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This publication provides guidance to prospects, applicants, students, faculty and staff.

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Publication Information

Published by

Enrolment Services
McGill University
3415 McTavish Street
Montreal, Quebec, H3A 0C8
Canada

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1 Dean's Welcome

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Note: For inquiries regarding specific graduate programs, please contact the appropriate department.

2.3 General Statement Concerning Higher Degrees

Graduate and Postdoctoral Studies (GPS) oversees all programs leading to graduate diplomas, certificates, and higher degrees, with the exception of some programs in the School of Continuing Studies. It is responsible for admission policies, the supervision of graduate students' work, and for recommending to Senate those who may receive the degrees, diplomas, and certificates.

3 Important Dates 2012–2013

For all dates relating to the academic year, consult *www.mcgill.ca/importantdates*.

4 Graduate Studies at a Glance

4.1 Graduate and Postoctoral Degrees Offered by Faculty

McGill University offers graduate and postdoctoral programs in the following units (organized by their administering home faculty):

Faculty of Agricultural and Environmental Sciences	**Degrees Available**
: Agricultural Economics	M.Sc.
: Animal Science	M.Sc., M.Sc.A., Ph.D.
: Bioresource Engineering	M.Sc., M.Sc.A., Ph.D., Graduate Certificate
: Biotechnology	M.Sc.A., Graduate Certificate
: Dietetics and Human Nutrition	M.Sc., M.Sc.A., Ph.D., Graduate Diploma
: Food Science and Agricultural Chemistry	M.Sc., Ph.D.
: Natural Resource Sciences	M.Sc., Ph.D.
: Parasitology	M.Sc., Ph.D.
: Plant Science	M.Sc., M.Sc.A., Ph.D., Graduate Certificate
Faculty of Arts	**Degrees Available**
: Anthropology	M.A., Ph.D.
: Art History	M.A., Ph.D.
Classics – see *: History and Classical Studies*	N/A
: Communication Studies	M.A., Ph.D.
: East Asian Studies	M.A., Ph.D.
: Economics	M.A., Ph.D.
: English	M.A., Ph.D.
: French Language and Literature	M.A., Ph.D.
section 11.6: Geography	M.A., Ph.D.
: History and Classical Studies	M.A., Ph.D.
: Institute for the Study of International Development	N/A
: Islamic Studies	M.A., Ph.D.

Faculty of Arts	Degrees Available
: Jewish Studies	M.A.
: Languages, Literatures, and Cultures	M.A., Ph.D.
: Linguistics	M.A., Ph.D.
section 11.7: Mathematics and Statistics	M.A., Ph.D.
: Philosophy	M.A., Ph.D.
: Political Science	M.A., Ph.D.

Degree		Prerequisites
		Post-professional degree – an M.Arch. (professional degree) or equivalent professional degree.
Master of Business Administration	M.B.A.	An undergraduate degree from an approved university. See *: M.B.A. Program*.
Master of Business Administration with integrated Bachelor of Civil Law / Bachelor of Laws	M.B.A. with B.C.L./LL.B.	See *: M.B.A. Program*.
		See *: M.B.A. Pr*

Thesis/Non-Thesis	Options

Program	Thesis/Non-Thesis	Options
Law	Thesis, Non-Thesis	Bioethics, European Studies (Thesis) Air and Space Law, Environment, Comparative La

Program Areas	Thesis/Non-Thesis	Options
Food Science and Agricultural Chemistry	Thesis, Non-Thesis	Food Safety (Non-Thesis)
Genetic Counselling	Non-Thesis	N/A
Geography	Thesis	Environment, Neotropical Environment
Human Genetics	Thesis	Bioethics, Bioinformatics
Human Nutrition	Thesis	N/A
Kinesiology and Physical Education	Thesis, Non-Thesis	N/A
Mathematics and Statistics	Thesis, Non-Thesis	Bioinformatics, Computational Science and Engineering
Mechanical Engineering	Thesis	N/A
Medical Radiation Physics	Thesis	N/A
Microbiology	Thesis	Environment
Microbiology and Immunology	Thesis	N/A
Mining and Materials Engineering	Thesis	N/A
Neuroscience	Thesis	N/A
Otolaryngology	Thesis	N/A
Parasitology	Thesis	Bioinformatics, Environment
Pathology	Thesis	N/A
Pharmacology	Thesis	Chemical Biology
Physics	Thesis	N/A
Physiology	Thesis	Bioinformatics
Plant Science	Thesis	Bioinformatics, Environment, Neotropical Environment
Psychiatry	Thesis	N/A
Psychology	Thesis	N/A
Public Health	Non-Thesis	Environment
Rehabilitation Sciences	Thesis, Non-Thesis	N/A
Renewable Resources	Thesis, Non-Thesis	Environment, Neotropical Environment (Thesis) Environmental Assessment (Non-Thesis)

Master of Science, A

Programs leading to the degree of Doctor of Philosophy are offered in the following areas:

Program	Options	Offered by Faculty/School
Animal Science	Bioinformatics	Faculty of Agricultural and Environmental Sciences
Anthropology	Neotropical Environment	Faculty of Arts
Architecture	N/A	Faculty of Engineering
Art History	Gender and Women's Studies	Faculty of Arts
Atmospheric and Oceanic Sciences	N/A	Faculty of Science
Biochemistry	Bioinformatics, Chemical Biology	Faculty of Medicine
Biology	Bioinformatics, Developmental Biology, Environment, Neotropical Environment	Faculty of Science
Biomedical Engineering	Bioinformatics	Faculty of Medicine
Bioresource Engineering	Environment, Neotropical Environment	Faculty of Agricultural and Environmental Sciences
Biostatistics	N/A	Faculty of Medicine
Cell Biology	N/A	Faculty of Medicine
Chemical Engineering	N/A	Faculty of Engineering
Chemistry	Chemical Biology	Faculty of Science
Civil Engineering	N/A	Faculty of Engineering
Classics	N/A	Faculty of Arts
Communication Sciences and Disorders	Language Acquisition	Faculty of Medicine
Communication Studies	Gender and Women's Studies	Faculty of Arts
Computer Science	Bioinformatics	Faculty of Science
Counselling Psychology	N/A	Faculty of Education
Earth and Planetary Sciences	Environment	Faculty of Science
Economics	N/A	Faculty of Arts
Educational Psychology	N/A	Faculty of Education
Educational Studies	Gender and Women's Studies, Language Acquisition	Faculty of Education
Electrical Engineering	N/A	Faculty of Engineering
English	N/A	Faculty of Arts
Entomology	Environment, Neotropical Environment	Faculty of Agricultural and Environmental Sciences
Epidemiology	N/A	Faculty of Medicine
Experimental Medicine	Environment	Faculty of Medicine
Experimental Surgery (Surgical Research)	N/A	Faculty of Medicine
Food Science and Agricultural Chemistry	N/A	Faculty of Agricultural and Environmental Sciences
French Language and Literature	Gender and Women's Studies	Faculty of Arts
Geography	Environment, Gender and Women's Studies, Neotropical Environment	Faculty of Arts, Faculty of Science
German	N/A	Faculty of Arts
Hispanic Studies	N/A	Faculty of Arts
History	N/A	Faculty of Arts
Human Genetics	Bioinformatics	Faculty of Medicine
Human Nutrition	N/A	Faculty of Agricultural and Environmental Sciences
Information Studies	N/A	Faculty of Education

Program	Options	Offered by Faculty/School
Islamic Studies	Gender and Women's Studies	Faculty of Arts
Linguistics	Language Acquisition	Faculty of Arts
Management	N/A	Desautels Faculty of Management
Mathematics and Statistics	Bioinformatics	Faculty of Arts, Faculty of Science
Mechanical Engineering	N/A	Faculty of Engineering
Microbiology	N/A	Faculty of Agricultural and Environmental Sciences
Microbiology and Immunology	Bioinformatics, Environment	Faculty of Medicine
Mining and Materials Engineering	N/A	Faculty of Engineering
Music	(Composition, Music Education, Musicology, Music Technology, Sound Recording, Theory), Gender and Women's Studies	Schulich School of Music
Neuroscience	N/A	Faculty of Medicine
Nursing	Psychosocial Oncology	Ingram School of Nursing
Occupational Health	N/A	Faculty of Medicine
Parasitology	Bioinformatics, Environment	Faculty of Agricultural and Environmental Sciences
Pathology	N/A	Faculty of Medicine
Pharmacology	Chemical Biology	Faculty of Medicine
Philosophy	Environment, Gender and Women's Studies	Faculty of Arts
Physics	N/A	Faculty of Science
Physiology	Bioinformatics	Faculty of Medicine
Plant Science	Bioinformatics, Environment, Neotropical Environment	Faculty of Agricultural and Environmental Sciences
Political Science	Gender and Women's Studies	Faculty of Arts
Psychology	Language Acquisition, Psychosocial Oncology	Faculty of Arts, Faculty of Science
Rehabilitation Science	N/A	School of Physical and Occupational Therapy
Religious Studies	Gender and Women's Studies	Faculty of Religious Studies
Renewable Resources	Environment, Neotropical Environment	Faculty of Agricultural and Environmental Sciences
Russian	N/A	Faculty of Arts
School/Applied Child Psychology	N/A	Faculty of Education
Social Work	N/A	Faculty of Arts
Sociology	Environment, Gender and Women's Studies	Faculty of Arts

Joint Doctor of Philosophy Degrees

The following joint Ph.D. programs are offered:

Nursing (McGill / Université de Montréal)
Management (McGill / Concordia / H.E.C. / UQAM)
Social Work (McGill / Université de Montréal)

***Ad Hoc* Doctor of Philosophy Degrees (Ph.D. (*Ad Hoc*))**

Several departments offer the possibility of directly entering a Ph.D. program on an *ad hoc* basis, or, with the permission of the supervisor and the approval of the Graduate Program Director, exceptional students may transfer from the master's program to the *ad hoc* Ph.D. program.

