) present critical analyses of current research and 2) develop and implement software demonstrations.

**MUMT 611 COMPUTER MUSIC SEMINAR 2.** (3) (3 hours) Advanced topics in computer applications in music will be examined. Students will be expected to 1) present critical analyses of current research and 2) develop and implement software demonstrations.

**MUMT 612 COMPUTER MUSIC SE**

This course covers advanced concepts and techniques of audio post-production using digital workstations. Students practise the assembly of raw material into a complete final product through editing, signal processing, mixing, sound restoration and pre-mas-  
 tering.

**MUSR 690 MEDIA THEORY AND PRACTICE SEMINAR 1.** (3) (3 hours) (Restriction: Not open to students who have taken MUMT 690.) Topics vary from year to year and are normally chosen according to the individual instructor's area of expertise. Topics to be covered may include the following: Media Technology, Digital Restoration of Archival Recordings, Communications Systems and Standards, Audio Aesthetics of Video Musicals, Classical Music and the Television Medium, etc.

**MUSR 691 MEDIA THEORY AND PRACTICE SEMINAR 2.** (3) (3 hours.) (Restriction: Not open to students who have taken MUMT 691.) Topics vary from year to year and are normally chosen according to the individual instructor's area of expertise. Topics to be covered may include the following: Media Technology, Digital Restoration of Archival Recordings, Communications Systems and Standards, Audio Aesthetics of Video Musicals, Classical Music and the Television Medium, etc.

**MUSR 692 MEDIA THEORY AND PRACTICE SEMINAR 3.** (3) (3 hours.) (Restriction: Not open to students who have taken MUMT 692.)

**MUSR 693 MEDIA THEORY AND PRACTICE SEMINAR 4.** (3) (3 hours) (Restriction: Not open to students who have taken MUMT 693.)

**MUSR 694 M3R T**





**MUPG 722 D.MUS. PERFORMANCE TUTORIAL 3.** (4) Individual instrumental or vocal tutorial. Advanced technical and interpretive training as well as recital preparation.

**MUPG 723 D.MUS. PERFORMANCE TUTORIAL 4.** (4) Individual instrumental or vocal tutorial. Advanced technical and interpretive training as well as recital preparation.

**MUPG 724 D.MUS. PERFORMANCE TUTORIAL 5.** (4) Individual instrumental or vocal tutorial. Advanced technical and interpretive training as well as recital preparation.

**MUPG 725 D.MUS. PERFORMANCE TUTORIAL 6.** (4) Individual instrumental or vocal tutorial. Advanced technical and interpretive training as well as recital preparation.

**MUPG 726 D.MUS. PERFORMANCE TUTORIAL 7.** (4) Individual instrumental or vocal tutorial. Advanced technical and interpretive training as well as recital preparation.

**MUPG 730 D.MUS. PERFORMANCE TUTORIAL 8.** (6) Individual instrumental or vocal tutorial. Advanced technical and interpretive training as well as recital preparation.

**MUPG 731 D.MUS. PERFORMANCE TUTORIAL 9.** (6) Individual instrumental or vocal tutorial. Advanced technical or interpretive training as well as recital preparation.

**MUPG 732 D.MUS. PERFORMANCE TUTORIAL 10.** (6) Individual instrumental or vocal tutorial. Advanced technical and interpretive training as well as recital preparation.

**MUPG 733 D.MUS. PERFORMANCE TUTORIAL 11.** (6) Individual instrumental or vocal tutorial. Advanced technical and interpretive training as well as recital preparation.

**MUPG 760 DOCTORAL RECITAL 1.** (12) A full-length public recital which includes a minimum of 60 minutes of music.

**MUPG 767 DOCTORAL RECITAL 2.** (12) A full-length public recital which includes a minimum of 60 minutes of music.

**MUPG 770 DOCTORAL LECTURE - RECITAL PROJECT.** (12) The lecture-recital comprises a minimum of 35 minutes of music and 25 to 35 minutes of oral presentation. The examiners and audience may question the candidate following the lecture-recital. The subject and repertoire will also be treated in a project paper, submitted within two months of the lecture-recital.

**MUPP 690 PERFORMANCE PRACTICE SEMINAR 1.** (3) (3 hours)

**MUPP 691 PERFORMANCE PRACTICE SEMINAR 2.** (3) (3 hours)

**MUPP 692 PERFORMANCE PRACTICE SEMINAR 3.** (3) (3 hours)

**MUPP 693 PERFORMANCE PRACTICE SEMINAR 4.** (3) (3 hours)

**MUPP 694 PERFORMANCE PRACTICE SEMINAR 5.** (3) (3 hours)

**MUPP 695 PERFORMANCE PRACTICE SEMINAR 6.** (3) (3 hours)

**MUTH 502 THEORY REVIEW 2.** (3) (3 hours) (For incoming



### **53 Natural Resource Sciences**

Department of Natural Resource Sciences  
Macdonald Campus  
21,111 Lakeshore Road



**ENTO 515 PARASITOID BEHAVIOURAL ECOLOGY.** (3) (Winter) (Not open to students who have taken NRSC 515) The origin and diversity of parasitoid species will be presented. Aspects of behavioural ecology that pertain to host selection, optimal allocation of progeny and sex and host-parasitoid interactions are examined. The importance of these processes is discussed in a biological control perspective.

**ENTO 520 INSECT PHYSIOLOGY.** (3) (Winter) (Prerequisite: Permission of instructor) (Not open to students who have taken NRSC 520) Organismal approach to insects, emphasizing the physiology and development, and the physiological relations of insects to their environment.

**ENTO 535 AQUATIC ENTOMOLOGY.** (3) (Winter)

**ENTO 550 VETERINARY AND MEDICAL ENTOMOLOGY.** (3) (Winter) (Prerequisite: Permission of instructor) (Not open to students who have taken NRSC 550) Environmental aspects of veterinary and medical entomology. An advanced course dealing with the biology and ecology of insects and acarines as aetiological agents and vectors of disease, and their control. Integrated approaches to problem solving.

**ENTO 600 INSECT PATHOLOGY.** (3)

**ENTO 610 INSECT PHYLOGENY AND DIVERSITY.** (3) (Winter)

**ENTO 615 FOREST ENTOMOLOGY.** (3) (Winter) (Prerequisite: Permission of the instructor.) Current topics in forest entomology.

**ENTO 726 INSECT POPULATION DYNAMICS.** (3)

**MICR 772 ADVANCED MICROBIAL GENETICS.** (3) (Restriction: Not open to students who have successfully completed NRSC 772)

**MICR 773 ADVANCED MICROBIAL PHYSIOLOGY.** (3) (Not open to students who have successfully completed NRSC 773)

**NRSC 510 AGRICULTURAL MICROMETEOROLOGY.** (3) (Fall) (3 lectures) (Not open to students who have taken AEPH 510) Interaction between plant communities and the atmosphere. The physical processes governing the transfer of heat, mass and momentum as they relate to research and production in agricultural and environmental systems. Experimental techniques for measuring fluxes of heat, water-vapour, CO<sub>2</sub> and natural and man-made pollutants.

**NRSC 540 SOCIO-CULTURAL ISSUES IN WATER.** (3) (Winter) (Prerequisite: A 300- or 400-level course in water or permission of instructor.) (3-hour seminar) Discussion of current debates and problems related to water, especially in developing countries. Topics include: gender relations and health in the context of cultural and economic systems, and the impacts of new technologies, market structures and population growth.

**NRSC 643 GRADUATE SEMINAR 2. (1)** (Section 001 Agrometeorology, Forest Science and Soil Science students) (Section 002 Entomology and Wildlife Biology students) (Section 003 Microbiology students) Open to students in the M.Sc. Program. Presentation on a selected topic, research proposal, or research results based on progress towards the M.Sc. degree.

**NRSC 644 GRADUATE SEMINAR 2. (1)** (Section 001 Agrometeorology, Forest Science and Soil Science students) (Section 002 Entomology and Wildlife Biology students) (Section 003 Microbiology students) Open to students in the M.Sc. Program. Presentation on a selected topic, research proposal, or research results based on progress towards the M.Sc. degree.

**NRSC 651 GRADUATE SEMINAR 3. (1)** (Section 001 Agrometeorology, Forest Science and Soil Science students) (Section 002 Entomology and Wildlife Biology students) (Section 003 Microbiology students) Open to students in the M.Sc. Program. Presentation of an M.Sc. student's final thesis results.

**NRSC 680 SPECIAL TOPICS 1.** (1) Students pursue topics not otherwise available in formal courses, under staff supervision.

**NRSC 681 SPECIAL TOPICS 2.** (1) Students pursue topics not otherwise available in formal courses, under staff supervision.

**NRSC 682 SPECIAL TOPICS 3.** (2) Students pursue topics not otherwise available in formal courses, under staff supervision.

**NRSC 683 SPECIAL TOPICS 4.** (2) Students pursue topics not otherwise available in formal courses, under staff supervision.

**NRSC 684 SPECIAL TOPICS 5.** (3) Students pursue topics not otherwise available in formal courses, under staff supervision.

**NRSC 685 SPECIAL TOPICS 6.** (3) Students pursue topics not otherwise available in formal courses, under staff supervision.

**NRSC 691 M.Sc. THESIS RESEARCH 1.** (12) Independent research under the direction of a supervisor towards the completion of the M.Sc. degree.

**NRSC 692 M.Sc. THESIS RESEARCH 2.** (12) Independent research under the direction of a supervisor towards the completion of the M.Sc. degree.

**NRSC 693 M.Sc. THESIS RESEARCH 3.** (12) Completion of the M.Sc. thesis, its approval by reviewers and acceptance by the Graduate and Postdoctoral Studies Office all required for a pass to be granted.

**NRSC 701 PH**

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tion, reproductive strategies, sex determination mechanisms, competition, communication and predator-prey relationships.

**WOOD 640 RECENT ADVANCES: TREE ECOPHYSIOLOGY.** (3) (3 lectures per week) Discussion of the effects of environmental factors on the physiology of trees. Both anthropogenic and natural factors will be discussed.

**WOOD 660 RECENT ADVANCES: FOREST ECOLOGY.** (3) (2 hours seminar) Review and discussion of current literature in forest ecology. Topics covered will depend on the research interests of students and may include population biology of forest plants, forest succession, forest nutrition and nutrient cycling, computer modelling of forest systems.

## 54 Neurology and Neurosurgery

### GRADUATE PROGRAM IN NEUROLOGICAL SCIENCES

Division of Neuroscience  
Department of Neurology and Neurosurgery  
Departments of Psychiatry, Ophthalmology, and Anesthesia  
Montreal Neurological Institute, Room 141  
3801 University Street  
Montreal, QC H3A 2B4  
Canada

Telephone: (514) 398-1905/ 398-1229

Fax: (514) 398-4621

E-mail: monique.ledermann@mcgill.ca or GPNS@mni.mcgill.ca

Web site: www.mcgill.ca/gpns

*Chair, Graduate Program in Neurological Sciences* — H. Durham

*Chair, Dept. of Neurology and Neurosurgery* — R. Riopelle

### 54.1 Staff

#### Professors

A. Aguayo; M.D.(Cordoba Natn.), F.R.C.P.(C)  
E. Andermann; M.D., C.M., M.Sc., Ph.D.(McG.)  
F. Andermann; B.A.(Paris), B.Sc., (McG.), M.D.(Montr.), F.R.C.P.(C)  
J. Antel; M.D., B.Sc.(Man.), F.R.C.P.(C)  
D. Arnold; B.Sc., M.D.(C'nell), F.R.C.P.(C) (*James McGill Professor*)  
M. Avoli; M.D.(Rome), Ph.D.(McG.)  
A. Beaudet; B.A., M.D., Ph.D.(Mont.)  
C. Bourque; B.Sc.(Ott.), Ph.D.(McG.)  
G. Bray; B.Sc.(Bran.), M.D., B.Sc.(Man.), F.R.C.P.(C)  
S. Carbonetto; M.Sc.(Mass.), Ph.D.(N.Carolina)  
D. Colman; Ph.D.(SUNY)  
S. David; Ph.D.(Man.)  
R. Del Maestro; M.D.(W. Ont.), Ph.D.(Uppsala), F.R.C.S.(C), D.A.B.N.S., F.A.C.S.  
M. Diksic; B.Sc., Ph.D.(Zagreb)  
P. Drapeau; B.Sc., Ph.D.(McG.)  
J.R. Dunn; B.Sc., Ph.D.(U.B.C.)  
H. Durham; M.Sc.(W. Ont.), Ph.D.(Alta.)  
A. Evans; M.Sc.(Sur.), Ph.D.(Leeds)  
J.P. Farmer; M.D., M.Sc.(McG.), F.R.C.P.(C)  
S.G. Gauthier; B.A., M.D.(Montr.), F.R.C.P.(C)  
J. Gotman; M.Eng.(Dart.), Ph.D.(McG.)  
D. Guitton; Dipl. IVK(U. Libre de Brux.), B.Eng., M.Eng., Ph.D.Eng., Ph.D.Physiol.(McG.)  
E. Hamel; B.Sc.(Sher.), Ph.D.(Montr.)  
P.C. Holland; B.A.(Lanc.), Ph.D.(N'cle)  
B. Jones; B.A., M.A., Ph.D.(Delaware)  
M. Jones-Gotman; B.A.(Calif.), M.A., Ph.D.(McG.)  
G. Karpati; M.D.(Dal.), F.R.C.P.(C)  
R. Leblanc; M.Sc.(McG.), M.D.(Ott.), F.R.C.S.(C)  
B. Milner; B.A., Sc.D.(Cantab.), Ph.D.(McG.)  
G. Mohr; M.D.(Stras.)  
A. Olivier; M.D.(Montr.), Ph.D.(Laval), F.R.C.S.(C)  
T. Owens; M.Sc.(McG.), Ph.D.(Ott.)

M. Petrides; B.Sc., M.Sc.(Lond.), Ph.D.(Cantab.) (*James McGill Professor*)  
M. Rasminsky; B.A.(Tor.), M.D.(Harv.), Ph.D.(Lond.), F.R.C.P.(C)  
J. Richardson; B.Sc., M.D., C.M., Ph.D.(McG.), F.R.C.P.(C)  
R.J. Riopelle; M.D.(Ott.), F.R.C.P.(C)  
G. Rouleau; M.D.(Ott.), F.R.C.P.(C)  
H. Schipper; M.D., Ph.D.(McG.)  
E. Shoubridge; M.Sc., Ph.D.(U.B.C.)  
J.D. Stewart; B.Sc.(Lond.), M.B., B.S.(W.I.), F.R.C.P.(C)  
G. Tannenbaum; M.Sc., Ph.D.(McG.)  
C. Thompson; M.Sc., D.Sc.(N.Z.)  
G. Watters; B.A.(Minn.), M.D.(Man.), F.R.C.P.(C)  
R.J. Zatorre; A.B.(Boston), M.Sc., Ph.D.(Brown)

#### Associate Professors

A. Alonso; M.S.(Barcelona), Ph.D.(Madrid) M. Aubé; B.A., M.D.(Montr.), F.R.C.P.(C)  
P. Barker; Ph.D.(Alta.), B.Sc.(S. Fraser)  
S. Bekhor; M.B., Ch.B.(Baghdad), F.R.C.P.(C)  
J. Carlton; B.S., M.D.(Johns H.), F.R.C.P.(C)  
C. Chalk; B.Sc.(Queen's), M.D., C.M.(McG.) F.R.C.P.(C)  
H. Chertkow; M.D.(W. Ont.), F.R.C.P.(C)  
R. Cote; M.D.(Montr.), F.R.C.P.(C)  
A. Dagher; M.Eng.(McG.), M.D.(Tor.), F.R.C.P.(C)  
F. Dubeau; M.D.(Montr.), F.R.C.P.(C)  
K. Hastings; B.Sc., Ph.D.(McG.)  
T. Kennedy; B.Sc.(McM.), Ph.D.(Col.)  
Y. Lapierre; B.A., M.D.(Montr.), F.R.C.P.(C)  
A. Leblanc; M.Sc.(Moncton), Ph.D.(Dal.)  
I. Libman; B.A., M.D., C.M.(McG.), F.R.C.P.(C)  
P. McPherson; M.Sc.(Man.), Ph.D.(Iowa) (*William Dawson Scholar*)  
D. Melançon; B.A., M.D.(Montr.)  
C. Melmed; B.Sc., M.D.(Man.), F.R.C.P.(C)  
J. Minuk; M.D.(Man.), F.R.C.P.(C)  
J. Montes; B.Sc.(Inst.Pot.-Mex.), M.D.(Uoio.Auto.de San Luis Pot.-Mex)  
J. Nalbantoglu; B.Sc., Ph.D.(McG.)  
A. O'Gorman; M.D.(Ireland)  
T. Paus; M.D.(Purkyne U./Czechoslovakia), Ph.D.(Czech. Acad. of Sciences/Prague)  
A. Peterson; B.Sc.(Vic., B.C.), Ph.D.(U.B.C.)  
B. Pike; B.Eng.(Mem.), M.Eng., Ph.D.(McG.) (*William Dawson Scholar*)  
A. Ptito; Ph.D.(Montr.)  
D. Ragsdale; B.S.(Ill.), Ph.D.(Calif.)  
B. Rosenblatt; B.Sc., M.D., C.M.(McG.), F.R.C.P.(C)  
A. Sadikot; M.D., C.M.(McG.), Ph.D.(Laval), F.R.C.S.(C)  
G. Savard; M.D.(Montr.), F.R.C.P.(C)  
R. Schondorf; M.Sc., Ph.D., M.D., C.M.(McG.), F.R.C.P.(C)  
P. Séguéla; Ph.D.(Bord.), Ph.D.(Montr.)  
M. Shevell; B.Sc., M.D.(Vanderbilt)  
W. Sossin; S.B.(M.I.T.), Ph.D.(Stan.)  
S. Stifani; Ph.D.(Rome); Ph.D.(Alta)  
D. Tampieri; M.D.(Bologna)  
J. Teitelbaum; M.D.(Montr.), F.R.C.P.(C)  
J. Woods; M.B., B.Ch.(Dub.), M.Sc.(McG.), F.R.C.P.(C)  
  
**Assistant Professors**  
M. Angle; M.D., C.M.(McG.), F.R.C.P.(C)  
J. Atkinson; M.D.,(Tor.) F.R.C.S.C.  
A. Bar-Or; M.D., C.M.(McG.); F.R.C.P.(C), D.A.B.N.P.  
A. Bernasconi; M.D.(Basel U.)  
L. Collins; M.Eng., Ph.D.(McG.)  
M.-E. Dilenge; M.D.(Sher.), F.R.C.P.(C)  
L. Durcan; M.D.(Man.), F.R.C.P.(C)  
E. Fon; M.D.(Montr.), F.R.C.P.(C)  
A. Fournier; B.Sc., Ph.D.(McG.)  
D. Gendron; M.D.(Laval), F.R.C.P.(C)  
A. Genge; B.Sc.(Dal.), B.Med.Sc., M.D.(Mem.), F.R.C.P.(C)  
B. Goulet; M.D.(Laval), F.R.C.S.(C)  
M.-C. Guiot; B.Sc. (Acad. de Bordeaux), M.D. (U. de Bordeaux II)  
L. Jacques; B.Sc.(Laval), M.Sc., M.D.(Montr.), F.R.C.P.(C)  
K. Johnston; Ph.D., M.D.(Tor.), F.R.C.S.(C)

## ACADEMIC UNITS

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D. Klein; B.A., Ph.D.(U. of Witwatersrand/S. Africa)

A. Koch; M.S. (Freiburg), Ph.D. (Basel)

T. Kolivakis; M.D., C.M. (McG.), F.R.C.P.C.

A.L. Lafontaine; M.Sc.(McG.), M.D.(McM.), F.R.C.P.(C)

M. Lechter; B.Sc.(McG.), M.D., Ph.D.(Queen's)

McG.

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proposal and communicate its recommendations to the student and the Graduate Studies Committee.

3. Students will present a formal seminar on their research work prior to writing their thesis. This presentation will be attended by the student's Advisory Committee and members of the Graduate Studies Committee who will report their impressions and recommendations to the student.
4. An annual oral informal presentation of research work accomplished will be presented to the student's Advisory Committee which in turn presents its report to the Graduate Studies Committee.

**M.Sc. DEGREE****Course requirements:**

Student with a B.Sc., B.A. or M.D. degree: A minimum of 45 credits distributed as follows:\*

Principles of Neuroscience 1 course: NEUR630 and either

Principles of Neuroscience 2: NEUR631 or CNS course:  
NEUR610;

6 credits in other graduate level specialty courses relevant to program;

9 credits in Master's project Proposal: NEUR697 (first term of studies)

9 credits in Master's Seminar Presentation: NEUR698 (second term of studies)

rotransmission and signal transduction.) An overview of the structure, function and interaction of neuronal systems of vertebrates.



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**Ph.D. PROGRAM**

Each student's program is designed with the thesis supervisor, taking into account the student's previous academic preparation, needs and research interests. The requirements for the doctoral degree are:

1. A minimum of 18 credits beyond the Master's level. Courses and seminars in research design, issues of measurement, advanced nursing, development of theory in nursing, advanced statistics and complementary course(s) in the student's major field of study are compulsory. The student's program is decided in consultation with the faculty advisor.
2. Successful completion of the Ph.D. comprehensive examination.
3. Oral defense of the thesis proposal.
4. Dissertation and oral examination.
5. Two years of full-time residence. A student who has obtained a Master's degree at McGill University or at an approved institution elsewhere, and is proceeding in the same subject to a Ph.D. degree, may on the recommendation of the School, be registered in the second year of the Ph.D. program.

**55.6 Courses**

**Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.**

Details of the courses to be offered in the current year are also available from the School.

**Courses with numbers ending D1 and D2** are taught in two consecutive terms (most commonly Fall and Winter). Students must register for both the D1 and D2 components. No credit will be given unless both components (D1 and D2) are successfully completed in consecutive terms.

The course credit weight is given in parentheses after the title.

Denotes courses not offered in 2004-05.

**QUALIFYING PROGRAM**

**NUR1 222 MCGILL MODEL OF NURSING.** (1) This introductory course provides an overview of the history and the philosophical and theoretical tenets underlying the core concepts of the Model. Students are introduced to McGill's perspective on health, family, learning, and collaborative nursing through a study of selected theoretical and research papers.

**NUR1 235 HEALTH AND PHYSICAL ASSESSMENT.** (4) This course will develop basic knowledge and skills required to do a health history and to carry out basic physical assessment in infants, children, and adults.

**NUR2 511D1 (3), NUR2 511D2 (3) PRACTICE OF NURSING PART 1.** (Students must register for both NUR2 511D1 and NUR2 511D2.) (No credit will be given for this course unless both NUR2 511D1 and NUR2 511D2 are successfully completed in consecutive terms) A study of selected concepts related to the practice of nursing including health, family, normative life transitions and interper-

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**NUR2 627 NURSING PRACTICUM. (3)**

**NUR2 628 ADVANCED ASSESSMENT. (4)** (Prerequisite: NUR1 235 or permission of instructor.) Development of advanced skills in health assessment and physical examination of clients across the life span, including diagnostic tests and interventions, documentation and follow-up.

**NUR2 630 CLINICAL PROJECT 1. (3)** Identification of a clinical problem and development of a project to test or implement best-practice approaches.

**NUR2 635 PAIN MEASUREMENT**

**M.Sc. Applied Program (Full-time) (Resident) (on campus)**

Candidates should have completed, with high academic standing, a bachelor of science degree or its equivalent in a discipline relevant to occupational health or hygiene such as: chemistry, engineering, environmental sciences, physics; medicine, nursing and other health sciences with a standing equivalent to a minimum Cumulative Grade Point Average (CGPA) of 3.0 out of 4. High grades are expected in courses considered by the Department to be preparatory to the graduate program.

**M.Sc. Applied Program (Distance Education)**

Candidates must hold an M.D., a bachelor's degree in nursing, or a B.Sc. (any major). They must have maintained at least a 3.0 on 4.0 grade point average.

Those who hold a B.Sc. must be Industrial Hygienists with at least three years of experience in industrial hygiene and/or safety. In the case of medical doctors and nurses, priority will be given to candidates with two or more years of experience in occupational health.

**Ph.D. Program**

Candidates must hold a M.Sc. degree or its equivalent in occupational health sciences, or in a relevant discipline, such as: community health, environmental health, epidemiology, chemistry, engineering, physics, or health sciences (medicine, nursing, etc.).

**56.4 Application Procedures**

Application forms are available on-line at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

**M.Sc. Applied Program (Full-time) (Resident) (on campus)**

Candidates must submit with their application two official copies of their university transcripts, two letters of reference, a copy of their curriculum vitae and a letter describing their background (occupational health, occupational hygiene, worker safety, etc.) as well as a \$60(Cdn) application fee.

Eligible candidates may be invited for an interview with members of the Admissions Committee of the Department.

Applications are accepted for Fall term only.

**M.Sc. Applied Program (Distance Education)**

Candidates must submit with their application two official transcripts from their university of graduation, two letters of recommendation, a copy of their résumé, a letter describing their career plan, the reasons for their enrolment, and how they plan to accommodate their study time within their work schedule as well as a \$60(Cdn) application fee.

**Ph.D. Program**

Candidates must submit with their application two official copies of their university transcripts (undergraduate and graduate), two letters of reference (or completed special forms), a copy of their curriculum vitae and a letter describing their field of interest as well as a \$60(Cdn) application fee.

Candidates must also submit with their application an outline of their scientific interests, indicating the field and the topic of their proposed research. Each student will be assigned to one academic staff member of the Department, who will act as his/her supervisor, who will guide him/her in the preparation of a definite research protocol.

**56.5 Program Requirements**

It is highly recommended to have access to a computer and the Internet as some of the course material is most readily available by accessing the Web.

**M.SC. APPLIED PROGRAM (FULL-TIME) (RESIDENT) (ONCAMPUS)**

Teaching is organized in eight 3-credit courses and one 6-credit course totalling 30 credits. Promotion to the following term is

dependent upon passing grade. A comprehensive examination is held at the end of the course program.

After successfully completing the course requirements and passing the comprehensive examination, students must carry out an extended project (15 credits). The project requires students to identify an issue in their area of specialization, to review the present state of knowledge relevant to that issue, and either to carry out a survey to assess a particular work situation and make recommendations, or to devise a research protocol to extend knowledge in the area and to carry out a preliminary study to assess the feasibility of the protocol proposed.

Normally, students extend the duration of their project into the Fall term by registering for an additional session.

**Required Courses (30 credits)**

OCCH602	(3)	Occupational Health Practice
OCCH603	(3)	Work and Environment Epidemiology 1
OCCH604	(3)	Monitoring Occupational Environment
OCCH605D1	(3)	Physical Health Hazards
OCCH605D2	(3)	Physical Health Hazards
OCCH608	(3)	Biological and Chemical Hazards
OCCH612	(3)	Principles of Toxicology
OCCH614	(3)	Topics in Occupational Health
OCCH615	(3)	Occupational Safety Practice
OCCH616	(3)	Occupational Hygiene
OCCH600		Comprehensive Examination

**Project Component – Required (15 credits)**

OCCH699	(15)	Project Occupational Health and Safety
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**M.SC. APPLIED PROGRAM (DISTANCE EDUCATION)**

The Master distance education program takes three and one-half years to complete.

The first part (3 years) consists of 10 three-credit theory courses. Students enrolled in the program must successfully complete ten courses (30 credits). Equivalencies may be granted upon examination of the application by the professors concerned, and the Graduate and Postdoctoral Studies Office.

On-campus Practicums may be held at the discretion of each professor. These sessions are held in Montreal on the McGill University Campus. Their aim is to offer students additional specific learning activities. Each course has a final examination at the end of the term. Participation in the practica is an essential component of the program.

The second part consists of writing an extended project report (15 credits). The project report will be carried out under the supervision of a member of the teaching staff. Note that students must pass the comprehensive exam before writing their report. A total of 45 credits is offered, the number required to complete the M.Sc. program.

**Courses**

OCCH602	(3)	Occupational Health Practice
OCCH603	(3)	Work and Environment Epidemiology 1
OCCH604	(3)	Monitoring Occupational Environment
OCCH608	(3)	Biological and Chemical Hazards
OCCH612	(3)	Principles of Toxicology
OCCH615	(3)	Occupational Safety Practice
OCCH616	(3)	Occupational Hygiene
OCCH617	(3)	Occupational Diseases
OCCH624	(3)	Social and Behavioural Aspects - Occupational Health
OCCH625	(3)	Work and Environment Epidemiology 2
OCCH626	(3)	Basics: Physical Health Hazards
OCCH627	(3)	Work Physiology and Ergonomics
OCCH630	(3)	Occupational Disease for OHNS
OCCH635	(3)	Environmental Risks to Health
OCCH600		Comprehensive Examination

Each course has a final examination at the end of the term. Students must obtain at least B- (65%) in each course in the program. Students who fail one course will be invited to withdraw from the program. Special circumstances can be examined.



tions or to devise a study proposal and to carry out a preliminary feasibility study.

#### PH.D. Courses

##### OCCH 700 COMPREHENSIVE EXAMINATION. (0)

**OCCH 706 PH.D SEMINAR ON OCCUPATIONAL HEALTH AND HYGIENE. (2)** A critical appraisal of the occupational health sciences literature which addresses issues in hygiene, safety, epidemiology and toxicology. Students will develop a critical sense of the literature and increase their understanding of different research paradigms.

**OCCH 706D1 (1), OCCH 706D2 (1) PH.D SEMINAR ON OCCUPATIONAL HEALTH AND HYGIENE.** (Students must register for both OCCH 706D1 and OCCH 706D2) (No credit will be given for this course unless both OCCH 706D1 and OCCH 706D2 are successfully completed in consecutive terms) (OCCH 706D1 and OCCH 706D2 together are equivalent to OCCH 706) A critical appraisal of the occupational health sciences literature which addresses issues in hygiene, safety, epidemiology and toxicology. Students will develop a critical sense of the literature and increase their understanding of different research paradigms.

## 57 Otolaryngology

Department of Otolaryngology  
Royal Victoria Hospital  
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H3A 1A1

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Chair — S. Frenkiel

### 57.1 Staff

#### *Emeritus Professor*

J.D. Baxter; M.D.,C.M., M.Sc.(McG.), F.R.C.S.(C)

#### *Professors*

S. Frenkiel; B.Sc., M.D.,C.M.(McG.), F.R.C.S.(C)  
A. Katsarkas; M.D.(Thess.), M.Sc.(Otol.), F.R.C.S.(C)  
H. Galiana; B.Sc., B.eng., M.eng., Ph.D. (McG.)  
M.D. Schloss; M.D.(Br.Col.), F.R.C.S.(C)  
T.L. Tewfik; M.D.(Alex.), F.R.C.S.(C)

#### *Associate Professors*

M.J. Black; M.D.,C.M.(McG.), F.R.C.S.(C)  
N. Fanous; M.B., BCH.(Cairo), F.R.C.S.(C)  
W.R.J. Funnell; B.Eng., M.Eng., Ph.D.(McG.)  
K. Kost; M.D., C.M.(McG.), F.R.C.S.(C)  
J. Manoukian; M.B., Ch.B.(Alex.), F.R.C.S.(C)  
W.H. Novick; M.D.(Queen's), F.R.C.S.(C)  
B. Segal; B.Sc., B.Eng., M.Eng., Ph.D.(McG.)  
R.S. Shapiro; M.D., C.M.(McG.), F.R.C.S.(C)  
A.G. Zeitouni; M.D.(Sher.), M.Sc.(Otol.), F.R.C.S.(C)

#### *Assistant Professors*

F. Chagnon; M.D.C.M.(McG.), F.R.C.S.(C)  
S. Daniel; M.D.C.M. (McG.), M.Sc. (Otol), F.R.C.S.C  
I. Fried; M.D.(Dal.), F.R.C.S.(C)  
M. Hier; M.D.,C.M.(McG.), F.R.C.S.(C)  
R. Lafleur; M.D.(Ott.), F.R.C.S.(C)  
M.-L. Lessard; M.D.(Laval), F.R.C.S.(C)  
J. Rappaport; M.D.(Dal.), F.R.C.S.(C)  
L. Rochon; M.D.(Sher.), F.R.C.P.(C)  
M. Samaha; M.D.(Queen's), F.R.C.S.(C)  
G. Sejean; M.D.(Beirut), F.R.C.S.(C)  
R. Sweet; M.D.,C.M.(McG.)  
L. Tarantino; M.D.(Naples), F.R.C.S.(C)

#### *Lecturers*

A. Finesilver, J. Rothstein

#### *Adjunct Professors*

M. Desrosiers, J.-J. Dufour

### 57.2 Program Offered

The Master of Science degree in Otolaryngology trains otolaryngologists for clinical or basic-science research in Otolaryngology.

### 57.3 Admission Requirements

Admission to the M.Sc. program requires acceptance by a research supervisor, and the proposed program must be approved by the Departmental Research Committee.

All applicants must be otolaryngologists or they should be currently enrolled in a residency program leading to certification in Otolaryngology.

### 57.4 Application Procedures

Applications require the following documentation:

1. completed application form and personal statement form;
2. letters of reference from two professors;
3. two official copies of academic transcripts;
4. application fee: \$60;
5. results of Test of English as a Foreign Language (TOEFL) (minimum of 550 on the paper-based test or 213 on the computer-based test) if undergraduate and medical training were carried out in a language other than English or French.

Prospective students should contact research supervisors individually.

McGill's on-line application form for graduate program candidates is available at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

### 57.5 Program Requirements

The M.Sc. program comprises a minimum of 45 credits as follows:

#### **Required Courses** (12 credits)

- OTOL602 (3) Physiology, Histopathology and Clinical Otolaryngology 1  
OTOL612 (3) Physiology, Histopathology and Clinical Otolaryngology 2  
OTOL603 (3) Advanced Scientific Principles of Otolaryngology1  
OTOL613 (3) Advanced Scientific Principles of Otolaryngology2

#### **Complementary Course** (3 credits)

- EPIB607 (3) Principles of Inferential Statistics in Medicine or equivalent

#### **Thesis Component – Required** (30 credits)

- OTOL690 (3) Thesis 1  
OTOL691 (3) Thesis 2  
OTOL692 (6) Thesis 3  
OTOL693 (6) Thesis 4  
OTOL694 (12) Thesis 5

When appropriate, courses OTOL602, OTOL612, OTOL603 or OTOL613 may be replaced by other basic-science or clinical (500-level or higher) courses of relevance to Otolaryngology, as recommended or approved by the Department.

Students aiming to acquire an interdisciplinary background will be expected to take additional elective courses, at the undergraduate level if necessary.

### 57.6 Graduate Courses

Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been









employer and the instructor (or designate) will develop an individualized practicum experience program of at least 12 weeks duration for each student.

**PARA 600 THESIS PROPOSAL FOR M.Sc.** (4) Comprises a written document outlining the proposed research objectives.

**PARA 600D1 (2), PARA 600D2 (2) THESIS PROPOSAL FOR M.Sc.** (Students must register for both PARA 600D1 and PARA 600D2) (No credit will be given for this course unless both PARA 600D1 and PARA 600D2 are successfully completed in consecutive terms) (PARA 600D1 and PARA 600D2 together are equivalent to PARA 600) Comprises a written document outlining the proposed research objectives.

**PARA 606 PARASITOLOGY SEMINAR.** (2) A seminar series in which students present seminars covering topics in parasitology, in areas relevant to their research interests. Students register for the course in their second term of residency. Attendance and participation are compulsory for M.Sc. students.

**PARA 607 PARASITOLOGY RESEARCH SEMINAR.** (2) This is a required course for M.Sc. students. A seminar course in which students registered at the Institute of Parasitology present seminars on the results of their thesis research. Students register for the course in the final term prior to thesis submission.