Program	Options	Offered by Faculty/School
East Asian Studies	N/A	Faculty of Arts
Italian Studies	N/A	Faculty of Arts

Note: The master's degree must have been awarded before initial registration in the doctoral program; otherwise, the admission level will be at Ph.D. 1 and residency will be extended to three years. Once the level of admission is approved, it will not be changed after obtaining the master's degree if the date falls after registration in the program. If a previous awarded degree is a condition of admission, it must be fulfilled before registration in another program.

As a rule, no more than one-third of the McGill program formal coursework can be credited with courses from another university.

Comprehensive Examinations – Doctoral

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 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. For more information, see *Programs, Courses and University Regulations > University Regulations and Resources > Graduate > Guidelines and Policies > : Ph.D. Comprehensives Policy*.

Language Requirements – Doctoral

Most graduate departments in the Faculties of Agricultural and Environmental Sciences, Education, Engineering, Management, Medicine, and Science do not require a language examination. Students should inquire in their departments if there are any such requirements or whether any other requirements have been substituted for those relating to languages.

Graduate departments in the Faculties of Arts, Music, and Religious Studies usually require proficiency in one or two languages other than English. In all cases, **students should consult departmental regulations concerning language requirements**.

Language requirements for the Ph.D. degree are met through demonstrated reading knowledge. The usual languages are French, German, or Russian, but in particular instances another language may be necessary.

All language requirements must be fulfilled and the grades reported **before** submission of the thesis to GPS (Thesis Section).

Students must contact their departments to make arrangements to take the Language Reading Proficiency Examinations. Students may, however, demonstrate competence by a pass standing in two undergraduate language courses taken at McGill (see departmental regulations).

Candidates are advised to discharge their language requirements as early in their program as possible.

Students expecting to enrol in Professional Corporations in the province of Quebec are advised to become fluent in both spoken and written French.

Courses in French language are a

English and French language courses offered by the French Language Centre (Faculty of Arts) or the School of Continuing Studies may not be taken for coursework credits toward a graduate program.

All substitutions for coursework in graduate programs, diplomas, and certificates must be approved by GPS.

Courses taken at other institutions to be part of the requirements of a program of studies must be approved by GPS before registration. Double counting is not permitted.

6 Graduate Admissions and Application Procedures

6.4 Admission Tests

Revision, October 2012. Start of revision.

Graduate Record Examination (GRE)

The Graduate Record Examination (GRE) (Educational Testing Service, Princeton, NJ 08540) consists of a relatively advanced test in the candidates' specialty, and a general test of their attainments in 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. Refer to *www.ets.org/gre* for further information. 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 ensure that official test results are sent to McGill directly by the testing service.

This credential is of special importance in the case of applicants whose education has been interrupted, or has not led directly toward 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 a6 0. Sfi 0 Clvu1 0 C3ity est7.150 0 0 1 67.52 5riousome ss Tm(vision.)Tj/F3 8.1 Tf1 05j1347.52 677.12 TmManage the tober 2012.

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 for a master's. 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 all cases, after the completion of a Qualifying year or term, an applicant interested in commencing a degree program must apply for admission by the Dates for Guaranteed Consideration. Successful completion of the work in the Qualifying Program (B- in all courses) does not automatically entitle the student to proceed toward a degree. Qualifying year students must apply for admission to the program for which they seek qualification.

In cases where a department recommends a change of registration from Qualifying Program (Fall) to Master's Degree First Year (Winter), **students must apply to the degree program by the Winter departmental Dates for Guaranteed Consideration**. A Qualifying year applicant admitted to a Winter term as a first term of studies must apply for admission for a Fall term as his/her second term of studies.

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

Revision, December 2012. Start of revision.

Students may, with special permission granted by the Graduate Admissions Committee (composed of the Dean and Associate Deans of Graduate and Postdoctoral Studies) and in consultation with the Graduate Admissions Unit of Enrolment Services, be admitted to two degree programs or to two departments or faculties. Students are **never** permitted to pursue two **full-time** degree programs concurrently.

Revision, December 2012. End of revision.

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. Approval for the joint program must be obtained from Graduate and Postdoctoral Studies. The request shall be signed by the Chairs of both departments involved and shall explicitly list the conditions imposed. The student shall undertake research under the joint supervision of both departments.

This program is described in more detail at *www.mcgill.ca/gradapplicants/apply/prepare#program*.

6.10 Reinstatement and Admission of Former Students

Revision, December 2012. Start of revision.

Students who have not been registered for a period of less than two years and who have not officially withdrawn from the University by submitting a signed Withdrawal Form to Service Point are eligible to be considered for reinstatement into their program. The student's department must recommend, in writing, that the student be reinstated, stipulating any conditions for reinstatement that it deems appropriate. If the student's department chooses not to recommend reinstatement, the student may appeal to the Associate Dean (Graduate and Postdoctoral Studies). The decision of the Associate Dean (Graduate and Postdoctoral Studies) shall be final and not subject to further appeal.

Revision, December 2012. End of revision.

Reinstatement fees will be charged in addition to the fees due for the academic session into which the student has been reinstated. The amount of the reinstatement fees is the tuition portion of fees owed for all unregistered terms, up to a maximum of two years just prior to the term of reinstatement.

If an individual has not registered for a period of more than two years, their student file will be closed. These individuals and those who have formally withdrawn may be considered for admission. Applicants' admission applications will be considered as part of the current admission cycle, in competition with other people applying during that cycle and in accordance with current graduate admission procedures and policies.

Procedure: Requirements for completion of the program will be evaluated. Some of these requirements may need to be redone or new ones may be added. Applicants must inquire about the fees that will be charged.

Revised – Council of February 9, 2004.

6.11 Deferral of Admission

Under exceptional circumstances, an admission for a particular semester can be considered for a deferral. This can be considered only if the student has not registered. If the student has already registered, no deferral can be granted. The student must withdraw from the University and apply for admission to a later term.

7 Fellowships, Awards, and Assistantships

Graduate and Postdoctoral Studies
(Fellowships and Awards Section)
James Administration Building, Room 400
845 Sherbrooke Street West
Montreal, QC H3A 0G4
Telephone: 514-398-3990
Fax: 514-398-2626
Website: *www.mcgill.ca/gps/students/funding/students-postdocs*

The Fellowships and Awards section of Graduate and Postdoctoral Studies provides processing services for 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 in 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.

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8.2 Guidelines and Policy for Academic Units on Postdoctoral Education

The general guidelines listed below are meant to encourage units to examine their policies and procedures to support postdoctoral education. Every unit hosting Postdocs should have explicitly stated policies and procedures for the provision of postdoctoral education as well as established means for informing Postdocs of policies, procedures, and privileges (e.g., orientation 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 parental or health leave 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 a McGill professor, including Adjunct Professors, who is a member of McGill's academic staff qualified in the discipline in which training is being provided and with the abilities to fulfil responsibilities as a supervisor of the research and as a mentor for career development. 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 Enrolment Services. Initial 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 funding and where the unit can provide assurance of the necessary resources to permit postdoctoral education.

ii. Upon registration, the Postdoc will be eligible for a University identity card issued by Enrolment Services.

3. Appointment, Pay, Agreement of Conditions

i. Appointments may not exceed your registration eligibility status.

ii. In order to be registered as a Postdoc, you must be assured of financial support other than from personal means during your stay at McGill University, equivalent to the minimal stipend requirement set by the University in accordance with guidelines issued by federal and provincial research granting agencies. There are no provisions for paid parental 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 template Letter of Agreement and supporting document—*Commitments of Postdoctoral Scholars and Supervisors*—on the web at *www.mcgill.ca/gps/postdocs/fellows/letter*). This should stipulate, for example, the purpose of the postdoctoral appointment (research training and the advancement of knowledge), the duration of the fellowship/financial support, 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 (see *section 8.3: Vacation Policy for Graduate Students and Postdocs* and *Programs, Courses and University Regulations > University Regulations and Resources > Graduate > : 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 on Student Rights and Responsibilities* ("Green Book"), available at *www.mcgill.ca/secretariat/policies/students*.

ii. Postdocs have full graduate student borrowing privileges in McGill libraries through their identity card.

iii. As a rule, Postdocs who are Canadian citizens or who have Permanent Resident status may take courses for credit. Admission to such courses should be sought by submitting application documents directly to the appropriate program by the Postdoc. They must be admitted by the department offering the courses as Special Students. These Postdocs may only be enrolled as part-time students in non-degree granting programs. They will be charged fees for these courses.

iv. Postdocs may be listed in the McGill directory. The Computing Centre will grant Postdocs email privileges on the same basis as graduate students upon presentation of a valid identity card.

v. The Department of Athletics will grant Postdocs access to sports facilities upon presentation of their identity card. A fee will be charged on an annual or term basis.

vi. Postdocs are mandatory members of the Post-Graduate Students' Society (PGSS) and an annual association fee is automatically charged. PGSS fees are mandatory. Postdocs are permitted membership in the Faculty Club; an annual fee will be charged for this membership.

vii. Postdocs are encouraged to participate in Professional Development Workshops provided by Graduate and Postdoctoral Studies and Teaching and Learning services. These sessions are usually free of charge.

viii. Postdocs have access to the services provided by the Ombudsperson.

ix. Postdocs may enrol as part-time students in the second language written and spoken English/French courses offered by the School of Continuing Studies/French Language Centre. Postdocs will be charged tuition for these courses. International Postdocs may be required to obtain a CAQ and a Study Permit.

x. Access to student services and athletic services are available to the Postdoc on an opt-in basis. Fees are applicable.