**PARA 635 CELL BIOLOGY AND INFECTION.** (3) (Prerequisite: students with some background in molecular biology) Research articles will be the primary source of information. This course will cover new principles in cell biology. In particular, the mechanisms by which gene expression is regulated through signal transduction pathways initiated at the cell surface will be presented.

**PARA 655 HOST-PARASITE INTERACTIONS.** (3) Lectures, tutorials and laboratory demonstrations of the principal factors which affect levels of parasite infection and treatment of infections in humans and animals. The integration and management of the host-parasite relationship in terms of transmission, population dynamics, environmental management, behaviour, immune responses, pathology, and pharmacology to decrease parasitic disease.

**PARA 665 SPECIAL TOPICS IN PARASITOLOGY.** (3)

**PARA 687 THESIS RESEARCH 1.** (10)

**PARA 688 THESIS RESEARCH 2.** (10)

**PARA 689 THESIS RESEARCH 3.** (12)

**PARA 700 THESIS PROPOSAL FOR PH.D.** (0) Comprises a written document outlining the proposed research objectives.

**PARA 700D1 (0), PARA 700D2 (0) THESIS PROPOSAL FOR PH.D.** (Students must register for both PARA 700D1 and PARA 700D2)

### 59.3 Admission Requirements

Applicants must have a B.Sc. or the equivalent degree with an extensive background in the physical and biological sciences. An academic record equivalent to or better than a CGPA of 3.2 out of 4 at McGill is required for at least the two final full-time years of undergraduate training with a minimum CGPA of 3.0 overall.

Non-Canadian students may be required to take the GRE and TOEFL examinations in order to properly evaluate their suitability. Students are normally accepted into the M.Sc. program, and those candidates showing exceptional ability may be permitted to transfer into the Ph.D. program after one year of training.

Applicants who already possess an additional degree (M.Sc., M.D.) and have some research experience may be allowed to register in the Ph.D. program directly.

Prospective students are encouraged to contact the Teaching Office, Department of Pathology, for application forms and a departmental brochure containing the research interests of the academic staff.

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### 59.4 Application Procedures

Applications will be considered upon receipt of:

1. application;
2. transcripts;
3. letters of reference;
4. \$60 application fee;
5. test results (GRE, TOEFL).

All information is to be submitted directly to the Pathology Teaching Office.

All applications will be evaluated by the Graduate Students Committee. Candidates found suitable must then be accepted by a research director, and adequate funding must be obtained for both personal support and research expenses.

McGill's on-line application form for graduate program candidates is available at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

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### 59.5 Program Requirements

All students must take PATH300 plus a course in statistics if they have not completed these requirements before admission.

Candidates with insufficient background in one of the biomedical sciences will be required to take specific courses to remedy the deficiency. These and additional courses which are relevant to the student's area of research will be chosen in consultation with the research director and Graduate Students Committee.

#### M.Sc. Program Requirements

The program consists of 45 credits, 30 credits obtained by laboratory work and submission of a thesis (PATH690, PATH691, PATH692), with the remaining 15 course credits to be distributed as follows: PATH613 or PATH614, PATH620, PATH622, plus any two graduate level courses offered by the Department. A

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R. Capek; M.D., Ph.D.(Prague)  
P.B.S. Clarke; M.A.(Camb.), Ph.D.(Lond.)  
B. Collier; Ph.D.(Leeds)  
A.C. Cuello; M.D.(Buenos Aires), D.Sc.(Oxon), F.R.S.C.  
B.F. Hales; Ph.D.(McG.)  
P.J. McLeod; M.D.(Man.), F.R.C.P.(C)  
A. Ribeiro-da-Silva; M.D., Ph.D. (Oporto)  
B. Robaire; Ph.D.(McG.)  
M. Szyf; Ph.D.(Hebrew Univ.)  
J. Trasler; M.D., C.M., Ph.D.(McG.)  
D.R. Varma; M.D.(L'now), Ph.D.(McG.)  
H.H. Zingg; M.D., Ph.D.(McG.)

*Associate Professors*

B. Esplin; M.D.(Warsaw)  
D. Maysinger; Ph.D.(S. Calif.)  
S. Nattel; M.D. C.M.(McG.)  
A.L. Padjen; M.D., Ph.D.(Zagreb)  
H. Saragovi; Ph.D.(Miami)  
B.I. Sasyniuk; Ph.D.(Man.)  
E. Zorychta; Ph.D.(McG.)

*Assistant Professor*

D. Bowie; B.Sc., Ph.D.(Lond.)

*Associate Members*

M. Alaoui-Jamali; Ph.D.(Sorbonne)  
G. Batist; M.D., C.M.(McG.)  
G. Di Batista; B.Sc., Ph.D.(Montr.)  
P. Fiset; M.D.(Laval), F.R.C.P.S.(C)  
S. Gauthier; M.D.(Montr.)  
B.J. Jean-Claude; Ph.D.(McG.)  
J.B. Richardson; M.D., C.M., Ph.D.(McG.) F.R.C.P.  
R. Prichard; Ph.D.(N.S.W.)  
R. Quirion; Ph.D.(Sher.)  
A. Tenenhouse; M.D., C.M., Ph.D.(McG.)

*Adjunct Professors*

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**M.Sc. (Thesis)** (45 credits)

In addition to a M.Sc. Thesis, the specific requirements are as follows:

1. Complete PHAR601 Comprehensive Examination (6credits)
2. Plus PHAR712 Statistics for Pharmacologists (3 credits)
3. \*PHAR562 General Pharmacology 1 and PHAR563 General Pharmacology 2 or their equivalent (6 credits)  
\*Students who have taken PHAR562 and PHAR563 as part of their undergraduate degree must register for PHAR697 Thesis Preparation 1 (6 credits)
4. Two 700-level graduate courses in Pharmacology (3 credits each)

The M.Sc. program consists of 45 credits, a minimum of 18 credits are required in addition to thesis preparation courses PHAR696, PHAR698 and PHAR699 (3, 9 and 12 credits respectively).

**Ph.D. (Thesis)**

Students enrolled in the Ph.D. program must successfully complete or be exempted from the same courses as for the M.Sc. degree, plus one additional 700-level graduate course (for total of three), in addition to a Ph.D. thesis.

**M.Sc. (Applied) degree**

(Not offered during the 2004-05 year.)

The objective of the M.Sc. Applied program is to provide a broad exposure and training in Pharmacology, with two terms of courses and two of research, one of which may be completed during the summer.

The course requirements (45 credits) are as follows: PHAR562 and PHAR563, General Pharmacology 1 and 2, or their equivalents; PHAR712, Statistics for Pharmacologists; PHAR603, Drug Discovery and Development; one 700 level Pharmacology graduate course; PHAR604, Advanced independent research project in pharmacology; PHAR605, Advanced independent research project in applied pharmacology, plus three complementary courses to be chosen from options in Epidemiology, Experimental Medicine, Biotechnology, Bioethics, Biochemistry, Physiology, Microbiology and Immunology, Pathology, and Economics.

**Program Requirements - Chemical Biology Option**

The curriculum of the Chemical Biology Option is structured so that in completing the option, students also complete the course requirements for the regular graduate programs in their home departments. For this reason, program requirements are listed separately for each department, even though the 'core' content in Chemical Biology (9 lecture credits plus 2 or 4 seminar credits for each program) is the same for each. The course requirements for the Chemical Biology Option taken through the Pharmacology and Therapeutics Department are available at [www.mcgill.ca/biochemistry/chemicalbiology](http://www.mcgill.ca/biochemistry/chemicalbiology).

**60.6 Courses for Higher Degrees**

**Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.**

The course credit weight is given in parentheses after the title.

The following courses are designed primarily for graduate students in the Department, but may be attended by others under special circumstances. These courses are given in a rotational sequence and students may register according to their specific requirements and interests.

Denotes courses not offered in 2004-05.

**PHAR 601D1 (3), PHAR 601D2 (3) COMPREHENSIVE.** (Students must register for both PHAR 601D1 and PHAR 601D2) (No credit will be given for this course unless both PHAR 601D1 and PHAR 601D2 are successfully completed in consecutive terms)

**PHAR 601N1 COMPREHENSIVE.** (3) (Students must also register for PHAR 601N2) (No credit will be given for this course unless both PHAR 601N1 and PHAR 601N2 are successfully completed in a twelve month period) See PHAR 601D1 for course description.

**PHAR 601N2 COMPREHENSIVE.** (3) (Prerequisite: PHAR 601N1) (No credit will be given for this course unless both PHAR 601N1 and PHAR 601N2 are successfully completed in a twelve month period) See PHAR 601D1 for course description.

**PHAR 696 THESIS PREPARATION.** (3)

**PHAR 697 THESIS PREPARATION 1.** (6)

**PHAR 698 THESIS PREPARATION 2.** (9)

**PHAR 699 THESIS PREPARATION 3.** (12)

**PHAR 702 BIOCHEMICAL PHARMACOLOGY.** (3)

**PHAR 703 NEUROPHARMACOLOGY.** (3)

**PHAR 704 DRUG DISTRIBUTION, METABOLISM AND EXCRETION.** (3) Mechanisms by which the body handles endogenous and foreign chemicals and the effects of these processes on the characteristics of drug action.

**PHAR 705 CARDIOVASCULAR REGULATION AND DRUG ACTION.** (3)

**PHAR 706 CHEMICAL MEDIATORS AND AUTONOMIC DRUGS.** (3)

**PHAR 707 MOLECULAR PHARMACOLOGY.** (3)

**PHAR 712 STATISTICS FOR PHARMACOLOGISTS.** (3) Basic theoretical and practical aspects of statistics for pharmacologists.

**PHAR 713 DEVELOPMENTAL PHARMACOLOGY.** (3)

**PHAR 714 ENDOCRINE PHARMACOLOGY.** (3) Mechanisms by which drugs interact with and modulate the endocrine system. Examples of drugs for discussion include oral contraceptives, drugs used to treat infertility and for the management of menopause, vitamin D, insulin, adrenal steroids and thyroid hormone.

**61 Philosophy**

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Chair — R.P. Buckley

**61.1 Staff***Emeritus Professors*

R. Klibansky; M.A.(Oxon), D.Phil.(Heidel.), F.R.Hist. F.R.S.C.  
(*John Frothingham Emeritus Professor of Logic and Metaphysics*)

A.T. McKinnon; M.A.(Tor.), Ph.D.(Edin.), B.D.(McG.), F.R.S.C., R.D., D.H.L.(St. Olaf) (*William C. Macdonald Emeritus Professor of Moral Philosophy*)

D. Norton; M.A.(Claremont), Ph.D.(Calif.), F.R.S.C.  
C. Taylor; M.A., D.Phil.(Oxon), F.R.S.C.

*Professors*

M.A. Bunge; Ph.D.(LaPlata), F.R.S.C. (*John Frothingham Professor of Logic and Metaphysics*)

G. DiGiovanni; B.A., M.A., S.T.B., Ph.D.(Tor.)  
S. McCall; B.A.(McG.), B.Phil., D.Phil.(Oxon)

*Associate Professors*

R.P. Buckley; Ph.D.(Louvain)  
D. Davies; B.A.(Oxon), M.A.(Manit.), Ph.D.(W.Ont.)  
M. Deslauriers; B.A.(McG.), M.A., Ph.D.(Tor.)  
M. Hallett; B.Sc., Ph.D.(Lond.)



candidacy paper, and (b) have at least a 3.5 GPA (on the undergraduate Grade Point scale) in the course work required for the program. The Department as a whole, taking into account the Thesis Advancement Committee's recommendation and the student's overall academic record in the program, decides whether to permit the student to continue.

Students who do not receive a positive recommendation but who satisfy Graduate and Postdoctoral Studies Office requirements (no courses below a B-minus and completion of 45 credits) will be recommended to the Graduate and Postdoctoral Studies Office by the Department to transfer from the Ph.D. program to the M.A. program.

**M.A. specialization in Bioethics:** The curriculum is composed of required courses (for 6 credits) offered in the Biomedical Ethics Unit, bioethics courses (3 credit minimum) offered by Philosophy and any graduate courses required or accepted by Philosophy for the granting of a Master's degree, for a total of 18 to 21 credits. A minimum of 45 credits is required including the thesis. For further information refer to the Bioethics entry.

## 61.6 Courses for Higher Degrees

**Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.**

**Note:** All undergraduate courses administered by the Faculty of Arts (courses at the 100- to 500-level) have limited enrolment.

The course credit weight is given in parentheses after the title.

Denotes courses not offered in 2004-05.

**PHIL 506 SEMINAR: PHILOSOPHY OF MIND.** (3) (Prerequisite: PHIL 306. Open only to students as indicated above and to Cognitive Science Minors) (Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department.) An advanced course devoted to specific topics in the philosophy of mind.

**PHIL 507 SEMINAR: COGNITIVE SCIENCE.** (3) (Prerequisites: PHIL 306, PHIL 415 or written permission of the instructor) (Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department)

**PHIL 510 SEMINAR: ADVANCED LOGIC 2.** (3) (Prerequisite: PHIL 310 or written permission of the instructor) (Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department.)

**PHIL 511 SEMINAR: PHILOSOPHY OF LOGIC AND MATHEMATICS.** (3) (Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department.)

**PHIL 515 SEMINAR: PHILOSOPHY OF LANGUAGE.** (3) (Prerequisite: PHIL 415 or written permission of the instructor) (Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department)

**PHIL 519 SEMINAR: EPISTEMOLOGY.** (3) (Prerequisite: PHIL 420 or written permission of the instructor) (Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department.) An advanced course devoted to a topic in the theory of knowledge. Subject varies from year to year.

**PHIL 521 SEMINAR: METAPHYSICS.** (3) (Prerequisite: PHIL 421 or written permission of the instructor) (Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department.)

**PHIL 534 SEMINAR: ETHICS.** (3) (Prerequisite: PHIL 334 or written permission of the instructor) (Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department)

**PHIL 540 SEM: PHILOSOPHY AND SOCIAL SCIENCES.** (3)

**PHIL 541 SEMINAR: PHILOSOPHY OF SCIENCE.** (3) (Prerequisite: PHIL 441 or other requirements specified by the instructor) (Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department) An advanced course devoted to a topic in the philosophy of science.

**PHIL 543 SEMINAR: MEDICAL ETHICS.** (3) (Prerequisite: PHIL 343 or written permission of the instructor) (Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department) An advanced course devoted to a particular philosophical problem as it arises in the context of medical practice or the application of medical technology.

**PHIL 544 POLITICAL THEORY.** (3) (Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department)

**PHIL 548 SEMINAR: PHILOSOPHY OF LAW.** (3) (Prerequisite: PHIL 348 or written permission of the instructor) (Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department)

**PHIL 551 SEMINAR: ANCIENT PHILOSOPHY 2.** (3) (Prerequisite: at least one course in ancient philosophy and the specific requirements of individual instructors) (Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department) An advanced course on a philosopher or philosophical issue articulated in antiquity.

**PHIL 556 SEMINAR: MEDIEVAL PHILOSOPHY.** (3) (Prerequisite: PHIL 345 or PHIL 357 or written permission of the instructor) (Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department) An advanced course devoted to a particular topic in medieval philosophy. Subject varies from year to year.

**PHIL 560 SEMINAR: 17TH CENTURY PHILOSOPHY.** (3) (Prerequisite: PHIL 360 or written permission of the instructor) (Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department) An advanced course on a seventeenth-century philosopher or philosophical issue.

**PHIL 561 SEMINAR: 18TH CENTURY PHILOSOPHY.** (3) (Prerequisite: PHIL 361 or written permission of the instructor) (Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department.) An advanced course on an eighteenth-century philosopher or philosophical issue.

**PHIL 567 SEMINAR: 19TH CENTURY PHILOSOPHY.** (3) (Prerequisite: PHIL 366 or PHIL 367 or written permission of the instructor) (Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department.)

**PHIL 570 SEMINAR: CONTEMPORARY ANALYTIC PHILOSOPHY.** (3) (Prerequisite: PHIL 370 or PHIL 415 or written permission of the instructor) (Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department.)

**PHIL 575 SEMINAR: CONTEMPORARY EUROPEAN PHILOSOPHY.** (3) (Prerequisite: PHIL 475 or written permission of the instructor) (Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department) An advanced course on





## 62 Physical and Occupational Therapy

School of Physical and Occupational Therapy  
3654 Promenade Sir-William-Osler  
Montreal, QC H3G 1Y5  
Canada

Telephone: (514) 398-4504  
Fax: (514) 398-6360  
E-mail: [graduate.rehabilitation@mcgill.ca](mailto:graduate.rehabilitation@mcgill.ca)  
Web site: [www.medicine.mcgill.ca/spot](http://www.medicine.mcgill.ca/spot)

*Acting Director* — Sharon Wood-Dauphinee  
*Director, Graduate Program* — Diane St-Pierre

### 62.1 Staff

#### Professors

Hugues Barbeau; B.Sc.(P.T.), Ph.D.(Laval)  
Robert W. Dykes; B.A.(UCLA), Ph.D.(Johns H.)  
Erika Gisel; B.A.(Zur.), B.S.O.T., M.S., Ph.D.(Temple)  
Sharon Wood-Dauphinee; B.Sc.(P.T.), Dip.Ed., M.Sc.A.,  
Ph.D.(McG.)

#### Associate Professors

Katherine Berg; B.P.T., B.Sc. P.T., M.Sc.(Rehab Sc.),  
Ph.D.(McG.)  
Joyce Fung; B.Sc.(P.T.)(HK PU), Ph.D.(McG.)  
Eva Kehayia; B.A., M.A., Ph.D.(McG.)  
Nicol Korner-Bitensky; B.Sc.(O.T.), M.Sc., Ph.D.(McG.)  
Annette Majnemer; B.Sc.(O.T.), M.Sc., Ph.D.(McG.)  
Nancy Mayo; B.Sc.(P.T.)(Queen's), M.Sc., Ph.D.(McG.) (*James  
McGill Professor*)

Patricia McKinley; B.A., M.A., Ph.D.(U.C.L.A.)  
Diane St-Pierre; B.Sc.(P.T.)(McG.), M.Sc., Ph.D.(Montr.)