5. Responsibilities

i. Postdocs are subject to the responsibilities outlined in the *Handbook on Student Rights and Responsibilities* ("Green Book"), available at *www.mcgill.ca/secretariat/policies/students*.

ii. Each academic unit hosting Postdocs should clearly identify Postdocs' needs and the means by which they will be met by the unit.

iii. Each academic unit should assess the availability of research supervision facilities, office space, and research funding before recruiting Postdocs.

iv. Some examples of responsibilities of the department are:

– to verify the Postdoc's eligibility period for registration;

11.1.3.3 Dates for Guaranteed Consideration

Canadian	International	Special/Exchange/Visiting
		F

11.1.5 Master of Science (M.Sc.); Atmospheric and Oceanic Sciences (Thesis) (45 credits)

The M.Sc. degree requires a minimum of 45 credits, up to a maximum of 51 credits. The program includes from 9 to 27 credits of coursework (depending on the student's background).

Thesis Courses (24 credits)

ATOC 691	(3)	Master's Thesis Literature Review
ATOC 692	(6)	Master's Thesis Research 1
ATOC 694	(3)	Master's Thesis Progress Report and Seminar
ATOC 699	(12)	Master's Thesis

Students registered in M.Sc. programs are expected to regularly attend both the student seminar series (ATOC 751D1/D2 or ATOC 752D1/D2) and the Department seminar series during the entire period of their enrolment in the program.

Complementary Courses (21 credits)

Must complete or have completed the following courses or equivalent:

ATOC 512	(3)	Atmospheric and Oceanic Dynamics
ATOC 513	(3)	Waves and Stability
ATOC 515	(3)	Turbulence in Atmosphere and Oceans
ATOC 521	(3)	Cloud Physics
ATOC 525	(3)	Atmospheric Radiation
ATOC 530	(3)	Paleoclimate Dynamics
ATOC 531	(3)	Dynamics of Current Climates
ATOC 540	(3)	Synoptic Meteorology 1
ATOC 541	(3)	Synoptic Meteorology 2
ATOC 568	(3)	Ocean Physics
ATOC 619*	(3)	Advanced Atmospheric Chemistry
ATOC 626	(3)	Atmospheric/Oceanic Remote Sensing
ATOC 646	(3)	Mesoscale Meteorology
CHEM 619*	(3)	Advanced Atmospheric Chemistry

* Students may select either ATOC 619 or CHEM 619.

Or other courses at the 500 level or higher recommended by the Department's Graduate Program Director.

Students with a strong background in atmospheric or oceanic science, or a Diploma in Meteorology, will take at least the 7 credit minimum. Students with no previous background in atmospheric or oceanic science must take the 20 credit maximum.

11.1.6 Master of Science (M.Sc.); Atmospheric and Oceanic Sciences (Thesis) — Environment (45 credits)

Thesis Courses (24 credits)

ATOC 691	(3)	Master's Thesis Literature Review
ATOC 692	(6)	Master's Thesis Research 1
ATOC 694	(3)	Master's Thesis Progress Report and Seminar
ATOC 699	(12)	Master's Thesis

Students registered in M.Sc. programs are expected to regularly attend both the student seminar series (ATOC 751D1/D2 or ATOC 752D1/D2) and the Department seminar series during the entire period of their enrolment in the program.

Required Courses (6 credits)

ENVR 610	(3)	Foundations of Environmental Policy
ENVR 650	(1)	Environmental Seminar 1
ENVR 651	(1)	Environmental Seminar 2
ENVR 652	(1)	Environmental Seminar 3

Complementary Courses (15 credits)

12 credits of Departmental courses chosen from the following:

ATOC 512	(3)	Atmospheric and Oceanic Dynamics
ATOC 513	(3)	Waves and Stability
ATOC 515	(3)	Turbulence in Atmosphere and Oceans
ATOC 521	(3)	Cloud Physics
ATOC 525	(3)	Atmospheric Radiation
ATOC 530	(3)	Paleoclimate Dynamics
ATOC 531	(3)	Dynamics of Current Climates
ATOC 540	(3)	Synoptic Meteorology 1
ATOC 541	(3)	Synoptic Meteorology 2
ATOC 568	(3)	Ocean Physics
ATOC 619*	(3)	Advanced Atmospheric Chemistry
ATOC 626	(3)	Atmospheric/Oceanic Remote Sensing
ATOC 646	(3)	Mesoscale Meteorology
CHEM 619*	(3)	Advanced Atmospheric Chemistry

or another course at the 500 level or higher recommended by the Department's Graduate Program Director.

* Students may select either ATOC 619 or CHEM 619.

3 credits of MSE courses chosen from the following:

ENVR 519	(3)	Global Environmental Politics
ENVR 544	(3)	Environmental Measurement and Modelling
ENVR 620	(3)	Environment and Health of Species
ENVR 622	(3)	Sustainable Landscapes
ENVR 630	(3)	Civilization and Environment
ENVR 680	(3)	Topics in Environment 4

or another course at the 500 level or higher recommended by the advisory committee and approved by the Environment Option Committee.

11.1.7 Doctor of Philosophy (Ph.D.); Atmospheric and Oceanic Sciences

Thesis

A thesis for the doctoral degree must constitute original scholarship and must be a distinct contribution to knowledge. It must show familiarity with previous work in the field and must demonstrate ability to plan and carry out research, organize results, and defend the approach and conclusions in a scholarly manner. The research presented must meet current standards of the discipline; as well, the thesis must clearly demonstrate how the research advances knowledge in the field. Finally, the thesis must be written in compliance with norms for academic and scholarly expression and for publication in the public domain.

Required Courses

(1 credit)

ATOC 700	(1)	Ph.D. Proposal Seminar
ATOC 701	(0)	Ph.D. Comprehensive (General)

Complementary Courses (7 credits)

Students are required to take ATOC 751D1 and ATOC 751D2 OR ATOC 752D1 and ATOC 752D2.

1 credit from:

ATOC 751D1	(.5)	Seminar: Physical Meteorology
ATOC 751D2	(.5)	Seminar: Physical Meteorology
ATOC 752D1	(.5)	Atmospheric, Oceanic and Climate Dynamics
ATOC 752D2	(.5)	Atmospheric, Oceanic and Climate Dynamics

And 6 credits from the Department of Atmospheric and Oceanic Sciences, at the 500 or 600 level, as approved by the Graduate Program Director.

11.2 Biology

11.2.1 Location

Department of Biology
Stewart Biological Sciences Building, Room W4/8
1205 Dr. Penfield Avenue
Montreal, QC H3A 1B1
Canada

Telephone: 514-398-6400
Fax: 514-398-5069
Email: *gradinfo.biology@mcgill.ca*
Website: *http://biology.mcgill.ca*

11.2.2 About Biology

The Department offers graduate training in many areas of biology with particular strengths in the following areas: Molecular Biology and Genetics; Cell and Developmental Biology; Ecology, Biodiversity, and Conservation; Evolution; Neurobiology; Bioinformatics; and Plant Biology. In addition to the regular M.Sc. and Ph.D. programs, the Biology Department offers specialized programs, known as “options” in certain specific areas: Neotropical Environment (NEO), Bioinformatics, Environment, and Developmental Biology.

Graduate programs leading to the M.Sc. and Ph.D. degrees are offered. Both are research-intensive degrees, and the emphasis in both programs is on development of the intellectual and technical skills necessary for independent research. The main component of both degrees is a thesis presenting results of this work and the student’s original contribution to scientific knowledge. Formal coursework, usually in the form of literature-based seminar courses, is minimal and typically completed within the first year. To complement their classroom and laboratory training, students regularly attend other seminar series and journal clubs and present their own work annually in a formal seminar.

In addition to working with world-class researchers, graduate students in Biology have access to top-notch research infrastructure. The recently renovated Stewart Biology Building and the newly constructed Bellini Life Sciences Complex are equipped with state-of-the-art equipment and facilities for sophisticated imaging, robotic, and genetic techniques, to name a few. These in-house capabilities are complemented by a wide range of field research facilities, which include the Gault Nature Reserve at Mont St. Hilaire (Québec), the Morgan Arboretum (Québec), the Huntsman Marine Science Centre (New Brunswick), the Subarctic Research Laboratory (Québec), the Bellairs Research Institute (Barbados), the Smithsonian Tropical Research Institute (Panama), and the limnology research station at the Wilder and Helen Penfield Nature Reserve on Lake Memphremagog (Québec). These resources are also extended by affiliation with other organizations such as the Redpath Museum, the Biotechnology Research Institute of the National Research Council of Canada, the *Groupe Interuniversitaire de Recherches Océanographiques du Québec* (GIROQ), the McGill Macdonald campus, the Montreal Neurological Institute and Hospital, the Jewish General Hospital, the Montreal General Hospital, the Montreal Children's Hospital, and the Royal Victoria Hospital.

The Department specifies a minimum level of support for all graduate students. This amount is $15,500 per annum plus tuition fees. The required minimum duration of support is two years for the M.Sc. program, five years for a Ph.D. student entering as Ph.D. 1 (directly from a bachelor's degree), and four years for a Ph.D. student entering as Ph.D. 2 (after having completed a master's degree).

The graduate program of each student is established and regularly evaluated by a three-member supervisory committee appointed by the Graduate Training Committee and chaired by the student’s thesis supervisor.

11.2.3.1 Admission Requirements

Applicants must hav

Professors

Gregory G. Brown; B.Sc.(Notre Dame), Ph.D.(CUNY)

Lauren Chapman; B.Sc.(Alta.), Ph.D.(McG.)

Rajinder S. Dhindsa; B.Sc., M.Sc.(Punj.), Ph.D.(Wash.)

Siegfried Hekimi; M.Sc., Ph.D.(Geneva)

Paul F. Lasko; A.B.(Harv.), Ph.D.(MIT) (*Molson Professor of Genetics*) (*Associate Member in Anatomy and Cell Biology*) (*James McGill Professor*)

Martin J. Lechowicz; B.A.(Mich. St.), M.S., Ph.D.(Wisc.)

Louis Lefebvre; B.Sc., M.A., Ph.D.(Montr.)

Gerald S. Pollack; M.A., Ph.D.(Princ.)

Catherine Potvin; B.Sc., M.Sc.(Montr.), Ph.D.(Duke)

Neil M. Price; B.Sc.(New Br.), Ph.D.(Br. Col.)

Daniel J. Schoen; B.Sc., M.Sc.(Mich.), Ph.D.(Calif.) (*Macdonald Professor of Botany*) (*on sabbatical until December 31, 2012*)

Associate Professors

Ehab Abouheif; M.Sc.(C'dia), Ph.D.(Duke)

Thomas E. Bureau; B.Sc.(Calif.), Ph.D.(Texas) (*William Dawson Scholar*)

Joseph A. Dent; B.Sc.(Mich.), Ph.D.(Colo.)

François Fagotto; Ph.D.(Neuchâtel)

Gregor Fussmann; Dipl.(Berlin), Ph.D.(Max Planck Institute)

Andrew Gonzalez; B.Sc.(Nott.), Ph.D.(Imperial Coll., Lond.)

Frédéric Guichard; B.Sc.(Montr.), Ph.D.(Laval)

Paul Harrison; B.Sc.(NUI), Ph.D.(Lond.) (*on sabbatical until December 31, 2012*)

Andrew Hendry; B.Sc.(Vic., BC), M.Sc., Ph.D.(Wash.) (*joint appt. with Redpath Museum*)

Rudiger Krahe; Dipl.(Alexander U.), Ph.D.(Humboldt)

Brian Leung; B.Sc.(Br. Col.), Ph.D.(Car.)

Laura Nilson; B.A.(Colgate), Ph.D.(Yale)

Simon Reader; B.A.(Colgate), Ph.D.(Yale) (*Canada Research Chair in Developmental Genetics*)

Richard Roy; B.Sc.(Bishop's), Ph.D.(Laval)

Frieder Schoeck; Dipl.(Erhangen), Ph.D.(Max Planck Institute)

Jacalyn Vogel; M.Sc.(E. Ill.), Ph.D.(Kansas) (*Canadian Pacific Chair in Biotechnology*)

Tamara Western; B.Sc.(Dal.), Ph.D.(Br. Col.)

Monique Zetka; B.Sc., Ph.D.(Br. Col.)

Assistant Professors

Gary Brouhard; M.S.E., Ph.D.(Mich.)

David Dankort; B.Sc., Ph.D.(McM.)

Jonathan Davies; M.Sc.(Cape Town), Ph.D.(Imperial Coll., Lond.)

Irene Gregory-Eaves; B.Sc.(Vic., BC), M.Sc., Ph.D.(Qu.) (*on sabbatical until August 31, 2013*)

Nam-Sung Moon; B.Sc., Ph.D.(McG.)

Jon Sakata; B.A.(C'Nell), Ph.D.(Texas-Austin)

Alanna J. Watt; B.Sc.(C'dia), Ph.D.(Brandeis)

Sarah Woolley; B.Sc.(Duke), Ph.D.(Texas-Austin)

Hugo Zheng; M.Sc.(Helsinki), Ph.D.(Oxf. Brookes)

Associate Members

Anatomy and Cell Biology: Nathalie Lamarche-Vane, Craig Mandato

Anthropology: Colin Chapman

Bellairs: Judith Mendes

Biochemistry: Maxime Bouchard

Centre for Research in Neuroscience: Sal Carbonetto, Yong Rao, Donald Van Meyel

MCH: Feige Kaplan, Rima Rozen

Medical Genetics, Chair: David Rosenblatt

MNI: Kenneth Hastings, Stefano Stifani

Physics: Paul Francois

Redpath Museum: David Green, Hans Larsson, Virginie Millien, Anthony Ricciardi

RVH: Hugh J. Clarke, Daniel Dufort, Teruko Taketo

Adjunct Professors

CNRS Moulis, France: M. Loreau

IRCM: Michel Cayouette, Frédéric Charron, Artur Kania, Marie Kmita

NRC Lab: Malcolm S. Whiteway

STRI: Eldredge Bermingham, Rachel Collin, Hector Guzman, Edward Allen Herre, Haris Lessios, William Owen McMillan, Mark Torchin

Univ. de Montréal: Pierre Drapeau, Louis St-Amant

11.2.5 Master of Science (M.Sc.); Biology (Thesis) (45 credits)

Thesis Courses (39 credits)

BIOL 697	(13)	Master's Thesis Research 1
BIOL 698	(13)	Master's Thesis Research 2
BIOL 699	(13)	Master's Thesis Research 3

Complementary Courses (6 credits)

Two 3-credit courses, or equivalent, at the 500, 600, or 700 level in Biology or other departments, and approved by the Supervisory Committee.

11.2.6 Master of Science (M.Sc.); Biology (Thesis) — Environment (48 credits)

Thesis Courses (39 credits)

BIOL 697	(13)	Master's Thesis Research 1
BIOL 698	(13)	Master's Thesis Research 2
BIOL 699	(13)	Master's Thesis Research 3

Required Courses (6 credits)

ENVR 610	(3)	Foundations of Environmental Policy
ENVR 650	(1)	Environmental Seminar 1
ENVR 651	(1)	Environmental Seminar 2
ENVR 652	(1)	Environmental Seminar 3

Complementary Courses (3 credits)

3 credits, one of the following courses:

ENVR 519	(3)	Global Environmental Politics
ENVR 544	(3)	Environmental Measurement and Modelling
ENVR 620	(3)	Environment and Health of Species
ENVR 622	(3)	Sustainable Landscapes
ENVR 630	(3)	Civilization and Environment
ENVR 680	(3)	Topics in Environment 4

or another graduate course at the 500 level or higher recommended by the advisory committee and approved by the Environment Option Committee.

11.2.7 Master of Science (M.Sc.); Biology (Thesis) — Neotropical Environment (48 credits)

Participation in the MSE-P

11.2.9 Doctor of Philosophy (Ph.D.); Biology

Thesis

A thesis for the doctoral degree must constitute original scholarship and must be a distinct contribution to knowledge. It must show familiarity with previous work in the field and must demonstrate ability to plan and carry out research, organize results, and defend the approach and conclusions in a scholarly manner. The research presented must meet current standards of the discipline; as well, the thesis must clearly demonstrate how the research advances knowledge in the field. Finally, the thesis must be written in compliance with norms for academic and scholarly expression and for publication in the public domain.

Required Courses (6 credits)

BIOL 700	(0)	Doctoral Qualifying Examination
BIOL 702	(6)	Ph.D. Seminar

Complementary Courses (6 credits)

Two 3-credit courses, or equivalent, at the 500, 600, or 700 level in Biology or other departments, and approved by the Supervisory Committee.

11.2.10 Doctor of Philosophy (Ph.D.); Biology — Developmental Biology

Doctor of Philosophy

Thesis

A thesis for the doctoral degree must constitute original scholarship and must be a distinct contribution to knowledge. It must show familiarity with previous work in the field and must demonstrate ability to plan and carry out research, organize results, and defend the approach and conclusions in a scholarly manner. The research presented must meet current standards of the discipline; as well, the thesis must clearly demonstrate how the research advances knowledge in the field. Finally, the thesis must be written in compliance with norms for academic and scholarly expression and for publication in the public domain.

Required Courses (12 credits)

BIOL 520	(3)	Gene Activity in Development
BIOL 532	(3)	Developmental Neurobiology Seminar
BIOL 700	(0)	Doctoral Qualifying Examination
BIOL 702	(6)	Ph.D. Seminar

Complementary Course (3 credits)

One course chosen from the following:

BIOL 544	(3)	Genetic Basis of Life Span
BIOL 569	(3)	Developmental Evolution
BIOL 592	(3)	Integrated Bioinformatics
EXMD 607	(3)	Molecular Control of Cell Growth
EXMD 608	(3)	Molecular Embryology
HGEN 692	(3)	Human Genetics
NEUR 605	(3)	Neuroscience Seminar 4

or another graduate course at the 500, 600, or 700 level chosen in consultation with the student's supervisor.