#### Assistant Professors

Sophie De Serres; B.Eng., M.Eng.(École Poly.), Ph.D.(Alta.)  
Isabelle Gélinas; B.Sc.(O.T.)(Montr.), M.Sc.(Virginia),  
Ph.D.(Rehab.Sc.)(McG.)  
Anouk Lamontagne; B.Sc.(P.T.), M.Sc., Ph.D.(Laval)  
Bernadette Nedelec; B.Sc.(O.T.), Ph.D.(Alta.)  
Laurie Snider; B.Sc.(O.T.)(McG.), M.A.(Br.Col.), Ph.D.(Tor.)

### 62.2 Programs Offered

#### Master of Science (non-thesis) in Rehabilitation Science

The program requires three terms of full-time residence study and can usually be completed within three to four terms. It is designed for graduates who hold a B.Sc. (or equivalent) in Physical or Occupational Therapy or related health professions. Two years of clinical experience is recommended. The program trains health professionals to become consumers of research in order to promote evidence-based practice in rehabilitation science. The curriculum is made up of both required and elective courses and may also include a research project.

#### Master of Science in Rehabilitation Science

The full curriculum consists of approximately two years of study for graduates who hold a B.Sc. degree in one of the medical rehabilitation disciplines or a related field. The program consists of required and elective course work, a research proposal and a research thesis.

#### Doctorate in Rehabilitation Science

The Ph.D. program curriculum consists of three to four years of study, on average, for graduates with Master's level training in one of the medical rehabilitation disciplines or a related field. The program consists of required and elective course work, a comprehensive written examination, a research proposal and a doctoral thesis.

### 62.3 Admission Requirements

#### Master of Science in Rehabilitation Science

1. A B.Sc. degree or equivalent in physical or occupational therapy or related fields from a university of recognized reputation.
2. Evidence of a high academic achievement equivalent to a B standing, or a McGill CGPA of 3.0 (70-74%).
3. Prerequisite courses may be required in statistics, anatomy, physiology, psychology, sociology, neurophysiology or other areas, depending on the student's anticipated specialization.
4. Non-Canadian applicants whose mother tongue is not English and who have not completed an undergraduate degree using the English language are required to submit documented proof of competency in oral and written English, by appropriate exams, e.g., TOEFL. (Test of English as a Foreign Language) with a minimum score of 250 on the computer-based test (School requirement), or the International English Language Testing System (IELTS) with a minimum overall band score of 7.0.
5. The GRE Test is mandatory for the following applicants: those who do not have a B.Sc. or equivalent from a Canadian university; those who have been out of university for 5 years or more. Only the General Test is mandatory. For consideration, students must obtain a minimum score of 550 in verbal and quantitative categories and a score of 3.5 to 4 in analytical writing. For enquiries about Graduate Records Examination, please contact GRE - Educational Testing Service, Princeton, NJ 08540, (609) 683-2002, [www.gre.org](http://www.gre.org). Applicants are responsible for ensuring that their scores are sent to the School of Physical and Occupational Therapy, at the following address: 3654 Promenade Sir-William-Osler, Montreal, QC H3G 1Y5

#### Master of Science (non-thesis) in Rehabilitation Science

1. to 5. as above, plus
6. Two years of clinical experience is recommended.

#### Doctorate in Rehabilitation Science

1. An M.Sc. degree in a rehabilitation-related discipline from a university of recognized reputation.
2. Evidence of a high academic achievement equivalent to a B<sup>+</sup> standing, or a McGill CGPA of 3.3 (75-79%) is required.
3. Proof of proficiency in English.
4. GRE Test with a minimum score of 600 in verbal and quantitative categories and a score of 4.5 to 5 in analytical writing. The test is mandatory for the following applicants: those who do not have a B.Sc., M.Sc. or equivalent from a Canadian university; those who have been out of university for 5 years or more.

If a graduate student accepted into the M.Sc. program demonstrates superior performance in the first year, the Graduate Committee, in consultation with the thesis supervisor, may recommend waiving the M.Sc. thesis requirement, and allow the student to proceed directly to the Ph.D. program.

### 62.4 Application Procedures

Application forms for admission to graduate studies for the degree of M.Sc., M.Sc.(non-thesis), or Ph.D. in Rehabilitation Science may be requested directly from the School. An on-line application is available at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

Applications will be considered upon receipt of:

1. the completed application form (on-line or paper),
2. \$60 application fee,
3. a complete curriculum vitae,
4. a statement of purpose (for paper application only),
5. two copies of official transcripts,
6. two letters of reference,
7. test results (GRE, TOEFL), if required.



**POTH 508 PLASTICITY IN REHABILITATION.** (3) (Prerequisite: POTH 455 or equivalent.) A seminar course designed to provide students with a review of current research on plasticity in the central and peripheral nervous systems. Particular emphasis is placed on the mechanisms involved in the recovery of function after injury.

**POTH 602 EDUCATIONAL METHODOLOGY.** (3) (Course equivalent: EDPH 689)

**POTH 603 DIRECTED PRACTICUM.** (3) (Restricted to on-campus students only.) A tutorial with directed practical experience in a clinical setting related to the student's clinical specialization, including curriculum development, and emphasizing current thought in rehabilitation.

**POTH 604 CURRENT TOPICS IN PEDIATRICS.** (3) (Prerequisite: POTH 260, or permission of instructors.) This course will provide an overview of current research in pediatrics.

**POTH 610 RESEARCH METHODOLOGY.** (3) (Corequisite: PSYC 305 or EPIB 607, or EDPE 675 and EDPE 676) An advanced lecture and seminar course. The philosophy of scientific inquiry, principles of research design, and application of statistical techniques are discussed with special consideration given to research studies in health care and rehabilitation.

**POTH 614 SELECTED TOPICS IN REHABILITATION SCIENCE.** (3) (Restricted to on-campus students only.) A weekly lecture and seminar course taught by staff, designed to provide an overview of current research issues in rehabilitation.

**POTH 616 SEMINARS IN REHABILITATION SCIENCE.** (1) A weekly seminar course given by staff and invited speakers in different areas of research related to rehabilitation science. Students are

**SBAM 516 SEMINARS IN REHABILITATION SCIENCE.** (1) A weekly seminar course given by staff and invited speakers in different areas of research related to rehabilitation science. Students are

and are presented\* Participate by 5:05 PM on Thursdays. POTH 616 5:05 PM - 6:00 PM. 11/17/05 (6/19/07) 22885-000 TR 01 11:00 AM 11:20 AM 11:40 AM 12:00 PM 12:20 PM 12:40 PM 1:00 PM 1:20 PM 1:40 PM 2:00 PM 2:20 PM 2:40 PM 3:00 PM 3:20 PM 3:40 PM 4:00 PM 4:20 PM 4:40 PM 5:00 PM 5:20 PM 5:40 PM 6:00 PM

J. Vinals; B.Sc., M.Sc., Ph.D.(Barcelona)

*Associate Professors*

R. Brandenberger; Dip.(Zür.), M.A., Ph.D.(Harv.)

J. Cline; B.Sc.(Calif.), M.Sc., Ph.D.(Cal. Tech.)

P. Grutter; Diploma, Ph.D.(Basel) (*William Dawson Scholar*)

V. Kaspi; B.Sc.(McG.), M.A., Ph.D.(Prin.) (*Canada Research Chair*)

K. Ragan; B.Sc.(Alta.), Ph.D.(Geneva)

*Assistant Professors*

R. Bennewitz; Diploma, Ph.D.(Berlin)

A. Clerk; B.Sc.(Tor.), Ph.D.(C'nell)

A. Cumming; B.A.(Camb.), Ph.D.(Calif.)

G. Gervais; B.Sc.(sher.), M.Sc.(McM.), Ph.D.(Northwestern)

M. Hilke; B.Sc., M.Sc., Ph.D.(Geneva)

G. Holder; M.Sc.(Qu.), Ph.D.(Camb.)

S. Jeon; B.Sc.(Korea), M.Sc., Ph.D.(Wash.)

M. Kilfoil; B.Sc.(UNB), M.Sc., Ph.D.(Mem.)

G. Moore; Ph.D.(Prin.)

R. Rutledge; B.Sc.(S. California), Ph.D.(MIT)

B. Vachon; B.Sc.(McG.), Ph.D.(Vic. B.C.)

A. Warburton; B.Sc.(Vic.), Ph.D.(Tor.)

P. Wiseman; B.Sc.(St. F.X.), Ph.D.(W. Ont.)

*Lecturers*

Z. Altounian, F. Buchinger

*Associate Members*

M.Mackey(Physiology), E. Podgorsak (Radiation Pysics),

D.Ronis (Chemistry)

## 63.2 Programs Offered

M.Sc. and Ph.D.

### FIELDS OF RESEARCH

#### High-Energy Physics

**Theoretical:** The McGill high energy theorists have interests in a wide range of problems pertaining to all fundamental interactions: strong, electromagnetic, weak and gravitational. The research program extends from studies closely connected with experimental data to purely theoretical questions. Ongoing projects involve: particle phenomenology, quantum chromodynamics, electroweak baryogenesis, group theory, astroparticle physics, quantum gravity, grand unification and string theory.

**Experimental High Energy Physics** The experimental high energy physics group is engaged in a number of experiments at the research frontiers of the field, both in subatomic physics and in high energy astrophysics. These include:

- BaBar: The group played a major role in constructing installation and commissioning of the drift chamber. The full detector has been operational and taking data since summer 1999. The physics interests of the group center on CP violation in B-meson decays to CP eigenstates and in the determination of CKM matrix elements  $V_{cb}$  and  $V_{ub}$ .
- STACEE: Members of the group are currently constructing and installing a major air Cherenkov detector for the study of high energy gamma rays emitted by astrophysical objects such as supernova remnants and active galactic nuclei. The detector (located at Sandia National Labs in Albuquerque, New Mexico) operated and successfully observed the Crab Nebula, providing a proof-of-principle of this novel technique.
- ZEUS: A group working at the world's first electron-proton collider (HERA, at DESY, Hamburg) studies lepton-quark interactions at high energy. The physics topics of interest to the group include deep inelastic scattering (proton structure, forward jet production and low-x physics) and flavour (strange, charm) production.

Thus, graduate students at the M.Sc. and Ph.D. levels are offered a strong program of research in a challenging and rapidly advancing field. Short term Master's projects are based mainly on instrumentation or data analysis conducted on Campus, while Ph.D.

research may involve an extended stay at one of the world's major research laboratories.

#### Nuclear Physics

**Theoretical:** Transport equations for heavy ion collisions at intermediate energy; nuclear equation of state from heavy ion collisions; fragmentation at intermediate energy; electromagnetic probes in relativistic heavy ion collisions; effective lagrangians for hadronic systems at finite temperature; Quark-Gluon Plasma, QCD.

**Experimental:** Current research programs in experimental nuclear physics at McGill are focussed on two main axes:

- The study of heavy-ion reactions at relativistic energies to determine the properties of nuclear matter at high density. This program is being performed at the Brookhaven National Laboratory. McGill physicists are part of a major experiment at the heavy-ion collider RHIC at BNL.
- The study of ground state properties of unstable nuclei using laser spectroscopy techniques and ion traps. This work is being carried out using the Canadian Penning trap facility at the Argonne National Laboratory and at the accelerator ISOLDE (CERN), and the ISAC facility at TRIUMF.

Furthermore, the Nuclear Physics Group has an active in-house research program that applies the ion trap and laser techniques to the detection of trace quantities of material and contaminants, and to ion spectroscopy.

#### Condensed-Matter Physics

**Theoretical:** Programs of research are in progress on the properties of dilute alloys and amorphous metals, including magnetic systems and "spin-glasses"; on nonequilibrium characteristics of quantum devices; on kinetics of pattern formation during first order phase transitions, on structured fluids and polymers, on the statistical mechanics of biological membranes and growth problems; and on interface instabilities in dendritic crystal growth. Research is being done by nonlinear analysis and large-scale computational modelling.

**Experimental:** Lines of research include structural, transport, Mössbauer and other magnetic properties of metallic glasses and rapidly quenched metals, and certain crystalline metal alloys. Also included are major areas of activity in high resolution X-ray diffraction using synchrotrons to study the time evolution of non-equilibrium structures and to study thin films and buried interfaces, scanning tunneling and atomic force microscopy, and the rapidly expanding area of nanoscience.

#### Astrophysics

This group does research in radio and X-ray observation of neutron stars and ground-based gamma-ray astronomy. The research program in X-ray astrophysics uses various X-Ray observatories including the RXTE, Chandra and the XMM satellites. Among the scientific issues addressed in this program are the properties of young neutron stars, both pulsars and "magnetars", pulsar wind nebulae, and supernova remnants.

#### Nonlinear Variability in Geophysics

This group studies nonlinear dynamical processes in the atmosphere and other geophysical systems, especially those associated with turbulent, chaotic and extremely variable behaviour. Emphasis is placed on multifractal analysis and modelling as well as the development of new theories and techniques covering wide ranges of scale in time and space. Data from a variety of in situ and remotely sensed sources are used. This includes satellite data of the earth's atmosphere and surface as well as high quality precipitation data from the McGill Radar Weather Observatory.

## 63.3 Admission Requirements

### M.Sc.

Normal requirement is a B.Sc. in Physics, or equivalent, with high standing.

**Ph.D.**

Normal requirement is a M.Sc. in Physics or equivalent. Candidates in good standing may have the option of transferring into this program from the M.Sc. program after one year.

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**63.4 Application Procedures**

An application package is available upon request. It includes a brochure with a detailed description of the research activities in the Department, application forms for admission to graduate studies and information concerning requirements for the M.Sc. and Ph.D. degrees. Inquiries should be addressed to the Graduate Coordinator.

Applications will be considered upon receipt of:

1. application form
2. official transcripts
3. letters of reference
4. \$60 application fee
5. test result (TOEFL)

All information is to be submitted to Paula Domingues, Department of Physics.

Applications and supporting documents should be submitted by:  
February 1st – international applicants,  
March 15th – Canadian applicants.

McGill's on-line application form for graduate program candidates is available at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

**Financial Assistance**

Subject to the availability of funds, financial assistance will be offered to students in the form of a bursary, Teaching and Research assistantships. For new students, financial support will be offered at the time of acceptance and arrival. Forms are given and filled out on registration day.

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**63.5 Program Requirements****M.Sc.** (48 credits)

Candidates must successfully complete five 3-credit courses, plus PHYS691, PHYS692, PHYS690 and PHYS690D1/PHYS690D2 (M.Sc. Thesis), in addition to all the other normal requirements of the Graduate and Postdoctoral Studies Office.

**Ph.D.**

Candidates must successfully complete two one-term courses and a Preliminary examination and submit a Ph.D. thesis, in addition to all the normal requirements of the Graduate and Postdoctoral Studies Office. (Courses taken as part of the M.Sc. program at McGill may be accepted as substitutes for the two required courses.) Normally one of the courses must be a 600 or 700-level course in the candidate's area of specialization.

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**63.6 Advanced Undergraduate and Graduate Courses**

**Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.**

Term(s) offered (Fall, Winter, Summer) may appear after the credit weight to indicate when a course would normally be taught. Please check Class Schedule to confirm this information.

**Note:** All undergraduate courses administered by the Faculty of Science (courses at the 100- to 500-level) have limited enrolment. The course credit weight is given in parentheses after the title.

Denotes courses not offered in 2004-05.

**PHYS 514 GENERAL RELATIVITY.** (3) (Winter) (3 hours lectures) (Honours students, or permission of the instructor) Transition from

special to general relativity. Non-Euclidian geometry. The basic laws of Physics in co-variant form, Einstein's equations. Gravitational waves; neutron stars; black holes; cosmology.

**PHYS 521 ASTROPHYSICS.** (3) (Fall) (3 hours) A quantitative course in galactic and extragalactic astrophysics. Topics include observational techniques, stars and stellar evolution, compact objects, galaxy structure, kinematics, evolution and cosmology.

**PHYS 534 NANOSCIENCE AND NANOTECHNOLOGY**

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**PHYS 634 SEMINAR IN ADVANCED MATERIALS.** (3) (3 hours) A series of research-level seminars about topics of current interest in advanced materials. Topics include molecular and nanoelectronics, computational approaches to materials design and property predictions, new techniques in molecular and atomic imaging, advances in materials preparation, quantum device and quantum computing.

**PHYS 658 ADVANCED CONDENSED MATTER.** (3) (3 hours)

**PHYS 659 EXPERIMENTAL CONDENSED MATTER.** (3) (3 hours) To obtain an active understanding of the principles, the possibilities and the limitations of various experimental techniques. Possible topics include vacuum and low-temperature techniques; transport, thermal, magnetization and de Haas van Alphen measurements; scattering techniques; Mossbauer spectroscopy, NMR, scanning probe microscopy, electron microscopy; surface science methods.

**PHYS 673 THEORETICAL HIGH ENERGY PHYSICS.** (3) (3 hours) Introduction to quantum field theory; perturbation theory and Feynman diagrams. Applications to quantum electrodynamics, quantum chromodynamics and electroweak (Weinberg-Salam) theory.

**PHYS 690 M.Sc. THESIS.** (24)

**PHYS 690D1 (12), PHYS 690D2 (12) M.Sc. THESIS.** (Students must register for both PHYS 690D1 and PHYS 690D2) (No credit will be given for this course unless both PHYS 690D1 and PHYS 690D2 are successfully completed in consecutive terms) (PHYS 690D1 and PHYS 690D2 together are equivalent to PHYS 690)

**PHYS 691 THESIS PREPARATION.** (3) Directed study of research papers and experimental or theoretical techniques in the student's designated area of research under the supervision of the graduate studies committee of the Department.

**PHYS 692 THESIS PROJECT.** (6) Independent work under the direction of the student's supervisor on a research problem in the student's designated area of research leading to a project report or seminar.