Required Courses (12 credits)

BIOL 702	(6)	Ph.D. Seminar
COMP 616D1	(1.5)	Bioinformatics Seminar
COMP 616D2	(1.5)	Bioinformatics Seminar

Complementary Courses (6 credits)

Two courses chosen from the following:

BINF 621	(3)	Bioinformatics: Molecular Biology
BMDE 652	(3)	Bioinformatics: Proteomics
BTEC 555	(3)	Structural Bioinformatics
COMP 618	(3)	Bioinformatics: Functional Genomics
PHGY 603	(3)	Systems Biology and Biophysics

11.3 Chemistry

11.3.1 Location

Department of Chemistry
Otto Maass Chemistry Building
801 Sherbrooke Street West
Montreal, QC H3A 0B8
Canada

Telephone: 514-398-6999
Fax: 514-398-3797
Email: *graduate.chemistry@mcgill.ca*
Website: *www.chemistry.mcgill.ca*

11.3.2 About Chemistry

Research in Chemistry

Members of the Department are organized into various research themes. Some of the current research interests are listed below, and are presented in much more detail on the Departmental website at *www.chemistry.mcgill.ca*.

Analytical - Environmental

Analytical-Environmental research at McGill entails a wide range of exciting fundamental and applied research with focus on state-of-the-art instrumental development in spectroscopy; imaging; chemometric and analytical bio-spectroscopy; artificial intelligence; ultra trace sampling; state-of-the-art atmospheric kinetics and photochemistry; thermochemical, box, and cloud modelling; as well as the development and application of state-of-the-art numerical models of the chemistry of the regional and global atmosphere. Our collective research has direct implications in fields such as materials, environmental, and biomedical chemistry.

Chemical Biology

The Chemical Biology Thematic Group is engaged in a diverse range of research topics, which span structural biology, enzymology, nucleic acid research, signalling pathways, single-molecule biophysics, and biophysical chemistry of living tissues. Among the themes that unite the research being performed in this group is the attempt to learn new chemistry and physics from biological systems.

We have projects relating to pharmaceutically relevant enzymes such as those involved in drug metabolism and antibiotic resistance; development of therapeutic agents in the control of inflammation, cancer and viral infections; the chemical biology of NO; quantification of bioenergetic markers of metabolism; self-assembly mechanisms of the HIV-1 virion capsid; liposome microarray systems to address membrane protein dynamics and recognition; studies on reactive oxygen species translocation across the aqueous/lipid membrane interface; RNAi/antisense technologies; dynamic combinatorial chemistry; protein dynamics and function; mechanistic aspects involved in cellular adhesion and transport in membrane and zeolite channels; and cutting-edge microscopes used to examine transport, motility, and reactivity in cells.

Chemical Physics

The research interests of the members of the Chemical Physics Thematic group are diverse, with groups focusing on high-end laser and NMR spectroscopies, kinetics and modelling of atmospheric chemical reactions, experimental and theoretical biophysical chemistry, polymers at interfChemical Ph

FINANCIAL ASSISTANCE

M.Sc. and Ph.D. Degrees

Graduate students devote 12 hours per week (contact hours, plus grading of reports, etc.) during the academic session to their teaching duties. Financial assistance during the remainder of the year is provided from research funds. Scholarship holders, such as NSERC or awards of similar value, receive a tuition fee waiver.

11.3.3.3 Dates for Guaranteed Consideration

Canadian	International	Special/Exchange/Visiting
Fall: June 1	Fall: March 15	Fall: June 1
Winter: Oct. 15	Winter: Sept. 30	Winter: Oct. 15
	Summer: N/A	Summer: N/A

Professors

E.D. Salin; B.Sc.(Calif.), Ph.D.(Ore.), F.C.I.C.

B.C. Sanctuary; B.Sc., Ph.D.(Br. Col.)

H. Sleiman; B.Sc.(A.U.B.), Ph.D.(Stan.)

Y.S. Tsantrizos; B.Sc., M.Sc., Ph.D.(McG.)

T.G.M. van de Ven; Kand. Doc.(Utrecht), Ph.D.(McG.)

Revision, October 2012. End of revision.

Associate Professors

M.P. Andrews; B.Sc., M.Sc., Ph.D.(Tor.)

P. Ariya; B.Sc., Ph.D.(York)

K. Auclair; B.Sc.(UQAC), Ph.D.(Alta.)

C.J. Barrett; B.Sc., M.Sc., Ph.D.(Qu.)

G. Cosa; B.Sc.(Argentina), Ph.D.(Ott.)

W.C. Galley; B.Sc.(McG.), Ph.D.(Calif.)

J.L. Gleason; B.Sc.(McG.), Ph.D.(Virg.)

Research Project (15 credits)

CHEM 699	(15)	Project

Complementary Courses (30 credits)

15 credits, five 3-credit CHEM courses at the 500, 600, or 700 level.

15 credits, five 3-credit courses at the 500, 600, or 700 level selected in consultation with the Adviser.

11.3.6 Master of Science (M.Sc.); Chemistry (Thesis) (45 credits)

Thesis Courses

(24-31 credits)

At least 24 credits chosen from the following:

CHEM 691	(3)	M.Sc. Thesis Research 1
CHEM 692	(6)	M.Sc. Thesis Research 2
CHEM 693	(9)	M.Sc. Thesis Research 3
CHEM 694	(12)	M.Sc. Thesis Research 4
CHEM 695	(15)	M.Sc. Thesis Research 5
CHEM 697	(9)	M.Sc. Thesis Research 7
CHEM 698	(12)	M.Sc. Thesis Research 8

Required Courses

(5 credits)

CHEM 650	(1)	Seminars in Chemistry 1
CHEM 651	(1)	Seminars in Chemistry 2
CHEM 688	(3)	Assessment

Complementary Courses

(9-16 credits)

Students will normally take 9-16 credits of CHEM (or approved) courses at the 500 or 600 level.

11.3.7 Master of Science (M.Sc.); Chemistry (Thesis) — Chemical Biology (45 credits)

(Not offered in 2012-2013)

Thesis Courses (24 credits)

(minimum 24 credits)

At least 24 credits chosen from the following:

CHEM 691	(3)	M.Sc. Thesis Research 1
CHEM 692	(6)	M.Sc. Thesis Research 2
CHEM 693	(9)	M.Sc. Thesis Research 3
CHEM 694	(12)	M.Sc. Thesis Research 4
CHEM 695	(15)	M.Sc. Thesis Research 5
CHEM 697	(9)	M.Sc. Thesis Research 7
CHEM 698	(12)	M.Sc. Thesis Research 8

Required Courses (5 credits)

CHEM 650	(1)	Seminars in Chemistry 1
CHEM 651	(1)	Seminars in Chemistry 2
CHEM 688	(3)	Assessment

Complementary Courses (11 credits)

(minimum 11 credits)

2 credits, two of the following courses:

BIOC 610	(1)	Seminars in Chemical Biology 1
BIOC 611	(1)	Seminars in Chemical Biology 3
BIOC 689	(1)	Seminars in Chemical Biology 2
BIOC 690	(1)	Seminars in Chemical Biology 4

Students will take at least three courses from the following list, including at least 3 credits from the first two courses listed below:

BIOC 603	(3)	Genomics and Gene Expression
BIOC 604	(3)	Macromolecular Structure
CHEM 502	(3)	Advanced Bio-Organic Chemistry
CHEM 503	(3)	Drug Design and Development 1
CHEM 504	(3)	Studereocmistry

StEM 5042Tj1D0g1D2s1g4n4P6862n1e8Bv2p1e8Inoc9Tj1 0 0 1 2794656 82368622 1 168Tj1 0 0 1 283552 682368622 1 168ic Chemistry

PHAR 562	(3)	General Pharmacology 1
PHAR 563	(3)	General Pharmacology 2
		T

section 11.4.9: Doctor of Philosophy (Ph.D.); Computer Science

The Ph.D. program trains students to become strong, independent researchers in the field of their choice. Our graduates take challenging positions in industry or take academic positions at universities and research labs. In order to apply to the Ph.D. program, applicants should normally hold a master's degree in Computer Science or a closely related area, from a well-recognized university, but exceptional students can be admitted to the Ph.D. program directly without a master's degree.

section 11.4.10: Doctor of Philosophy (Ph.D.); Computer Science — Bioinformatics

Bioinformatics research lies at the intersection of biological/medical sciences and mathematics/computer science/engineering. The intention of the Bioinformatics option is to train students to become researchers in this interdisciplinary field. This includes the development of strategies for experimental design, the construction of tools to analyze datasets, the application of modelling techniques, the creation of tools for manipulating bioinformatics data, the integration of biological databases and the use of algorithms and statistics.

11.4.3 Computer Science Admission Requirements and Application Procedures

Revision, October 2012. Start of revision.

11.4.3.1 Admission Requirements

Master's (M.Sc.)

The minimum requirement for admission is a bachelor's degree (cumulative grade point average (CGPA) of 3.2 or better, or equivalent) with the coursework in Computer Science indicated in the brochure "Information for Applicants to Graduate Programs."

The brochure supplements information in this publication and should be consulted by all graduate students.

Ph.D.

In order to apply to the Ph.D. program, normally applicants should hold an M.Sc. degree in Computer Science or a closely related area, from a well-recognized university. Students who hold a B.Sc. degree in Computer Science but have an exceptionally strong academic record may be admitted directly to the Ph.D. program, but they must initially apply to the M.Sc. program. Students who are in the M.Sc. program have the option to be fast-tracked into the Ph.D. program at the end of their first academic year contingent on excellent performance as judged by the Ph.D. committee.