**PHYS 692D1 (3), PHYS 692D2 (3) THESIS PROJECT.** (Students must register for both PHYS 692D1 and PHYS 692D2) (No credit will be given for this course unless both PHYS 692D1 and PHYS 692D2 are successfully completed in consecutive terms) (PHYS 692D1 and PHYS 692D2 together are equivalent to PHYS 692) Independent work under the direction of the student's supervisor on a research problem in the student's designated area of research leading to a project report or seminar.

**PHYS 700 PRELIMINARY PH.D. EXAMINATION.** (0)

**PHYS 719 SPECIAL TOPICS: SOLID STATE PHYSICS 2.** (3) (3 hours) Specialized discussion of some current problems in solid state physics.

**PHYS 729 SPECIAL TOPICS IN NUCLEAR PHYSICS.** (3)

**PHYS 730 SPECIAL TOPICS: HIGH ENERGY PHYSICS 1.** (3) (3 hours) Specialized discussion of some current problems in theoretical particle physics.

**PHYS 731 SPECIAL TOPICS: HIGH ENERGY PHYSICS 2.** (3) (3 hours)

**PHYS 732 TOPICS IN ASTROPHYSICS 1.** (3) (Prerequisites: PHYS 521 or permission of instructor)

**PHYS 733 TOPICS IN ASTROPHYSICS 2.** (3) (Prerequisites: PHYS 521 or permission of instructor)

## 64 Physiology

Department of Physiology  
McIntyre Medical Sciences Building  
3655 Promenade Sir-William-Osler  
Montreal, QC H3G 1Y6  
Canada

Telephone: (514) 398-4343

Fax: (514) 398-7452

Web site: [www.medicine.mcgill.ca/physio](http://www.medicine.mcgill.ca/physio)

Chair — A. Shrier

Chair of Graduate Program — J. Orłowski

### 64.1 Staff

#### Emeritus Professors

Kresmir Krnjevic; O.C., B.Sc., Ph.D., M.B., Ch.B. (Edin.), F.R.S.C.  
Geoffrey Melvill Jones; B.A., M.A., M.B., B.Ch., M.D.(Cantab.)

#### Professors

Thomas M.S. Chang; B.Sc., M.D., C.M., Ph.D.(McG.), F.R.C.P.(C)  
Munroe W. Cohen; B.Sc., Ph.D.(McG.)

Ellis J. Cooper; B.Eng.(Sir G.Wms.), M.Sc.(Surr.), Ph.D.(McM.)  
Mony Frojmovic; B.Sc., Ph.D.(McG.)

Leon Glass; B.S.(Brooklyn), Ph.D.(Chic.) (*Isadore Rosenfield  
Professor of Cardiology*)

Phil Gold; M.Sc., Ph.D., M.D., C.M.(McG.), F.R.C.P.(C.) (*joint  
appoint. with Medicine*)

David Goltzman; B.Sc., M.D., C.M.(McG.), F.R.C.P.(C.) (*Antoine  
G. Massabki Professor of Medicine*) (*joint appoint. with  
Medicine*)

John Hanrahan; Ph.D.(Br.Col.)

Wayne S. Lapp; M.S.A.(Tor.), Ph.D.(McG.)

Mortimer Levy; B.Sc., M.D., C.M.(McG.), F.R.C.P.(C.) (*joint  
appoint. with Medicine*)

Michael Mackey; B.A., Ph.D.(Wash.) (*Joseph Morley Drake  
Professor of Physiology*)

Jacapo P. Mortola; M.D.(Milan)

John Orłowski; B.Sc.(McG.), M.Sc., Ph.D.(Queen's) (*James  
McGill Professor*)

Premysl Ponka; M.D., Ph.D.(Prague)

Alvin Shrier; B.Sc.(C'dia), Ph.D.(Dal.) (*Hosmer Professor of  
Physiology*)

Douglas G.D. Watt; M.D., Ph.D.(McG.)

#### Associate Professors

Kathleen Cullen; B.Sc.(Brown), Ph.D.(Chic.) (*William Dawson  
Scholar*)

Riaz Farookhi; B.Sc., M.Sc.(M.I.T.), Ph.D.(Tufts)

Mladen Glavinovic; B.Sc.(Zagreb), M.Sc.(Tor.), Ph.D.(McG.)

Michael Guevara; Ph.D.(McG.)

Sheldon Magder; M.D.(Tor.) (*joint appoint. with Medicine*)

Ursula Stochaj; Ph.D.(Cologne)

Teresa Trippenbach; M.D., Ph.D.(Warsaw)

Ann Wechsler; B.A.(Tor.), M.Sc., Ph.D.(McG.)

John White; B.Sc., M.Sc.(Car.), Ph.D.(Harv.)

#### Associate Professors - Part Time

Nicole Bernard

#### Assistant Professors

Erik Cook; Ph.D.(Baylor College, Houston, Tx)

Julie Desbarats; Ph.D.(McG.)

Pejmun Haghighi; Ph.D.(McG.)

Julios Martinez-Trujillo; Ph.D.(Tübingen, Germany)

#### Assistant Professor - Part Time

Anne-Marie Lauzon

#### Adjunct Professors

Roy Caplan, Terence Herbert, James Henry, John Milton,

Serge Rossignol, Malmur Sairam

#### Associate Members

Anaesthesia: Steven Backman

Biomedical: Robert Kearney, Satya Prakash

Dentistry: James Lund

Medicine: Angel Alonso, Andrey Cybulsky, Samuel O. Freedman,

Abraham Fuks, Claude Gagnon, Raymond Gagnon,

Harry L. Goldsmith, Geoffrey Hendy, Louise Larose,

Serge Lemay, Peter T. Macklem, James Martin, Shree Muly,

Mariana Newkirk, Barry Posner, Shafaat Rabbani, J. Enrique

Silva, Alan Sniderman, Mary Stevenson, Simon Wing, Hans

Zingg

Neurology and Neurosurgery: Albert Aguayo, Massimo Avoli, Charles Bourque, SalCarbonetto, Pierre Drapeau, DanielGuitton, David Rajsdale, Michael Rasminsky

Nephrology: Tomoko Takano

Ophthalmology: Curtis Baker

Otolaryngology: Bernard Segal

Pediatrics: Immanuela Moss, Charles Rohlicek

Psychiatry: Bernardo Dubrovsky, Christina Gianoulakis

## 64.2 Programs Offered

The Physiology Department offers training leading to M.Sc. and Ph.D. degrees. The scope of the ongoing research, and close connections with the McGill teaching hospitals, offer excellent opportunities for collaborations with hospital based scientists.

All graduate students in Physiology receive financial support.

Any faculty member who agrees to supervise a student who does not hold a fellowship, is obliged to provide financial support.

## 64.3 Admission Requirements

Admission to the Graduate Program is based on an evaluation by the Graduate Student Admissions and Advisory Committee (GSAAC), and on being accepted by a research supervisor. Final acceptance is contingent upon approval of the recommendation of the applicant by the Graduate and Postdoctoral Studies Office, from whom official notification will be received.

Candidates for the M.Sc. degree must hold a B.Sc. degree or its equivalent. Candidates who have completed an M.Sc. may be admitted directly to the Ph.D. program. M.Sc. students interested in a Ph.D., may transfer to the Ph.D. program after 12-18 months, if all of the transfer requirements have been fulfilled. The M.Sc. thesis requirement is then waived. Candidates with exceptional academic records may be considered to proceed directly to the Ph.D. degree from the B.Sc. degree.

The GRE General Test is required for anyone who does not have a degree from a Canadian University. The TOEFL is required for anyone whose university studies were completed in a language other than English outside of Canada. A minimum CGPA of 3.2 on 4.0 is required for a file to be considered.

## 64.4 Application Procedures

The GSAAC will only consider applications upon receipt of all of the following documentation:

1. application form;
2. personal statement;
3. CV;
4. two letters of reference, not more than six months old, from two professors;
5. two official copies of all university transcripts;
6. \$60 application fee;
7. results of the GRE (Graduate Record Exam) General Test, for applicants whose undergraduate degree is not from a Canadian university.
8. results of the Test of English as a Foreign Language (TOEFL), minimum score of 600 on paper-based test (or 250 on computer-based test), if the undergraduate studies were carried out in a language other than English outside of Canada.

Applications should be submitted to the Graduate Secretary as early as possible in order to facilitate processing. However, no applications will be considered after the following deadlines:

September (Fall term):

March 1 (November 1 for International students)

January (Winter term):

October 1 (May 1 for International students)

Interested candidates should refer to the Department's Web site.

McGill's on-line application form for graduate program candidates is available at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

## 64.5 Program Requirements

### M.Sc.

The M.Sc. program is comprised of a minimum of 49 credits.

### Required Courses (43 credits)

PHGY601	(1)	M.Sc. Proposal Seminar
PHGY602	(3)	Literature Search and Research Proposal
PHGY607	(3)	Laboratory Research 1
PHGY608	(3)	Laboratory Research 2
PHGY620	(3)	Progress in Research
PHGY621	(12)	Thesis 1
PHGY622	(15)	Thesis 2

### Elective Courses (6 credits)

In addition to the above, students must select 6 approved credits in Physiology or Science at the 500 or 600 level.

Students may be requested to fulfil other course requirements.

Students are required to submit a thesis, usually equivalent to one first author paper.

Each student will have a supervisory committee which will monitor the progress of the studies.

### Transfer to the Ph.D Program

After 18 months students may transfer to the Ph.D. program if all of the transfer requirements have been fulfilled. This includes completion of the Ph.D. Preliminary Exam and the successful completion of a transfer seminar. The M.Sc. thesis requirement is then waived.

### Ph.D.

Students in the Ph.D. program are required to:

1. present PHGY 702 - Ph.D. Proposal Seminar 3 months after starting the program (1 credit);
2. complete PHGY 701 - Comprehensive Examination within 6-12 months of admission to the program (0);
3. complete PHGY 720 through 725 - Ph.D. Departmental Seminar Course (1 credit each);
4. submit a thesis and defend it orally;
5. new students must take, in addition to the above, an additional 9 credits of Physiology or Science at the 500 level or above, in consultation with the Graduate Student Admissions and Advisory Committee and their supervisor;

Each student will have a supervisory committee which will monitor the progress of the studies.

### Required Courses (9 credits)

### Complementary Courses (9 credits)

In addition to the above, students are required to take an additional 9 credits of Physiology or Science at the 500 level or above, in consultation with the GSAAC and the candidate's supervisor.

## 64.6 Courses

Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.



Term(s) offered (Fall, Winter, Summer) may appear after the credit weight to indicate when a course would normally be taught. Please check Class Schedule to confirm this information.

**Note:**

seminar series, students will meet for one hour before each seminar to critically discuss papers on the subject of the weekly seminar. Students will take turns introducing the papers and leading discussions on an overview of the research topic, some of the methodologies, results and conclusions.

**PHGY 723 PH.D. SEMINAR COURSE 4.** (1) Required for Ph.D. students. Coordinated in conjunction with the weekly Departmental seminar series, students will meet for one hour before each seminar to critically discuss papers on the subject of the weekly seminar. Students will take turns introducing the papers and leading discussions on an overview of the research topic, some of the methodologies, results and conclusions.

**PHGY 724 PH.D. SEMINAR COURSE 5.** (1) Required for Ph.D. students. Coordinated in conjunction with the weekly Departmental seminar series, students will meet for one hour before each seminar to critically discuss papers on the subject of the weekly seminar. Students will take turns introducing the papers and leading discussions on an overview of the research topic, some of the methodologies, results and conclusions.

**PHGY 725 PH.D. SEMINAR COURSE 6.** (1) Required for Ph.D. students. Coordinated in conjunction with the weekly Departmental seminar series, students will meet for one hour before each seminar to critically discuss papers on the subject of the weekly seminar. Students will take turns introducing the papers and leading discussions on an overview of the research topic, some of the methodologies, results and conclusions.

#### COURSES OFFERED BY OTHER UNITS –

##### Department of Medicine, Division of Experimental Medicine:

- EXMD 502 Advanced Endocrinology. (3)
- EXMD 503 Advanced Endocrinology. (3) (Winter)
- EXMD 504 Biology of Cancer. (3)
- EXMD 506 Advanced Applied Cardiovascular Physiology. (3)
- EXMD 507 Advanced Applied Respiratory Physiology. (3)
- EXMD 508 Advanced Topics in Respiration. (3)
- EXMD 509 Gastrointestinal Physiology and Pathology. (3)
- EXMD 615 Membrane Carbohydrates. (3)

##### Biomedical Engineering:

- BMDE 519 Biomedical Signals and Systems. (3) (2-0-8)

## 65 Plant Science

Department of Plant Science  
Macdonald Campus  
21,111 Lakeshore Road  
Sainte-Anne-de-Bellevue, QC H9X 3V9  
Canada

Telephone: (514) 398-7851

Fax: (514) 398-7897

E-mail: [plantscience@macdonald.mcgill.ca](mailto:plantscience@macdonald.mcgill.ca)

Web site: [www.mcgill.ca/plant](http://www.mcgill.ca/plant)

Chair — M.G. Fortin

### 65.1 Staff

#### Emeritus Professors

- R.H. Estey; B.Ed.(U.N.B.), M.S.(Maine), D.I.C.(Imp. Coll.), B.Sc.(Agr.), Ph.D.(McG.), F.L.S.
- W.F. Grant; B.A., M.A.(McM.), Ph.D.(Va), F.L.S.
- H.A. Steppler; B.S.A.(Man.), M.Sc., Ph.D.(McG.), F.A.I.C.

#### Professors

- D.J.I. Buszard; B.Sc.(Bath), Ph.D.(Lond.)
- P. Dutilleul; L.Sc., D.Sc.(Louvain)
- D. Mather; B.Sc.(Agr.) (McG.), M.Sc., Ph.D.(Guelph)
- D.L. Smith; B.Sc., M.Sc.(Acad.), Ph.D.(Guelph)
- A.K. Watson; B.Sc.(Agr.), M.Sc.(Br.Col.), Ph.D.(Sask.)

#### Associate Professors

- D.J. Donnelly; B.Sc.(Agr.) (McG.), M.Sc.(U.B.C), Ph.D.(S.Fraser)
- M.G. Fortin; B.Sc.(Pl.Sc.), M.Sc.(Laval), Ph.D.(McG.) (*William Dawson Scholar*)

- S. Jabaji-Hare; B.Sc.(Beirut), M.Sc.(Guelph), Ph.D.(Wat.)
- A.C. Kushalappa; B.Sc., M.Sc.(B'Lore), Ph.D.(Flor.)
- K.A. Stewart; B.Sc.(Agr.)(Br.Col.), Ph.D.(R'dg)
- M. Waterway; B.A.(Grand Rapids), M.S.(Wis.), Ph.D.(C'nell)

#### Assistant Professors

- J. Bede; B.Sc.(Calg.), M.Sc., Ph.D.(Tor.)
- S. deBlois; B.Sc.(Agr.)(McG), M.Sc., Ph.D.(Montr.)
- P. Seguin; B.Sc.(Agr.), M.Sc.(McG), Ph.D.(Minn.)
- M. Stromvik; B.A., M.S. (Stockholm), Ph.D. (Ill.)

#### Faculty Lecturers

- C. Begg; B.Sc.(Agr.)(McG.), M.Sc.(Sask.), Ph.D.(McG.)
- S. Lussier; B.Sc.(Agr.) (McG.)
- K. McClintock; B.A.(Wellesley), B.Sc.(Agr), M.Sc.(McG.)
- D. Wees; B.Sc.(Agr.), M.Sc.(McG.)

#### Associate Member

- T.A. Johns (*Dietetics and Human Nutrition*)

#### Adjunct Professors

- T.L. Capson, S. Jenni, J.-F.Laliberté, L.O'Donoghue

## 65.2 Programs Offered

The Department offers an M.Sc. and Ph.D. in Plant Science and provides for study in all fields of the plant sciences. Research facilities – both field and laboratory – are available for investigations in plant breeding, crop physiology, crop management, plant ecology, the epidemiology and biology of plant diseases, the physiology of diseased plants, cytogenetics, biosystematics, recombinant DNA technology, mycology, weed biology, tissue culture and plant biochemistry.

An advisory committee is named for each student, having the responsibility for developing the program of study appropriate to the student's background and area of specialization.

## 65.3 Admission Requirements

### General

The minimum cumulative grade point average (CGPA) is 3.0/4.0 (second-class upper division) or a GPA of 3.2/4.0 during the last two years of full-time university study. High grades are expected in courses considered by the academic unit to be preparatory to the graduate program.

### Ph.D.

Ph.D. candidates are required to have an M.Sc. degree in an area related to the chosen field of specialization for the Ph.D. program. Outstanding M.Sc. students may be permitted to transfer to the second year of the Ph.D program following one year of study.

## 65.4 Application Procedures

Applicants for graduate studies must forward supporting documents to:

Department of Plant Science  
Macdonald Campus of McGill University  
21,111 Lakeshore  
Sainte-Anne-de-Bellevue, QC H9X 3V9  
Canada

Telephone: (514) 398-7851

Fax: (514) 398-7897

E-mail: [carolyn.bowes@mcgill.ca](mailto:carolyn.bowes@mcgill.ca)

Applications will be considered upon receipt of a signed and completed application form, \$60 application fee, and the following supporting documents:

DOCUMENTS SUBMITTED WILL NOT BE RETURNED.

**Transcripts** - Two official copies of all university level transcripts with proof of degree(s) granted. Transcripts written in a language other than English or French must be accompanied by a certified translation. An explanation of the grading system used by the applicant's university is essential. It is the applicant's responsibility to arrange for transcripts to be sent.

It is desirable to submit a list of the titles of courses taken in the major subject, since transcripts often give code numbers only. Applicants must be graduates of a university of recognized reputation and hold a Bachelor's degree equivalent to a McGill Honours degree in a subject closely related to the one selected for graduate work. This implies that about one-third of all undergraduate courses should have been devoted to the subject itself and another third to cognate subjects.