11.4.3.2 Application Procedures

McGill's online application form for graduate program candidates is available at *www.mcgill.ca/gradapplicants/apply*.

See *section 6.3: Application Procedures (for All Admissions Starting Summer 2013)* for detailed application procedures.

11.4.3.3 Dates for Guaranteed Consideration

Canadian	International	Special/Exchange/Visiting
Fall: March 1	Fall: March 1	Fall: March 1
Winter: Sept. 1 (Ph.D. only)	Winter: Sept. 1 (Ph.D. only)	Winter: Sept. 1 (Ph.D. only)
Summer: N/A	Summer: N/A	Summer: N/A

Application documents are also available on our website, *www.cs.mcgill.ca/academic/prospectivestudents/applying/applying*.

Deadlines: January 1st for applicants who wish to be considered for scholarship awards; otherwise March 1st for admission to the Fall term.

Revision, October 2012. End of revision.

11.4.4 Computer Science Faculty

Director

Gregory Dudek

Emeritus Professors

R. De Mori; Ph.D.(Politecnico di Torino)

Emeritus Professors

G.F.G. Ratzer; B.Sc.(Glas.), M.Sc.(McG.)

G.T. Toussaint; B.Sc.(Tulsa), Ph.D.(Br. Col.)

Revision, October 2012. Start of revision.

Faculty Lecturer

J. Vybihal; B.Sc., M.Sc.(McG.)

Associate Members

D.J. Levitin (*Psychology*)

D. Schlimm (*Philosophy*)

R. Sengupta (*Geography*)

B.F. Shepherd (*Mathematics & Statistics*)

T.R. Shultz (*Psychology*)

R. Sieber (*Geography*)

Adjunct Professors

P.J. Mosterman, T. Perkins, I. Rekleitis, G.O. Sabidussi, M. Tabaeh Izadi, P. Tesson, H. Vangheluwe

11.4.5 Master of Science (M.Sc.); Computer Science (Thesis) (45 credits)

Thesis Courses (24 credits)

24 credits selected from:

COMP 691	(2)	Thesis Research 1
COMP 696	(3)	Thesis Research 2
COMP 697	(4)	Thesis Research 3
COMP 698	(9)	Thesis Research 4
COMP 699	(15)	Thesis Research 5

Complementary Courses (21 credits)

At least 21 credits of 500-, 600-, or 700-level COMP courses, including at least 12 credits of 4-credit courses.

Note: Students with an appropriate background can substitute 3 credits by COMP 696 and 4 credits by COMP 697.

11.4.6 Master of Science (M.Sc.); Computer Science (Thesis) — Computational Science and Engineering (45 credits)

Thesis Courses (24 credits)

24 credits selected from:

COMP 691	(2)	Thesis Research 1
COMP 696	(3)	Thesis Research 2
COMP 697	(4)	Thesis Research 3
COMP 698	(9)	Thesis Research 4
COMP 699	(15)	Thesis Research 5

Required Courses

One credit selected as folloCOMP 691s Semin(Complementar)Tj1 0 0 0 2046T.325 Tm((15))Tj1 0 0 2046TCOMP 699

MECH 632	(4)	Theory of Elasticity
MECH 642	(4)	Advanced Dynamics
MECH 650	(4)	Fundamentals of Heat Transfer
MECH 654	(4)	Compt. Fluid Flow and Heat Transfer

11.4.7 Master of Science (M.Sc.); Computer Science (Thesis) — Bioinformatics (45 credits)

Thesis Courses (24 credits)

24 credits selected from:

COMP 691	(2)	Thesis Research 1
COMP 696	(3)	Thesis Research 2
COMP 697	(4)	Thesis Research 3
COMP 698	(9)	Thesis Research 4
COMP 699	(15)	Thesis Research 5

Required Courses (3 credits)

COMP 616D1	(1.5)	Bioinformatics Seminar
COMP 616D2	(1.5)	Bioinformatics Seminar

Complementary Courses (18 credits)

6 credits chosen from the following courses:

BINF 621	(3)	Bioinformatics: Molecular Biology
BMDE 652	(3)	Bioinformatics: Proteomics
BTEC 555	(3)	Structural Bioinformatics
COMP 618	(3)	Bioinformatics: Functional Genomics
PHGY 603	(3)	Systems Biology and Biophysics

12 credits of 4-credit courses chosen from 500-, 600-, or 700-level Computer Science courses in consultation with the candidate's supervisor.

Note: Students with an appropriate background can substitute 4 credits by COMP 697.

11.4.8 Master of Science (M.Sc.); Computer Science (Non-Thesis) (45 credits)

Research Project (15 credits)

15 credits selected as follows:

COMP 693	(3)	Research Project 1
COMP 694	(6)	Research Project 2
COMP 695	(6)	Research Project 3

Complementary Courses (30 credits)

30 credits (nine courses), of which 12 credits must be of 4-credit courses at the 500 600 or 700 level of COMP courses.

11.4.9 Doctor of Philosophy (Ph.D.); Computer Science

Required coursework: Students must take eight graduate courses, of which at least five are computer science courses. These courses should be chosen by the student in consultation with the supervisor (or co-supervisor) and the Progress Committee.

Thesis

A thesis for the doctoral degree must constitute original scholarship and must be a distinct contribution to knowledge. It must show familiarity with previous work in the field and must demonstrate ability to plan and carry out research, organize results, and defend the approach and conclusions in a scholarly manner.

COMP 522	(4)	Modelling and Simulation
COMP 526	(3)	Probabilistic Reasoning and AI
COMP 529	(4)	Software Architecture
COMP 533	(3)	Object-Oriented Software Development
COMP 535	(3)	Computer Networks 1
COMP 557	(3)	Fundamentals of Computer Graphics
COMP 558	(3)	Fundamentals of Computer Vision
COMP 575	(3)	Fundamentals of Distributed Algorithms
COMP 598	(3)	Topics in Computer Science 1
COMP 599	(3)	Topics in Computer Science 2
COMP 612	(4)	Database Programming Principles
COMP 614	(4)	Distributed Data Management
COMP 621	(4)	Program Analysis and Transformations
COMP 646	(4)	Computational Perception
COMP 652	(4)	Machine Learning
COMP 655	(4)	Distributed Simulation
COMP 667	(4)	Software Fault Tolerance
COMP 762	(4)	Advanced Topics Programming 1
COMP 763	(4)	Advanced Topics Programming 2
COMP 764	(4)	Advanced Topics Systems 1
COMP 765	(4)	Advanced Topics Systems 2
COMP 766	(4)	Advanced Topics Applications 1
COMP 767	(4)	Advanced Topics: Applications 2

COMP 618	(3)	Bioinformatics: Functional Genomics
PHGY 603	(3)	Systems Biology and Biophysics

Additional courses at the 500, 600, or 700 lev

Chemistry and crystallography of carbonate minerals. Experimental inv1 0 0 1 295.268llograph

11.5.3.1 Admission Requirements

Applicants should have an academic background equivalent to that of a McGill graduate in the Honours or Majors program in geology, geophysics, chemistry, or physics (3.0 out of 4.0). The admissions committee may modify the requirements in k

Assistant Professors

Eric Galbraith; B.Sc.(McG.), Ph.D.(Br. Col.)

Sarah Hall; B.A.(Hamilton), Ph.D.(Calif.-Santa Cruz)

Yajing Liu; B.Sc.(Peking), Ph.D.(Harv.)

Jeffrey McKenzie; B.Sc.(McG.), M.Sc., Ph.D.(Syrac.)

Christie Rowe; A.B.(Smith), Ph.D.(Calif.-Santa Cruz)

Vincent van Hinsberg; Propadeuse(Utrecht), Doctorandus(Utrecht), Ph.D.(Brist.)

Boswell Wing; A.B.(Harv.), M.A., Ph.D.(Johns Hop.) (*Canada Research Chair in Earth Systems Science (Geochemistry)*)

Faculty Lecturer

W. Minarik; B.A.(St. Olaf), M.Sc.(Wash.), Ph.D.(Rensselaer Poly.)

Adjunct Professors

M. Duchesne, M. Riedel, H. Short, B. Sundby, W. Trzcienski

Retired Professor

R. Hesse

11.5.5 Master of Science (M.Sc.); Earth and Planetary Sciences (Thesis) (45 credits)

Thesis Courses (33 credits)

EPSC 697	(9)	Thesis Preparation 1
EPSC 698	(12)	Thesis Preparation 2
EPSC 699	(12)	Thesis Preparation 3

Required Course (3 credits)

EPSC 666	(3)	Current Issues in Geosciences

Complementary Courses (9 credits)

Three 3-credit 500-, 600-, or 700-level EPSC courses chosen with the approval of the supervisor or the research director and GPS.

11.5.6 Master of Science (M.Sc.); Earth and Planetary Sciences (Thesis) — Environment (48 credits)

Thesis Courses (33 credits)

EPSC 697	(9)	Thesis Preparation 1
EPSC 698	(12)	Thesis Preparation 2
EPSC 699	(12)	Thesis Preparation 3

Required Courses (9 credits)

ENVR 610	(3)	Foundations of Environmental Policy
ENVR 650	(1)	Environmental Seminar 1
ENVR 651	(1)	Environmental Seminar 2
ENVR 652	(1)	Environmental Seminar 3
EPSC 666	(3)	Current Issues in Geosciences

Complementary Courses (6 credits)

One 3-credit course at the 500, 600, or 700 level chosen with the approval of the supervisor or research director and GPS.