**Letters of Recommendation** - Two letters of recommendation on letterhead (official paper) of originating institution or bearing the university seal and with original signatures from two instructors familiar with the applicant's work, preferably in the applicant's area

**Ph.D. – Neotropical Environment**

Students will follow the program of study established by their advisory committee. This program will consist of:

1. Ph.D. comprehensive examination PLNT701, which must be taken within one year of registering.
2. Ph.D. Thesis 1 PLNT766.
3. Ph.D. Thesis 2 PLNT767.
4. Ph.D. Thesis 3 PLNT768.
5. Two required courses: ENVR610 and BIOL640.
6. One course chosen from POLI644, SOCI565, ENVR611, ENVR612, ENVR680, BIOL553, BIOL641, GEOG498, AGRI550.
7. When in residence in Montreal, attendance at all thesis progress and program reports: PLNT665, PLNT666, PLNT690, PLNT767 and PLNT768; when in residence in Panama, participation at the STRI seminar series.
8. Participation in the MSE-Panama Symposium Presentation in Montreal is also required.
9. Additional courses may be required at the discretion of the candidate's supervisory committee.

Students who have taken their M.Sc. degree at McGill University will be required to spend one term in study at another research institution.

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**65.6 Courses for Higher Degrees**

**PLNT 690N1 RESEARCH HO**

The Department awards a number of teaching assistantships each year and students who are admitted to the graduate program are automatically considered for such an award. The announcements listing the positions expected to be available will be posted by October 15 for Winter Term courses and March 15 for Fall and Full Year courses.

Because this Calendar is prepared early in the year, changes may take place after it has been printed. Students are advised to contact the Department Office for supplementary information which may be important to their choice of program.

### 66.3 Admission Requirements

All applicants, including those who have done their undergraduate work at McGill, must submit at least two letters of reference. Transcripts from all universities attended must be sent to the Department.

#### Master's

Students holding a B.A. degree may be eligible for admission to the M.A. program. Preparation equivalent to a McGill Honours Program in Political Science is desirable. Students who have inadequate preparation in Political Science but are otherwise judged to be qualified are admitted to a qualifying year, in which they undertake advanced undergraduate work.

#### Ph.D.

Students holding a Master's degree in Political Science may be eligible for admission to the Ph.D. program. In some instances, students may be admitted directly into the Ph.D. program without having completed an MA degree. They will be considered Ph.D.1 and some previous political science course work could be applied to the requirements of the program, provided that it did not count towards any other degree.

#### GRE and TOEFL Exams

GRE results are required for applications to the Doctoral Program; this includes McGill Master's students applying to the Doctoral Program. GRE results are not required for students applying to the Master's Program or Qualifying term or year.

Non-Canadian students from countries where English is not the first language and who have not studied at a university in which teaching is conducted in English must submit TOEFL scores. A minimum score of 600 on the paper-based test (250 on the computer-based test) is required for admission. Files will not be considered unless TOEFL scores are received before the application deadline.

GRE information booklets and, when appropriate, TOEFL information booklets are included in the application package mailed to prospective students. For more information, consult the following Web sites: [www.gre.org](http://www.gre.org) and [www.toefl.org](http://www.toefl.org).

### 66.4 Application Procedures

Applications will be considered upon receipt of:

1. application form.
2. original transcripts;
3. two letters of reference;
4. \$60 application fee;
5. test results: TOEFL (if applicable) and GRE (for Ph.D. applicants);
6. personal statement (one page);
7. sample of writing (Ph.D. only).

All applications should be submitted to the Graduate Coordinator in the Department of Political Science.

The deadline for applications for admission to the Department is January 31.

McGill's on-line application form for graduate program candidates is available at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

### 66.5 Program Requirements

#### Requirements for the M.A. Degree (45 credits)

Students may select Option A (Thesis Option) or Option B (Research Project Option) in completing M.A. degree requirements. Students may switch from one option to the other while completing their coursework.

In addition, the Department offers an M.A. Research Project Option in Social Statistics.

#### A. Thesis Option

There are two requirements:

1. Five one-term courses (5 x 3 credits). Where special requirements of a student's area of concentration so warrant, the Director of Graduate Program may allow one of these courses to be taken at the upper undergraduate level. The substitution of one course outside Political Science in related disciplines may also be allowed if it is appropriate to the program.
2. A thesis to demonstrate proficiency in research. The thesis is normally about 100 pages long, and is subject to evaluation by one examiner internal to the Department and one examiner external to the Department.

#### B. Research Project Option

1. Seven one-term courses (7 x 3 credits). Where special requirements of a student's area of concentration so warrant, the Director of Graduate Program may allow one of these courses to be taken at the upper undergraduate level. The substitution of up to two courses outside Political Science in related disciplines may also be allowed if appropriate to the program.
2. A research paper to demonstrate proficiency in research. The research paper is normally about 50 pages in length and involves revision of a paper written for one of the graduate courses completed in the program. The research paper is evaluated by two faculty members in the Department.

For both of the above options, all students must take one of the following and preferably both:

- POLI616 or POLI617 or POLI561
- OR POLI612 or a suitable more advanced course.

#### M.A. Project Option in Social Statistics

The program complements disciplinary training with statistical research. Students will normally complete program course requirements, supplemented by further statistical courses, as advised by the Option advisor, and subject to approval by the Department.

Entrance to this option is by application to the Social Statistics Option Committee *subsequent to acceptance into the Department program*.

All students must take one of the following and preferably both:

- POLI616 or POLI617 or POLI561
- OR POLI612 or a suitable more advanced course.

In addition, students MUST take POLI688 Research Seminar in Social Statistics (or equivalent).

Candidates for the M.A. degree follow a program approved on an individual basis by the Department. All students who wish to be considered for the Ph.D. program are evaluated on the basis of their M.A. program. Only a small number of students are permitted to go on for their doctorate and students currently enrolled in the M.A. program must formally re-apply for admission into the Ph.D. program. A pass for the M.A. degree does not necessarily imply permission to proceed to the doctorate.

#### Requirements for the Ph.D. Degree

Superior applicants, normally understood as students who are at least in the top 10 percent of their graduating class or who have a CPGA of at least 3.5 or its equivalent, will be eligible for admission into the Ph.D. track and receive a Ph.D. degree after successfully completing the requirements of the Ph.D. track. These are:

- A. Successful completion of thirteen 3-credit courses.
- B. Distribution of Courses:
1. Two major fields in political science (satisfied by four courses and a written comprehensive examination in each field, as well as one integrated oral comprehensive examination covering both major fields).
  2. One minor field (satisfied by two courses). Minor fields can be in any one of the five fields offered by the Department. Students may also petition the Graduate Committee to approve as a minor some special combination of courses which is suitable to a particular student's planned course of study.
  3. An additional 3-credit course in either of the student's major fields or minor field, according to what best meets the particular student's needs.
  4. Students are required to take one 700-level Ph.D. Research Seminar in each major field, as part of the four course requirement. In each of these 700-level seminars, students are expected to complete a paper which focuses on a clearly defined research problem and is comparable in scope to an article in a professional journal. The papers should demonstrate the student's familiarity with the relevant scholarly work and his/her ability to carry out research and organize the results of the research. Each paper will be evaluated by two faculty members in the Department.
  5. Methodology Requirements: All students are required to take at least one of the following POLI616 or POLI617 or POLI561 and POLI612 or a suitable more advanced course. Students who are given an exemption from a methodology course requirement because of course work completed prior to entering the M.A.-Ph.D. program will still be required to complete thirteen 3-credit courses.
- C. Advanced Research Tools: The Department feels that it is essential that its Ph.D. students demonstrate a high level of proficiency in one of the two principal research tools of modern political science: languages or quantitative methods. Language Requirement: Students must pass an advanced-level translation test from a language other than English. In selecting a language to fulfill this requirement, the student must demonstrate in writing how the chosen language is related to the research. Quantitative Methods: To fulfill this requirement, students must complete a course in advanced statistical methods. For additional information, students should consult the "Information Bulletin for Ph.D. Program".
- D. All students in the Ph.D. program are expected to take their written comprehensives and their oral comprehensive in the second term of their third year in the program. Students are expected to have completed all of their required course work in their major and minor fields, as well as their methodology requirement (13 one-term courses), by no later than the end of the first term of their third year.
- E. Students are expected to submit dissertation proposals by the end of the second term of their third year in the program.
- F. The student must write a doctoral dissertation which makes an original contribution to knowledge in the discipline.

**Ph.D. – Neotropical Environment** candidates who choose the Language Requirement referred to in item C above, must fulfill that requirement in Spanish. They must also include the following courses as part of their program: ENVR610 and BIOL640, and one of POLI644, SOCI565, ENVR611, ENVR612, ENVR680, BIOL553, BIOL641, GEOG498, AGR1550;

**Transfer students and students with Master's degrees from other universities:** Transfer students will be treated as M.A. students who change tracks. Previous course work at the graduate level can be applied towards the requirements of the program, provided the Admission Committee is confident that the quality of such work is on par with McGill standards. Students transferring into the M.A.-Ph.D. track must fulfill a minimum residency requirement of two years, including a minimum of 6 courses and at least

one 700-level Ph.D. research paper. All students will be required to pass the comprehensive written and oral exams. Ph.D. residency requirement





tional crisis, conflict and war. Discussions will focus on: research designs and methods; decision-making models; crisis/conflict management; bargaining in crisis; UN and superpower crisis inter-

D. Pedersen; M.D.(Buenos Aires)  
J. Rochford; M.A.(Queen's), Ph.D.(C'dia)  
C. Rousseau; M.D.(Sher.), M.Sc.(McG.)  
L.K. Srivastava; B.Sc., M.Sc.(Alld.), Ph.D.(New Delhi)  
R. Tempier; M.D.(Aix-Marseille II)  
C.-D. Walker; B.Sc., Ph.D.(Geneva)  
M. Zoccolillo; B.Sc.(New Orleans), M.D.(Norfolk)

**Assistant Professors**

L. Beauclair; B.Sc., M.D.(Laval)  
P. Beaudry; M.D.(Sher.), Dipl.Psych.(McG.)  
D. Bloom; B.Sc.(Regina), M.D.(Queen's)  
D. Boivin; Ph.D.(Montr.)  
D. Charney; M.D.,C.M.(McG.)  
J.B. Debruille; M.D.(Paris), Ph.D.(U Pierre et Marie Curie)  
M. Elie; M.D.,C.M.(McG.)  
G. Galbaud du Fort; M.D., Ph.D.(Paris) (*joint appoint. with  
Epidemiology and Biostatistics*)  
D. Groleau; B.Sc., M.Sc., Ph.D.(Montr.)  
R. Joober; M.D.(France), Ph.D.(Tunisia)  
M. Lepage; Ph.D.(Que.)  
M. Leyton; Ph.D.(C'dia)  
S. Lupien; Ph.D.(Montr.)  
A. Malla; Ph.D. (W.Ont.)  
M. Perreault; Ph.D.(Montr.)  
D. Sookman; Ph.D.(C'dia)  
G. Turecki; M.D.(Brazil), Ph.D.(McG.)  
S. Williams; Ph.D.(Montr.)

**Associate Member**

R.O. Pihl (Psychology)

**Adjunct Professors**

P. Blier, L. Gaston, C. Mercier, S. Welner

6. An outline of the proposed thesis research, to be written by the prospective student in collaboration with an appropriate research supervisor.
7. Two letters of reference with Applicant Evaluation checklist forms (see department web site);
8. TOEFL or IELTS certificate of proficiency in English for non-Canadian applicants whose mother tongue and language of education is not English, with a minimum score of 213 on the computerized TOEFL or 550 on the written TOEFL test, or 6.5 on the IELTS test.

**Deadlines:**

January (Winter term): August 1

May (Summer term): December 15

September (Fall term): March 1

McGill's on-line application form for graduate program candidates is available at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

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**Appendix 6.**

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**67.2 Programs Offered**

Master of Science (M.Sc).

The M.Sc. program in Psychiatry is designed (1) to provide a mechanism for the training of medical scientists who intend to pursue a research career in psychiatry and (2) to provide a focus for basic science or social science students wishing to obtain advanced training in areas particularly relevant to psychiatric research. Students in this program receive no clinical training in psychiatry.

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**67.3 Admission Requirements**

A B.Sc., B.A., B.N. or M.D. degree.

A strong background in science and/or social science, as demonstrated by academic achievement equivalent to a GPA of 3.3 (on a 4 point scale) or 3.5 in the last two years.

A written agreement from the proposed research supervisor, and student's statement of purpose for seeking an M.Sc.

An outline of the proposed thesis research, to be written by the prospective student in collaboration with an appropriate research supervisor.

Two letters of reference.

Certified proficiency in written English or French.

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**67.4 Application Procedures**

Applications will be considered upon delivery of the following to the Graduate Program Coordinator:

1. a completed application form;
2. Cdn \$60.00 application fee;
3. two official transcripts of all university studies;
4. written Confirmation of Supervision form (see department web site) from the proposed research supervisor
5. A written statement of purpose, describing the specific reasons for seeking a Master of Science degree in Psychiatry.

uate students only.) (Graduate Studies: strongly recommended for M.Sc. students in Psychiatry.) Current theories on the neurobiological basis of most well known mental disorders (e.g. schizophrenia, depression, anxiety, dementia). Methods and strategies in research on genetic, physiological and biochemical factors in mental illness will be discussed. Discussion will also focus on the rationale for present treatment approaches and on promising new approaches.

**PSYT 502 BRAIN EVOLUTION AND PSYCHIATRY.** (3) (Fall) (Prerequisites: BIOL 115 or equivalent as authorized by instructor) The course will focus on the transcendental importance of evolution of nervous systems for normal and pathological behavior. Studies of allometric brain growth and recent evolutionary theories of brain organization as they relate to normal and abnormal behavior will be emphasized.

**PSYT 610 DIPLOMA EVALUATION: WRITTEN.** (0)

**PSYT 611 DIPLOMA EVALUATION: ORAL.** (0)

**PSYT 630 STATISTICS FOR NEUROSCIENCES.** (3) Statistics needed for analysing the types of data generated in a laboratory setting, with emphasis on the neurosciences, will be covered. Hypothesis testing, parametric and non-parametric statistics will be studied with a practical approach, using data generated by the students. Computer analysis will be introduced.

**PSYT 691 THESIS RESEARCH 1.** (12)

**PSYT 692 THESIS RESEARCH 2.** (12)

**PSYT 693 THESIS RESEARCH 3.** (12)

**PSYT 696 SPECIAL TOPICS IN PSYCHIATRY.** (3) Supervised reading and discussion of selected issues and topics in contemporary psychiatry. Students will be responsible for assigned readings and for preparation of a graded paper.

**PSYT 711 CULTURAL PSYCHIATRY.** (3) (Prerequisites: Knowledge of psychiatry and anthropology)

**PSYT 713 PSYCHIATRIC EPIDEMIOLOGY.** (3) (Prerequisites: EPIB 606 or equivalent or permission of instructor.)

## 68 Psychology

Department of Psychology  
Stewart Biological Sciences Building, Room W8/38  
1205 Avenue Docteur Penfield  
Montreal, QC H3A 1B1  
Canada

Telephone: (514) 398-6124 / 398-6100

Fax: (514) 398-4896

E-mail: gradapp@psych.mcgill.ca

Web site: www.psych.mcgill.ca

Chair — K.B.J. Franklin

### 68.1 Staff

#### *Emeritus Professors*

A.S. Bregman; M.A.(Tor.), Ph.D.(Yale)

V. Douglas; B.A.(Qu.), M.A., M.S.W., Ph.D.(Mich.)

W.E. Lambert; M.A.(Colgate), Ph.D.(N. Carolina), F.R.S.C.

A.A.J. Marley; B.Sc.(Birm.), Ph.D.(Penn.)

R. Melzack; B.Sc., M.Sc., Ph.D.(McG.) (*E.P. Taylor Emeritus Professor of Psychology*)

P. Milner; B.Sc.(Leeds), M.Sc., Ph.D.(McG.)

#### *Professors*

F.E. Aboud; B.A.(Tor.), M.A., Ph.D.(McG.)

I.M. Binik; B.A.(N.Y.U.), M.A., Ph.D.(Penn.)

A. Chaudhuri; B.Sc., M.Sc.(Tor.), Ph.D.(U.C.Berk.) (*James McGill Professor*)

B. Ditto; B.S.(Iowa), Ph.D.(Ind.)

K.B.J. Franklin; B.A., M.A.(Auck.), Ph.D.(Lond.)

F.H. Genesee; B.A.(W.Ont.), M.A., Ph.D.(McG.)

J. Mogil; B.Sc.(Tor.), Ph.D.(U.C. LA) (*E.P. Taylor Professor of Psychology*)

D.S. Moskowitz; B.S.(Kirkland), M.A., Ph.D.(Conn.)

Y. Oshima-Takane; B.A.(Tokyo Women's Christian U.), M.A.(Tokyo), Ph.D.(McG.)

D.J. Ostry; B.A.Sc., M.A.Sc., Ph.D.(Tor.)

C. Palmer; B.Sc.(Mich.), M.Sc.(Rutgers), Ph.D.(C'neil)

M. Petrides; B.Sc., M.Sc.(Lond.), Ph.D.(Cantab.)

R.O. Pihl; B.A.(Lawrence), Ph.D.(Ariz.)

J.O. Ramsay; B.Ed.(Alta.), Ph.D.(Prin.)

B. Sherwin; B.A., M.A., Ph.D.(C'dia) (*James McGill Professor*)

T.R. Shultz; B.A.(Minn.), Ph.D.(Yale)

Y. Takane; B.L., M.A.(Tokyo), Ph.D.(N. Carolina)

D.M. Taylor; M.A., Ph.D.(W.Ont.)

N. White; B.A.(McG.), M.A., Ph.D.(Pitt.)

D.C. Zuroff; B.A.(Harv.), M.A., Ph.D.(Conn.)

#### *Associate Professors*

J. Abela; B.A.(Brown), M.A., Ph.D.(Penn.)

A.G. Baker; B.A.(Br.Col.), M.A., Ph.D.(Dal.)

E.S. Balaban; B.A. (Mich. St.), Ph.D. (Rockefeller)

M. Baldwin; B.A.(Tor.), M.A., Ph.D.(Wat.)

D. Donderi; B.A., B.Sc.(Chic.), Ph.D.(C'neil)

R. Koestner; B.A., Ph.D.(Roch.)

D.J. Levitin; A.B.(Stan.), M.S., Ph.D.(Oregon) (*Bell Professor of Psychology and E-Commerce*)

J. Lydon; B.A.(Notre Dame), M.A., Ph.D.(Wat.)

J. MacDougall; B.A.(Carl.), M.A., Ph.D.(McG.) (Part-time)

M.J. Mendelson; B.Sc.(McG.), A.M., Ph.D.(Harv.)

G. O'Driscoll; B.A.(Wellesley), Ph.D.(Harv.) (*William Dawson Scholar*)

Z. Rosberger; B.Sc.(McG.), M.A., Ph.D.(C'dia) (Part-time)

#### *Assistant Professors*

I. Bradley; B.Sc., M.Sc.(Tor.), Ph.D.(Wat.) (Part-time)

M-H. Ho; B.Sc., M.Phil.(Chinese HK); M.Sc., Ph.D.(Ill.)

B. Knauper; Dr.phil.(Germany)

K. Nader; B.Sc., Ph.D.(Tor.)

D. Titone; B.A.(N.Y.), M.A., Ph.D.(SUNY at Binghamton)

#### *Lecturers*

N. Allard; R. Amsel

#### *Associate Members*

F. Abbott (*School of Nursing, Psychiatry*)

C. Baker, F.A.A. Kingdom, K.Mullen, R. Hess (*McGill Vision Research Centre*)

T. Coderre (*Anesthesia*)

M.Jones-Gotman, B.Milner, T.Paus, W.Sossin, V.Sziklas, R.Zatorre (*Montreal Neurological Institute*)

H. Steiger (*Douglas Hospital Research Centre*)

#### *Adjunct Professors*

M. Bruck, S. Bursein, F. Cramer-Azima, P. Delisle, C. Garson,

P.Gregoire, L.A. Petitto, A. Routtenberg, M.Shapiro,

D.Sookman, M. Spevack, A.Surkis

#### *Part-Time Appointments*

J. Armony, J-M. Assaad, V. Bohbut, J. Legallais, M. Lepage,

M.Leyton, S.Lupien, Z. Pleszweski, S. Stotland

### 68.2 Programs offered

M.A. and M.Sc. degrees may be awarded in Experimental Psychology, but only as a stage in the Ph.D. in Experimental Psychology program.

Ph.D. in Clinical Psychology (there is no M.A. or M.Sc. program).

The aim of the Experimental program is to provide students with an environment in which they are free to develop skills and expertise that will serve during a professional career of teaching and research as a psychologist. Course work and other requirements are at a minimum. Success in the program depends on the student's ability to organize unscheduled time for self-education. Continuous involvement in research planning and execution is considered a very important component of the student's activities.



**press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.**

**Courses with numbers ending D1 and D2** are taught in two consecutive terms (most commonly Fall and Winter). Students must register for both the D1 and D2 components. No credit will be given unless both components (D1 and D2) are successfully completed in consecutive terms.

**Note:** All undergraduate courses administered by the Faculty of Science (courses at the 100- to 500-level) have limited enrolment. The course credit weight is given in parentheses after the title.

Denotes courses not offered in 2004-05.

**PSYC 501 AUDITORY PERCEPTION.** (3) (2 lectures) (Prerequisite: PSYC 212 or equivalent, or permission of instructor.) Non-mathematical presentation of the acoustics biology and perception of: loudness, pitch, spatial location, frequency specificity, musical and speech sounds. Auditory scene analysis (segregation of component sounds) in multi-sound environments. For graduate students and undergraduates in any department with some background in acoustics or perception. Lectures and student presentations.

**PSYC 503 COMPUTATIONAL PSYCHOLOGY.** (3) (Prerequisite: Permission of instructor.) (Not open to U0 or U1 students.) Application of computational methods to the simulation of psychological phenomena. Use of psychological ideas in robotic and other engineering applications. Comparison of natural and artificial intelligence. Symbolic and neural network techniques. Methods for evaluating simulations.

**PSYC 505 THE PSYCHOLOGY OF PAIN.** (3) (Fall) (2 lectures; 1 conference) (Prerequisites: any two of the following: PSYC 308, PSYC 311, PSYC 318, PSYC 522, ANAT 321, BIOL 306, PHGY 314 or permission of instructor.) An introduction to pain research and theory, with emphasis on the interactions of psychological, cultural and physiological factors in pain perception. The role of these factors in clinical pain and its management by pharmacological and non-pharmacological means will be discussed.

**PSYC 507 EMOTIONS, STRESS, AND ILLNESS.** (3) (Prerequisites: PSYC 337, PSYC 429 and permission of the instructor.) Emotional effects on peripheral physiology and the development, course, and outcome of physical disorders such as high blood pressure, coronary artery disease, ulcers, asthma, and cancer.

**PSYC 510 STATISTICAL ANALYSIS OF TESTS.** (3) (3 lectures) (Undergraduate Prerequisites: PSYC 305 or PSYC 536, PSYC 406 or permission of instructor.) This course aims to introduce students interested in developing or appraising tests to the important statistical problems and modern techniques associated with testing data. Testing situations discussed will range from one-shot classroom tests through special purpose scales to the highly refined large scale tests such as the SAT.

**PSYC 511 INFANT COMPETENCE.** (3) (1, 3 hour seminar) (Prerequisites: PSYC 351 or PSYC 352 or PSYC 353 or PSYC 380 or PSYC 450 and permission of instructor) Basic research on the nature of infant competence - both the development of mental representations/operations and expressive/communicative ability - will be examined. Implications for clinical assessment and intervention including information processing procedures as an alternative to conventional tests and treatment procedures for developmental delays will be covered.

**PSYC 522 NEUROCHEMISTRY AND BEHAVIOUR.** (3) (2 lectures) (Prerequisites: any two of the following PSYC 308, PSYC 311, PSYC 318, ANAT 321, PHGY 314, BIOL 306) (Restrictions: Not open to students who have taken or are taking PHAR 562) Anatomical, biochemical and physiological aspects of neurotransmitter systems in the brain, current theories of the function of these systems in normal and abnormal behaviour, and the actions of psychotropic drugs.

**PSYC 526 ADVANCES IN VISUAL PERCEPTION.** (3) (Fall) (2 lectures) We examine in detail the structure of the visual system, and its function as reflected in the perceptual abilities and behaviour of the organism. Parallels are also drawn with other sensory systems to demonstrate general principles of sensory coding.

**PSYC 528 VULNERABILITY TO DEPRESSION.** (3) (Prerequisite: PSYC 337 or PSYC 412 or permission of instructor. Requires departmental approval.) This course will examine in depth cognitive, behavioral, psychodynamic, biological, and developmental psychopathology models of the etiology of depression. Within each theoretical perspective, core issues, theoretical and methodological underpinnings, and research data will be examined.

**PSYC 529 MUSIC COGNITION.** (3) (Prerequisites: PSYC 212, PSYC 213, PSYC 204 (or equivalent)) Overview of major topics in the interdisciplinary study of music cognition and perception, with an emphasis on cognitive psychological and experimental approaches. Topics include: psychoacoustics, music memory, scales, tonality, neuropsychology of music, performance, talent and expertise, absolute pitch, expectation, melody and rhythm.

**PSYC 530 APPLIED TOPICS IN DEAFNESS.** (3) (Prerequisite: PSYC 340 or PSYC 316 or equivalent. Permission of instructor) Covers fundamental topics in deafness (sensory, perceptual, cognitive, social, linguistic, education and health issues) from an applied psychological perspective. Lectures and seminar presentations plus field work involving ASL/LSQ.

**PSYC 531 STRUCTURAL EQUATION MODELS.** (3) (one 2-hour lecture plus one lab) (Prerequisite: PSYC 536, PSYC 651, or equivalent, or permission of instructor.) The course introduces basic concepts underlying structural equation models (SEM). SEM, which combine regression analysis and factor analysis, are quite useful and are currently very popular in analyzing data that arise in social, developmental and clinical psychology. The students are expected to get first-hand experiences in fitting SEM, and learn how to interpret and report the results from SEM.

**PSYC 532 COGNITIVE SCIENCE.** (3) (Fall) (Prerequisites: Admission to the Cognitive Science Minor or permission of instructor. Students should ideally have some cognitive science background in at least two disciplines) The multi-disciplinary study of intelligent systems. Problems in vision, memory, categorization, choice, problem solving, cognitive development, syntax, language acquisition, and rationality. Rule-based and connectionist approaches.

**PSYC 533 INTERNATIONAL HEALTH PSYCHOLOGY.** (3) (Fall) (Prerequisite: PSYC 305 and PSYC 215 or PSYC 429 or PSYC 304 or ANTH 227.) (Departmental permission required.) The focus will be on health and illness in developing countries, in particular, on health problems (malnutrition, alcohol abuse, mental illness, family planning, and HIV) where psychosocial factors play a large role in the problem and the solution. Attempted solutions based on community participation, health education, non-governmental and international agencies will be discussed.

**PSYC 534 COMMUNITY PSYCHOLOGY.** (3) (Prerequisites: PSYC 337 and PSYC 338 or permission of instructor) (Open to Graduate students or U3 undergraduates in Psychology) (Enrolment limited) Community psychology aims to promote health in groups and communities rather than expending resources solely on relieving dysfunction in individuals. The course reviews the conceptual rationale for community psychology and explores examples of both successful and unsuccessful prevention programs. It also discusses crisis intervention, informal caregivers, self-help groups, and mental health education through the media.

**PSYC 535 ADVANCED TOPICS IN SOCIAL PSYCHOLOGY.** (3) (Prerequisites: PSYC 215, PSYC 333 and one additional course from the social and personality area of specialization, or PSYC 380. Departmental permission required.) (Graduate Students, enrolment limited) Classic and contemporary readings in a specific content area within social psychology will be assigned in order to examine the sub-area in depth. The focus will vary depending upon the speciality area of the instructor. These areas include interpersonal relationships, intergroup relations, the self, and social cognition.

**PSYC 536 CORRELATIONAL TECHNIQUES.** (3) (Winter) (Prerequisites: PSYC 204 and PSYC 305 or their equivalents, and MATH 133 or equivalent. Requires departmental approval.) The statisti-



**PSYC 708J2 CLINICAL INTERNSHIP 2.** (5) (Prerequisite: PSYC 708J1) (Students must also register for PSYC 708J3) (No credit) (W) (B) Tj Tj 4g 75 39 m 75 38.25 l 577.5 38.25 l 3c (U) Tf 0.168 Tc (N) Tj 4.nl TD 0.33 Tc -0.165 Tw ( 4275 0 TD /F1 6 Tse unless 577.5 38.1, D 0.168 T

*Post-Retirement*

R.C.Culley; B.A.(Tor.), B.D.(Knox, Tor.), M.A., Ph.D.(Tor.),  
D.D.(Mtl. Dio.Coll.)

F. Wisse; Ing.(Utrecht), B.A., B.D.(Calvin, Mich.),  
Ph.D.(Claremont)

*Professors*

M. Boutin; B.A., B.A., B.A., (Montr.), D.Th.(Munich)

*(J.W.McConnell Professor of Philosophy of Religion)*

B. Barry Levy; B.A., M.A., B.R.E.(Yeshiva), Ph.D.(N.Y.U.)

A. Sharma; B.A.(Alld.), M.A.(Syr.), M.T.S., Ph.D.(Harv.) *(Henry Birks Professor of Comparative Religion)*

K.K. Young; B.A.(Vt.), M.A.(Chic.), Ph.D.(McG.) *(James McGill Professor)*

*Associate Professors*

E.B. Aitken; A.B.(Harv.), M.Div.(Univ. of the South), Th.D.(Harv.)

D.B. Farrow; B.R.E.(Providence), M.Div.(Grace), M.Th.(Regent),  
Ph.D.(Lond.)

I.H. Henderson; B.A.(Man.), B.D.(St. Andrews), M.A.(McM.),  
D.Phil.(Oxon)

G.V. Hori; B.A.(York), M.A.(Tor.), Ph.D.(Stan.)

T. Kirby; B.A.(King's, Halifax); M.A.(Dal.); D.Phil.(Oxon)

P.G. Kirkpatrick; B.A.(McG.), M.Th.(Lond.), D.Phil.(Oxon)

G.S. Oegema; B.A., Th.D.(Free, Amsterdam); M.A., Ph.D.(Freie,  
Berlin), Dr. Theol. Habil (Tübingen)

*Assistant Professors*

G. Fiasse; B.A., M.A., Ph.D. (Louvain) *(joint appointment with Department of Philosophy)*

L.H. Sideris; B.A., M.A., Ph.D.(Ind.) *(joint appoint. with McGill School of Environment)*

D. Soneji; B.A. (Man.), Ph.D. (McG.)

*Visiting Professor*

V. Yifa; B.A.(Naticual Taiwan); M.A.(Hawaii); Ph.D.(Yale)

*Adjunct Professor*

T. Jinpa Langri

*Associate Member*

L. Turner *(Bioethics)*

*Faculty Lecturer*

J. Kanaris

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## 70.2 Programs Offered

The Faculty of Religious Studies offers programs leading to the degrees of Master of Sacred Theology (S.T.M.), Master of Arts (M.A.) (thesis) and (non-thesis), M.A. (with Specialization in Bioethics) and Doctor of Philosophy (Ph.D.).

The purpose of the M.A. (thesis) degree is to encourage

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**RELG 751 TUTORIAL ON A SELECTED TOPIC. (3)**

**RELG 751, RELG 751 TUTORIAL**

## 71.6 Courses

Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.

Courses with numbers ending D1 and D2 are taught in two consecutive terms (most commonly Fall and Winter). Students must register for both the D1 and D2 components. No credit will be given unless both components (D1 and D2) are successfully completed in consecutive terms.

The course credit weight is given in parentheses after the title.

Denotes courses not offered in 2004-05.

**RUSS 510 HIGH STALINIST CULTURE.** (3) (Fall) (Given in English)  
Novels, films, art, architecture, pageantry, rhetoric and routine of the Stalinist 1930s-40s, including socialist realism as an aesthetic doctrine, utopian blueprint, target of parody, amalgam of a submerged avantgarde and state-controlled pop culture, precursor of the postmodernist simulacrum, self-proclaimed international style and/or uniquely Russian 20th-century project.

**RUSS 619 TOPICS IN LITERARY Tave been**

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**72.2 Programs Offered**



needs for professors, social policy analysts and researchers in Canada and Quebec. This bilingual program presents characteristics unique among Canadian doctoral programs in social work. Specifically, this program aims to:

1. Prepare graduates for careers in university teaching and research, in policy development, in evaluation of practice, in intervention, consultation, or management of human services;
2. Permit students to acquire the ability to apply scientific methods of research to the study of normative, analytical, and methodological questions;
3. Stimulate original research on pressing social concerns; and
4. Facilitate exchanges among academics in a bilingual (French and English) and multicultural perspective.

Of particular value and importance is the opportunity for students to be exposed throughout their program to the multicultural and multiracial character of Montreal.

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### 73.3 Admission Requirements

#### M.S.W Program

Students who have successfully completed a B.S.W., with a minimum B average (GPA 3.0/4.0), and who have completed course work in statistics and in research methods at the undergraduate level are admissible to the Master of Social Work program. It is expected that students will have professional social work experience with supporting references.

#### Joint M.S.W./Law Program

Students must apply separately for admission to each Faculty. Students must meet or surpass the requirements for admission to both the M.S.W. program and to Law and must submit a brief statement explaining their interest in this joint program.

#### Joint Ph.D. Program (McGill University and Université de Montréal)

Students are free to seek admission to either McGill or the Université de Montréal. Students accepted into the program have access to the resources offered by both schools.

Applicants applying to the joint Ph.D. program must hold a Master's degree in social work or, exceptionally, a Bachelor's degree in social work with a Master's degree in a related subject from an accredited program. Candidates must be proficient in French and English to be able to understand teaching and class discussion in both languages and to carry out necessary reading.

Criteria considered in weighing applications include:

- 1) demonstrated intellectual ability and critical capacity;
- 2) relevant experience;
- 3) admissibility and quality of the student's project.

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### 73.4 Application Procedures

Applications are available on-line by mid-September from the School of Social Work Web site. The deadline to apply is February 1. Applications will only be considered upon receipt of all required documents.

Applications will only be considered upon receipt of all required documents.

International applicants are required to submit documented proof of competency in English, e.g., TOEFL (Test of English as a Foreign Language) minimum score of 550 on the paper-based test (213 on the computer-based test) or an equivalent test. Applicants from the U.S.A. are exempt.

All documents must be submitted to the School of Social Work, attention: Ms. Lillian Iannone, Student Affairs Coordinator.

McGill's on-line application form for graduate program candidates is available at [www.mcgill.ca/applying/online](http://www.mcgill.ca/applying/online).

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### 73.5 Program Requirements

#### MASTER OF SOCIAL WORK

The M.S.W. is a second cycle of professional study in which students pursue programs at an advanced level, building upon their

first professional degree (B.S.W.). Each student works out a study plan in consultation with her/his academic advisor in relation to the student's identified study goals.

There are two options, practice (non-thesis, including a practicum and independent study project) and thesis (thesis, no practicum). Both options carry a weight of 45 credits, and, taken on a full-time basis, both options involve three terms of study. In both options, part-time study can be arranged (see section on Duration and Time Limitations below).

#### M.S.W. (Non-Thesis Option) (45 credits)

This option is designed for students who are interested in developing skills in specialized practice and policy analysis.

#### Required Courses (24 credits)

#### Complementary Course (3 credits)

#### Elective Courses (18 credits)

#### M.S.W. (Thesis Option) (45 credits)

This option is designed for students who have strong research interests.