3 credits chosen from the following courses:

ENVR 519	(3)	Global Environmental Politics
ENVR 544	(3)	Environmental Measurement and Modelling
ENVR 620	(3)	Environment and Health of Species
ENVR 622	(3)	Sustainable Landscapes
ENVR 630	(3)	Civilization and Environment
ENVR 680	(3)	Topics in Environment 4

or another course at the 500, 600, or 700 level recommended by the advisory committee and approved by the Environment Option Committee.

11.5.7 Doctor of Philosophy (Ph.D.); Earth and Planetary Sciences

Highly qualified B.Sc. graduates may be admitted directly to the Ph.D. 1 year. Students with the M.Sc. degree are normally admitted to the Ph.D. 2 year. Students are required to take six graduate-level courses in the Ph.D. 1 year, and two courses plus a comprehensive oral examination in the Ph.D. 2 year.

Note: The Ph.D. requirements for this program will be changing effective Winter 2013.

Thesis

A thesis for the doctoral degree must constitute original scholarship and must be a distinct contribution to knowledge. It must show familiarity with previous work in the field and must demonstrate ability to plan and carry out research, organize results, and defend the approach and conclusions in a scholarly manner. The research presented must meet current standards of the discipline; as well, the thesis must clearly demonstrate how the research advances knowledge in the field. Finally, the thesis must be written in compliance with norms for academic and scholarly expression and for publication in the public domain.

Required Courses

EPSC 666	(3)	Current Issues in Geosciences
EPSC 700	(0)	Preliminary Doctoral Examination

Complementary Courses

One to seven courses approved at the 500, 600, or 700 level selected in consultation with the student's supervisor and approved by the Academic Standing Committee.

Doctor of Philosophy (Ph.D.);

One to five courses

One course chosen from the following courses:

ENVR 519	(3)	Global Environmental Politics
ENVR 544	(3)	Environmental Measurement and Modelling
ENVR 620	(3)	Environment and Health of Species
ENVR 622	(3)	Sustainable Landscapes
ENVR 630	(3)	Civilization and Environment
ENVR 680	(3)	Topics in Environment 4

or another course at the 500, 600, or 700 level recommended by the advisory committee with the student's supervisor and approved by the Academic Standing Committee.

Zero to four courses at the 500, 600, or 700 level selected in consultation with the student's supervisor and approved by the Academic Standing Committee.

11.6 Geography

11.6.1 Location

Department of Geography
Burnside Hall
805 Sherbrooke Street West, Room 705
Montreal, QC H3A 0B9
Canada

Telephone: 514-398-4111
Fax: 514-398-7437
Email: *grad.geog@mcgill.ca*
Website: *www.geog.mcgill.ca*

11.6.2 About Geography

The Department of Geography offers research and thesis-based graduate programs leading to a Master of Arts (M.A.), a Master of Science (M.Sc.), or a doctorate (Ph.D.). In its scope, our program includes the opportunity to conduct field-based studies in both the natural (i.e., biophysical) and the social sciences. Thematic areas of study include Political, Urban, Economic, and Health Geography; Environment and Human Development; Geographic Information Systems and Remote Sensing; Land Surface Processes; Earth Systems Science; and Environmental Management. Geography houses the Hitschfield Geographic Information Centre, maintains the McGill High Arctic Research Station (Axel Heiburg Island, Nunavut Territory) and the McGill Sub-Arctic Research Station (Schefferville, Québec), and has strong ties with McGill's School of Environment and the Centre for Climate and Global Change Research. Faculty and students conduct research in fields as diverse as climate change impacts, periglacial geomorphology, and forest resource history in regions ranging from the Arctic to Southeast Asia and Latin America.

McGill Northern Research Stations

The McGill Sub-Arctic Research Station is located in Schefferville, in the centre of Quebec-Labrador. Facilities exist for research in most areas of physical and some areas of human geography in the subarctic.

McGill University also operates a field station at Expedition Fiord on Axel Heiberg Island in the High Arctic. Facilities are limited to a small lab, dorm building, and cookhouse. Research activities focus on the glacial and geological. For additional information on these stations, contact the Scientific Director, Wayne Pollard, Department of Geography.

Centre for Climate and Global Change Research

The Department of Geography, with the McGill Departments of Atmospheric and Oceanic Sciences, Economics, Natural Resource Sciences, and several departments from the *Université du Québec à Montréal* and *Université de Montréal*, developed a collaborative research centre that examines climate and global change. There are graduate opportunities through this centre.

For more information contact Professor Nigel Roulet, Director, Centre for Climate and Global Change, McGill University.

Being both a natural and a social science, geography provides a unique opportunity to obtain a broad exposure to modes of analyzing the many environmental and situational problems of contemporary society. Because of this, a geography degree is a fantastic opportunity to obtain a career in one of a diverse range of fields. Our students have gone on to become United Nations field researchers in Laos, environmental consultants in Toronto, science teachers in the U.S., geography professors in many parts of the world, UNHCR volunteers in Malaysia, and policy analysts, as well as health and social policy researchers in

Montreal…the list goes on! If you're on Facebook, look for *McGill Geography Alumni* or visit our website (*www.geog.mcgill.ca/other/jobsingeog.html*) to learn more about the advantages of having a geography degree from McGill!

Master's degrees in both the physical (M.Sc.) and social (M.A.) sciences are offered by Geography. The core of both programs for all students is field-based research supervised by a faculty member, culminating in a thesis. The core program consists of the thesis component (30 credits) and required (3) and complementary (12) graduate (500- or 600-level) courses.

Geography also offers in association with other McGill departments and programs a number of M.A. and M.Sc. options that students may choose to follow. Students must pass the courses specified for their program, attend such additional courses as the Chair and the student's thesis supervisor think fit, and submit a thesis in an appropriate area of geographical inquiry approved by the adviser.

Master of Arts (M.A.) Programs in Geography

Faculty of Arts > Graduate > Academic Programs > Geography > : Master of Arts (M.A.); Geography (Thesis) (45 credits)

Master's degrees in both the physical (M.Sc.) and social (M.A.) sciences are offered by Geography. The core of both programs for all students is field-based research, supervised by a faculty member, culminating in a thesis. The core program consists of the thesis component (30 credits), required (3), and complementary (12) graduate (500- or 600-level) courses. Geography also offers a number of M.A. and M.Sc. options in association with other McGill departments and programs that students may choose to follow.

Faculty of Arts > Graduate > Academic Programs > Geography > : Master of Arts (M.A.); Geography (Thesis) — Environment (45 credits)

The Environment option is offered in association with the McGill School of Environment (MSE) and is composed of a thesis component (24 credits); and required (9); and complementary (12) Geography and Environment courses. The graduate option in Environment provides students with an appreciation of the role of science in informing decision-making in the environment sector, and the influence of political, socio-economic, and ethical judgments. Students who have been admitted through their home department or Faculty may apply for admission to the option. Option requirements are consistent across academic units. The option is coordinated by the MSE, in partnership with participating academic units.

Faculty of Arts > Graduate > Academic Programs > Geography > : Master of Arts (M.A.); Geography (Thesis) — Neotropical Environment (45 credits)

The McGill-STRI Neotropical Environment Option (NEO) is a research-based option for master's or Ph.D. students offered in association with several University departments, the McGill School of Environment, and the Smithsonian Tropical Research Institute (STRI-Panama). The option includes thesis (30 credits); required courses in Geography, Environment, and Biology (9); and complementary (6) courses chosen from Geography, Agriculture Sciences, Biology, Sociology, Environment, and Political Science. NEO is aimed at students who wish to focus their graduate research on environmental issues relevant to the Neotropics and Latin American countries. NEO favours interdisciplinary approaches to research and learning through the participation of researchers from McGill and from STRI. Students will complete their research in Latin America and NEO's core and complementary courses will be taught in Panama. NEO's educational approach seeks to facilitate a broader understanding of tropical environmental issues and the development of skills relevant to working in the tropics.

Faculty of Arts > Graduate > Academic Programs > Geography > : Master of Arts (M.A.); Geography (Thesis) — Development Studies (45 credits)

The Development Studies Option (DSO) is cross-disciplinary in scope within existing master's programs in Geography, Anthropology, History, Political Science, Economics, and Sociology. Its components include the thesis (30 credits); required (6) International Development and Geography courses; and complementary (9) courses from the participating departments. This thesis option is open to master's students specializing in development studies. Students enter through one of the participating departments and must meet the M.A. requirements of that unit. Students will take an interdisciplinary seminar and a variety of graduate-level courses on international development issues. The M.A. thesis must be on a topic relating to development studies, approved by the DSO coordinating committee.

Faculty of Arts > Graduate > Academic Programs > Geography > : Master of Arts (M.A.); Geography (Thesis) — Gender and Women's Studies (45 credits)

This is an interdisciplinary program for Geography students wishing to focus on gender and women's studies and issues in feminist research and methods. Included within it are a thesis (30 credits) topically on gender and women's studies, and required (6) and complementary (9) courses from Geography and Women's Studies.

Faculty of Arts > Graduate > Academic Programs > Geography > : Master of Arts (M.A.); Geography (Thesis) — Social Statistics (45 credits)

The Social Statistics option focuses on applications of quantitative methods in social science and is composed of the thesis (30 credits); required (6) Geography courses; and complementary (9) Geography, Sociology, Economics, and Political Science courses. The program complements disciplinary training with research experience applying statistical methods to Statistics Canada data (or equivalent). Students will usually complete normal program course requirements supplemented by further statistical courses (as advised by the option adviser 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 Graduate and Postdoctoral Studies admission requirements.