#### Required Courses (33 credits)

#### Complementary Course (3 credits)

#### Elective Courses 3 credits









hours of work per week in the Fall and Winter terms. Students who wish to be considered for such assistantships should inform the Graduate Admissions Director, Leacock 712, in writing and preference will be given to those dossiers completed by February 15th.

A limited number of differential fee waivers are also available for international students. Several research assistantships may be available from faculty members.

### 74.3 Admission Requirements

Applicants must have a Bachelor's degree with a standing equivalent to a Cumulative Grade Point Average (CGPA) of 3.3 or better out of a possible 4.0. The degree may be either in Sociology – in which case it should be equivalent to the Honours B.A. degree at McGill – or it may be in another relevant social science. In the latter case, applicants may be required to take some additional Sociology courses to fill gaps in their background.

The strength of an applicant's academic record is of primary importance in consideration of an applicant's dossier. For a detailed description of courses open to graduates and undergraduates, and of preparation required of McGill University honours students, candidates should consult the *Undergraduate Programs Calendar* via on the Web at [www.mcgill.ca](http://www.mcgill.ca).

All applicants are asked to submit two letters of recommendation and two certified copies of their university-level grades along with an example of their written work. Applicants who have received a Master's degree at a university other than McGill should submit a copy of their thesis or evidence of equivalent research experience with their application for admission. The applicant's dossier must be completed by February 15th to be considered for the McGill Awards Competition and the internal Teaching Assistantship competition.

Applicants not registered at Canadian universities must submit with their applications the results of the Verbal and Quantitative aptitude tests of the Graduate Record Examination. Canadian students are also encouraged to submit the results of this test with their application. Arrangements to take the Graduate Record Examination should be made directly with the Educational Testing Service, Box 955, Princeton, New Jersey 08540, USA. The Test of English as a Foreign Language (TOEFL) is also required of all non-Canadian students whose mother tongue is not English. The minimum acceptable score for the TOEFL exam is 580 on the paper-based test or 237 on the computer-based test.

Candidates who lack sufficient preparation in the social sciences, but whose academic record justifies consideration for eventual admission to the Master's graduate program, must register for a qualifying year during which they are required to take courses to broaden their knowledge of sociology. Candidates must achieve a final mark of at least a B in these courses and an average in all courses of at least B+; in general, they must, in the opinion of the Department, have achieved sufficient preparation in the subject matter of sociology before they will be allowed to proceed with graduate work. All candidates are expected to have taken courses in statistics, research methods and sociological theory at the undergraduate level.

The program of study is designed to give students an advanced understanding of a major field in sociology, of current methods of sociological research, and of some principal theoretic issues in the discipline. Three terms of residence study is the minimum requirement for a Master's degree.

#### M.A. in Medical Sociology

The program is open to students with a social sciences, health professions or health sciences background. It is interdisciplinary in nature and includes required courses offered by both participating departments as well as a research thesis based on original research. For additional information concerning this program, please consult the Social Studies of Medicine section or the Web site, [www.mcgill.ca/ssom](http://www.mcgill.ca/ssom).

### 74.4 Application Procedures

Please note that the dossier must be complete with ALL of the following information before the applicant will be considered for entrance to the graduate program:

1. Application form.
2. Statistics, Theory, Methods form.
3. Two certified copies of undergraduate and graduate level transcripts. Please provide an official translation if the original is not in English or French.
4. Two letters of reference on the departmental forms enclosed with the graduate application package.
5. Test results (Graduate Record Examination (GRE) / Test of English as a Foreign Language (TOEFL) (if applicable) minimum score: 580 on the paper-based test or 237 on the computer-based test.
6. Statement of Academic Background - a brief statement of the applicant's interests and the areas of sociology he/she wishes to study at McGill.
7. One or two samples of written work. This can be in the form of a graded paper or a chapter from a thesis and must be at least 15 typewritten pages in length translated into English or French.
8. M.A. Option Form (for M.A. applicants only).
9. \$60 application fee (certified cheque, money order or credit card payment).
10. Two address labels which will serve to acknowledge both the receipt of the application and the decision taken by the Graduate Committee.

Applicants may apply using one of three formats:

1. on-line (Web) Application  
[www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate)
2. Adobe Acrobat PDF Application  
[www.arts.mcgill.ca/programs/sociology/grad/admissions.html](http://www.arts.mcgill.ca/programs/sociology/grad/admissions.html)
3. Paper Application  
[www.arts.mcgill.ca/programs/sociology/grad/admissions.html](http://www.arts.mcgill.ca/programs/sociology/grad/admissions.html)

Applications can be obtained by contacting the Graduate Secretary, Department of Sociology at (514) 398-6847, sending a fax to (514) 398-3403, an e-mail to [graduate.sociology@mcgill.ca](mailto:graduate.sociology@mcgill.ca) or sending a request in writing to the Sociology Department.

#### M.A. in Medical Sociology

Admission is granted by a joint admissions committee made up of representatives from Sociology and Social Studies of Medicine.

### 74.5 Program Requirements

#### M.A. PROGRAM OPTIONS

The M.A. degree has six options:

- non-thesis option consisting of seven required courses plus a research paper;
- thesis option with five required courses and a thesis;
- thesis option in Medical Sociology, which requires six courses plus a thesis;
- non-thesis option in Medical Sociology which requires seven courses plus a research paper;
- non-thesis option in Social Statistics which requires seven courses (supplemented by further statistical courses) plus a statistics-based research paper;
- thesis option in Neotropical Environment.

Although the non-thesis option requires more course work, students taking this option are likely to obtain the M.A. more rapidly than those in the thesis option because of the difficulty and length of time involved in completing an M.A. thesis. The expectation is that most students will choose the non-thesis Master's program so as to progress more quickly, especially those wishing to pursue a doctoral degree. The programs are described in more detail below.

**M.A. Degree Program Non-Thesis Option (45credits)**  
**Required Courses (12 credits)**

Should a student be granted an exemption from any one or more of these courses by the Graduate Studies Committee, another substantive seminar must be substituted in its place.

**Elective Courses (9 credits)**

**added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.**

**Note:** All undergraduate courses administered by the Faculty of Arts (courses at the 100- to 500-level) have limited enrolment.

All 300, 400 and 500-level Sociology courses listed in the Faculty of Arts Calendar are open to graduate students and can be taken for graduate credit provided appropriate work load adjustments are agreed upon with the instructor.

The course credit weight is given in parentheses after the title.

Denotes courses not offered in 2004-05.

**SOCI 504 QUANTITATIVE METHODS 1.** (3) (Prerequisites: SOCI 350 and SOCI 461 or equivalents) Analysis of quantitative information, especially in large, survey-type, data sets. Use of computer programs such as SPSS and SAS. Topics include: cross tabulations with an emphasis on multi-dimensional tables, multiple correlation and regression, and, the relationship between individual and aggregate level statistical analyses. Special reference to demographic techniques.

**SOCI 505 QUANTITATIVE METHODS 2.** (3) (Prerequisite: SOCI 504) Topics include: problems - and solutions - in regression analysis, models for categorical dependent variables, including logit, log-linear, and linear probability models, measurement models, structural equation models with latent variables (LISREL), and time series and panel analysis.

**SOCI 510 SEMINAR IN SOCIA**





by a research supervisor willing to provide laboratory space and direction for their research work.

#### **Ph.D. Program**

Admission is usually from the M.Sc. program either upon completion of the M.Sc. degree, or by transfer from the first year of M.Sc. to the second year of Ph.D. studies. Request for such transfer is to be made in writing by the thesis supervisor during the candidate's first year of M.Sc. studies, not later than March 30th for students enrolled in September, or November 1st for those registered in January. **Transfer is granted on the basis of an examination administered by the student's Research Supervisory Committee.** Exceptional students with a minimum 3.5/4.0 CGPA may apply directly to the Ph.D. program.

Students with an M.Sc. degree from other departments or from other recognized universities whose M.Sc. topic is closely related to the subject of their Ph.D. research may be admitted directly into the Ph.D. program, at the level of Ph.D.2, at the discretion of the Department. Exceptional students with a Master's degree unrelated to their proposed research may be admitted to Ph.D.1.

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### **75.4 Application Procedures**

Applicants must submit a completed application form including a brief curriculum vitae, a short description of the proposed thesis research (prepared by the student and/or the prospective research director), \$60 (payable by credit card, certified cheque or money order to McGill University), as well as two copies of all academic transcripts and two letters of recommendation mailed directly to the Department. A letter of intent and a memorandum of agreement are also required from the prospective supervisor.

Deadline for receipt of complete applications:

Canadian applicants: May 1 for September (Fall term)  
September 1 for January (Winter term)

International applicants: February 2 for September (Fall term)  
August 1 for January (Winter term)

McGill's on-line application form for graduate program candidates is available at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

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### **75.5 Program Requirements**

#### **Graduate Diploma in Surgical Health Care Research** (30credits)

This diploma program consists primarily of coursework, however a research project must be completed to obtain the required 30 credits. The program is designed to be completed within one year.

**Required Courses** (18 credits)

**Complementary Courses** (12 credits)

#### **M.Sc. Program** (48 credits)

The M.Sc. program consists of research work in preparation of cm.71216d 30

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## 76.2 Programs Offered

The objective of the School is to produce qualified professional urban planners for the public and the private sectors. Training is provided at the post-graduate level; the degree offered is the Master of Urban Planning (M.U.P.).

Upon completion of the two-year program of studies, graduates are expected to have acquired basic planning skills, a broad understanding of urban issues, and specialized knowledge in a field of their own choice.

The program of study offered by the School is fully recognized by the Ordre des Urbanistes du Québec (O.U.Q.) and the Canadian Institute of Planners (C.I.P.). Graduates can become full members of these professional organizations after meeting their internship requirements.

Modern urban planning developed into a profession in the early decades of the twentieth century, largely as a response to the appalling sanitary, social and economic conditions of rapidly developing industrial cities. Initially the disciplines of architecture, civil engineering and public health provided the nucleus of concerned professionals; beautification schemes and infrastructure works marked the early stages of public intervention in the nineteenth century. Architects, engineers and public health specialists were joined by economists, sociologists, lawyers and geographers as the complexities of the city's problems came to be more fully understood and public pressure mounted for their solution. Contemporary urban and regional planning techniques for survey, analysis, design and implementation developed from an interdisciplinary synthesis of these various fields.

Today, urban planning can be described as the collective management of urban development. It is concerned with the welfare of communities, control of the use of land, design of the built environment, including transportation and communication networks, and protection and enhancement of the natural environment. It is at once a technical and a political process which brings together actors from the public, private and community spheres. Planners participate in that process in a variety of ways, as designers and analysts, advocates and mediators, facilitating the search for equitable and efficient solutions to urban development problems.

McGill University was the first institution in Canada to offer a full-time planning program. An inter-disciplinary program was established in 1947, in which students combined a master's degree in Urban Planning with one in a related field. An autonomous program was established in 1972. It became the School of Urban Planning in 1976, a unit within the Faculty of Engineering.

Students come to the School from diverse backgrounds, the physical sciences, the traditional professions, such as architecture and engineering, and the social sciences. Alumni of the School work as planners and designers at various levels of government, in non-profit organizations and with private consulting firms. Their expertise ranges from historic preservation to traffic management, from housing development to computer imaging. They devote their efforts in increasing numbers to environmental planning and sustainable development.

The School is a partner in the Montreal Interuniversity "Group Urbanization and Development", a consortium recognized by CIDA as a Centre of Excellence, which is devoted to the study of urban problems and the formulation of policies in developing regions. Faculty and students collaborate actively with members of other McGill departments, notably Architecture, Geography, Civil Engineering and Law, and with colleagues at other institutions in Canada and abroad.

## 76.3 Admission Requirements

The M.U.P. degree is open to students holding a bachelor's degree or equivalent in Anthropology, Architecture, Economics, Engineering, Environmental Studies, Geography, Law, Management, Political Science, Social Work, Sociology or Urban Studies. Students from other backgrounds are considered for admission on an individual basis.

In addition to the documents for admission required by the Graduate and Postdoctoral Studies Office, the following must be submitted:

1. Statement of specific interest in the area of Urban Planning.
2. For architects only, a portfolio containing at least five (5) examples of architectural work accomplished in school and in practice. (Portfolios are not to exceed 8½" x 11" in size.)
3. For international students only. The minimum TOEFL requirement is 600 (paper-based test) or 250 (computer-based test).

The deadline for submitting applications and supporting material is March 1st.

McGill's on-line application form for graduate program candidates is available at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

### Awards and Financial Assistance

For information regarding awards and financial assistance, please refer to the Graduate and Postdoctoral Studies Office *Graduate Fellowships and Awards Calendar*.

## 76.4 Program Requirements

The program in Urban Planning requires two years of study (69credits). A three-month internship with a member of a recognized planning association is required.

Students are required to prepare a Supervised Research Project which may take the form of investigative research, an impact study, a development project or a plan. It may be undertaken jointly with another student.

### Required Courses (51 credits)

PUB1004*	(3)	Land Use Planning
URBP604	(6)	Planning Projects 3
URBP606	(3)	Supervised Research Seminar
URBP609*	(3)	Planning Graphics
URBP612	(3)	History and Theory of Planning
URBP622	(6)	Planning Project 1
URBP623	(3)	Planning Projects 2
URBP628	(6)	Practical Experience
URBP630	(3)	Supervised Research Project 1
URBP631	(6)	Supervised Research Project 2
URBP632	(6)	Supervised Research Project 3
URBP633	(3)	Planning Methods

Students who have completed the material for courses marked with an \* may request permission from the instructor to substitute another course.

### Complementary Courses (12 - 18 credits)

at least 12 credits, a minimum of 4 courses, must be selected from the following list. It is highly recommended that students complete at least one course in each of the disciplines: housing, transportation, environment and design.

ARCH378	(3)	Site Usage
ARCH527	(3)	Civic Design
ARCH528	(3)	History of Housing
ARCH529	(3)	Housing Theory
ARCH550	(3)	Urban Planning 1
ARCH551	(3)	Urban Planning 2
CIVE540	(3)	Urban Transportation Planning
GEOG351	(3)	Quantitative Methods
URBP501	(2)	Principles and Practice 1
URBP505	(3)	Geographical Information Systems
URBP605	(3)	Graduate Seminar
URBP607	(3)	Reading Course: Urban Planning
URBP614	(3)	Urban Environmental Planning
URBP616	(3)	Selected Topics 1
URBP617	(3)	Selected Topics 2
URBP618	(3)	Selected Topics 3
URBP619	(3)	Transportation and Land Development
URBP620	(3)	Computer Applications in Planning
URBP621	(3)	Theories of Urban Form
URBP625	(2)	Principles and Practice 2

**Electives** (0 - 6 credits)

Students may select additional courses that would be helpful in developing an in-depth knowledge of one or more subject areas in the field of planning. These courses must be at the 500 or 600 levels. They may be taken in any academic unit at McGill or at another university. Frequent choices are classes in real-estate analysis, urban geography, sociology, anthropology, law, politics, and environmental science. Students must confirm that the elective course(s) they select will be counted towards the MUP degree prior to registration.

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**76.5 Courses**

**Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.**

The course credit weight is given in parentheses after the title.

Denotes courses not offered in 2004-05.

**URBP 501 PRINCIPLES AND PRACTICE I.** (2) This six-week intensive course exposes students to issues and techniques that are applicable in diverse professional planning contexts. The subject matter, geographic area, scale of intervention and institutional location of planning varies from semester to semester. The course focuses on a specific case study and is taught by a visiting lecturer with professional experience in the selected subject matter.

**URBP 505 GEOGRAPHIC INFORMATION SYSTEMS.** (3) An introduction to fundamental geographic information system (GIS) concepts and a range of GIS applications in urban and regional planning.

**URBP 506 ENVIRONMENTAL POLICY AND PLANNING.** (3) (Restriction: This course is open to students in U3 and above) Analytical and institutional approaches for understanding and addressing urban and other environmental problems at various scales; characteristics of environmental problems and implications; political-institutional context and policy instruments; risk perception and implications; cost-benefit analysis, risk assessment, multiple-objectives approaches, life-cycle analysis; policy implementation issues; case studies.

**URBP 507 PLANNING AND INFRASTRUCTURE.** (3) (Corequisites: Enrolment in full "Barbados Field Study Semester"; AGRI 413, AGRI 519 or CIVE 519 or URBP 519, AGRI 452 or CIVE 452.) An exploration of the interrelationship between land-use planning and infrastructure provision, especially water and sewerage. An examination of their policy and regulatory frameworks and other methodology of plan making and evaluation.

**URBP 519 SUSTAINABLE DEVELOPMENT PLANS.** (6) (Corequisites: Enrolment in full "Barbados Field Study Semester"; AGRI 413, AGRI 519 or CIVE 519 or URBP 519, AGRI 452 or CIVE 452, URBP 507) (Restrictions: Not open to students who have taken AGRI 519 or CIVE 519.) Geared for solving real-world environmental problems related to water at the local, regional and international scale in Barbados. Projects to be designed by instructors in consultation with university, government and NGO partners and to be conducted by teams of 2 to 4 students in collaboration with them.

**URBP 604 PLANNING PROJECTS 3.** (6) (Prerequisites: Planning Projects I and II.) The second-year studio is designed to permit the study of planning problems in depth. Problems are chosen depending on the experience and research interests of the participants, or for their topical nature.

**URBP 605 GRADUATE SEMINAR.** (3)

**URBP 606 SUPERVISED RESEARCH SEMINAR.** (3) The supervised

performance by the supervisor, as well as a short report by the student, forms the basis for assessment.

**URBP 629 CITIES IN A GLOBALIZING WORLD.** (3) (3-0-6) (Prerequisite: URBP 622 or permission of instructor.)

**URBP 630 SUPERVISED RESEARCH PROJECT 1.** (3) The Supervised Research Project is intended to focus a student's interests on a particular area of enquiry at the end of studies for a Master's Degree in Planning. It should ideally provide the transition into practice or more advanced studies. Joint research projects are allowed.

**URBP 631 SUPERVISED RESEARCH PROJECT 2.** (6) Continuation

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