Master of Science (M.Sc.) Programs in Geography

Faculty of Science > Graduate > Academic Programs > Geography > ***section 11.6.5: Master of Science (M.Sc.); Geography (Thesis) (45 credits)***

Master's degrees in both the physical (M.Sc.) and social (M.A.) sciences are offered by Geography. The core of both programs for all students is field-based research, supervised by a faculty member, culminating in a thesis. The core program consists of the thesis component (30 credits), required (3), and complementary (12) graduate (500- or 600-level) courses. Geography also offers a number of M.A. and M.Sc. options in association with other McGill departments and programs that students may choose to follow.

Faculty of Science > Graduate > Academic Programs > Geography > ***section 11.6.6: Master of Science (M.Sc.); Geography (Thesis) — Environment (45 credits)***

The Environment option is offered in association with the McGill School of Environment (MSE) and is composed of a thesis component (24 credits); required (9) Geography and Environment courses; and complementary (12) Geography and Environment courses. The graduate option in Environment provides students with an appreciation of the role of science in informing decision-making in the environment sector, and the influence of political, socio-economic, and ethical judgments. Students who have been admitted through their home department or Faculty may apply for admission to the option. Option requirements are consistent across academic units. The option is coordinated by the MSE, in partnership with participating academic units.

Faculty of Science > Graduate > Academic Programs > Geography > ***section 11.6.7: Master of Science (M.Sc.); Geography (Thesis) — Neotropical Environment (45 credits)***

The McGill-STRI Neotropical Environment Option (NEO) is a research-based option for master's students is offered in association with several university departments, the McGill School of Environment, and the Smithsonian Tropical Research Institute (STRI-Panama). The option includes thesis (30 credits); required (9) courses in Geography, Environment, and Biology; and complementary (6) courses chosen from Geography, Agriculture Sciences, Biology, Sociology, Environment, and Political Science. NEO is aimed at students who wish to focus their graduate research on environmental issues relevant to the Neotropics and Latin American countries. NEO favours interdisciplinary approaches to research and learning through the participation of researchers from McGill and from STRI. Students will complete their research in Latin America and NEO's core and complementary courses will be taught in Panama. NEO's educational approach seeks to facilitate a broader understanding of tropical environmental issues and the development of skills relevant to working in the tropics.

Ph.D. Programs in Geography

section 11.6.8: Doctor of Philosophy (Ph.D.); Geography

The doctoral degree in Geography includes the successful completion of the comprehensive examination, a thesis based on original research, and coursework chosen in collaboration with the student's supervisor and/or research committee. The main elements of the Ph.D. are the thesis and comprehensive examination, a required Methods of Geographical Research course (3), and a minimum of two complementary (6) courses. The Ph.D. in Geography also includes several options.

section 11.6.9: Doctor of Philosophy (Ph.D.); Geography — Environment

The Environment option consists of the thesis and comprehensive examination; required (9) courses from Geography and Environment; and complementary (9) courses in Environment or other fields recommended by the research committee and approved by the Environment Option Committee. The graduate option in Environment provides students with an appreciation of the role of science in informing decision-making in the environment sector, and the influence of political, socio-economic, and ethical judgments. Students who have been admitted through their home department or Faculty may apply for admission to the option. Option requirements are consistent across academic units. The option is coordinated by the MSE, in partnership with participating academic units.

section 11.6.10: Doctor of Philosophy (Ph.D.); Geography — Gender and Women's Studies

This doctoral option is an interdisciplinary program for students who meet the degree requirements in Geography and who wish to earn 9 credits of approved coursework on gender and women's studies and issues in feminist research and methods. It includes a thesis centrally related to gender and/or women's studies, the comprehensive examination, required (9) courses in Geography and Women's Studies, and complementary (6) courses, one of which must pertain to gender and/or women's issues.

section 11.6.11: Doctor of Philosophy (Ph.D.); Geography — Neotropical Environment

The McGill-STRI Neotropical Environment Option (NEO) is a research-based option for Ph.D. students offered in association with several university departments, the McGill School of Environment, and the Smithsonian Tropical Research Institute (STRI-Panama) and includes the thesis; comprehensive examination; required (9) courses in Geography, Environment and Biology; and complementary (3) courses chosen from Geography, Agriculture Sciences, Biology, Sociology, Environment, and Political Science. NEO is aimed at students who wish to focus their graduate research on environmental issues relevant to the Neotropics and Latin American countries. NEO favours interdisciplinary approaches to research and learning through the participation of researchers from McGill and from STRI. Students will complete their research in Latin America and NEO's core and complementary courses will be taught in Panama. NEO's educational approach seeks to facilitate a broader understanding of tropical environmental issues and the development of skills relevant to working in the tropics.

11.6.3 Geography Admission Requirements and Application Procedures

Revision, October 2012. Start of revision.

11.6.3.1 Admission Requirements

M.A. and M.Sc. Degrees

Applicants not satisfying the conditions in *section 6: Graduate Admissions and Application Procedures*, but with primary undergraduate specialization in a cognate field, may be admitted to the M.A. or M.Sc. degree in Geography in certain circumstances. In general, they, and others who have deficiencies in their preparation but are otherwise judged to be acceptable, will be required to register for a Qualifying program or to undertake additional courses.

Ph.D. Degree

Students who have completed a master's degree in Geography (with high standing) may be admitted at the Ph.D. 2 level.

On rare occasions, a student may be admitted to the Ph.D. degree without having first taken the master's degree. They, and others who have deficiencies in their preparation but are otherwise acceptable, will be required to register for a year of coursework and/or be required to take extra courses. The normal duration of a program, including field work where required, is three years.

Normally, the Department will restrict admission to the Ph.D. program to students prepared to work in one of the fields of human or physical geography in which specialized supervision is offered. These, which cover a wide range of systematic areas, are listed in documents available from the Department.

11.6.3.2 Application Procedures

McGill's online application form for graduate program candidates is available at *www.mcgill.ca/gradapplicants/apply*.

See *section 6.3: Application Procedures (for All Admissions Starting Summer 2013)* for detailed application procedures.

11.6.3.2.1 Additional Requirements

The items and clarifications below are additional requirements set by this department:

- Research Proposal
- Letters of Reference – **three** references required for Ph.D. program
- *Department application form*

11.6.3.3 Dates for Guaranteed Consideration

Canadian	International	Special/Exchange/Visiting
		Fall: Jan. 15 (oc4l couut-

3 credits, one Geography graduate course. GEOG 696 can count among these complementary credits for students with an appropriate background.

Elective Course (3 credits)

3 credits, at the 500 level or higher, on environmental issues to be chosen in consultation with and approval by the student's supervisor AND the Neotropical Environment Options Director.

11.6.8 Doctor of Philosophy (Ph.D.); Geography

The doctoral degree in Geography includes the successful completion of the comprehensive examination, a thesis based on original research and coursework chosen in collaboration with the student's supervisor and/or research committee. The main elements of the Ph.D. are the thesis and comprehensive examination, a required Methods of Geographical Research course (3 credits), and a minimum of two complementary courses (6 credits). The Ph.D. in Geography also includes several options.

Thesis

A thesis for the doctoral degree must constitute original scholarship and must be a distinct contribution to knowledge. It must show familiarity with previous work in the field and must demonstrate ability to plan and carry out research, organize results, and defend the approach and conclusions in a scholarly manner. The research presented must meet current standards of the discipline; as well, the thesis must clearly demonstrate how the research advances knowledge in the field. Finally, the thesis must be written in compliance with norms for academic and scholarly expression and for publication in the public domain.

Required Courses

GEOG 631	(3)	Methods of Geographical Research
GEOG 700	(0)	Comprehensive Examination 1
GEOG 701	(0)	Comprehensive Examination 2
GEOG 702	(0)	Comprehensive Examination 3

Complementary Courses

Two courses at the 500, 600, or 700 level selected according to guidelines of the Department.

11.6.9 Doctor of Philosophy (Ph.D.); Geography — Environment

The option consists of the thesis and comprehensive examination, required courses (9 credits) from Geography and Environment and complementary courses (9 credits) in Environment or other fields recommended by the research committee and approved by the Environment Option Committee.

Thesis

A thesis for the doctoral degree must constitute original scholarship and must be a distinct contribution to knowledge. It must show familiarity with previous work in the field and must demonstrate ability to plan and carry out research, organize results, and defend the approach and conclusions in a scholarly manner. The research presented must meet current standards of the discipline; as well, the thesis must clearly demonstrate how the research advances knowledge in the field. Finally, the thesis must be written in compliance with norms for academic and scholarly expression and for publication in the public domain.

Required Courses

ENVR 610	(3)	Foundations of Environmental Policy
ENVR 650	(1)	Environmental Seminar 1
ENVR 651	(1)	Environmental Seminar 2
ENVR 652	(1)	Environmental Seminar 3
GEOG 631	(3)	Methods of Geographical Research

Complementary Courses

Two courses at the 500, 600, or 700 level selected according to guidelines of the Department.

One course chosen from the following:

ENVR 519	(3)	Global Environmental Politics
ENVR 544	(3)	Environmental Measurement and Modelling

ENVR 620	(3)	Environment and Health of Species
ENVR 622	(3)	Sustainable Landscapes
ENVR 630	(3)	Civilization and Environment
ENVR 680	(3)	Topics in Environment 4

or another course at the 500 level or higher recommended by the advisory committee and approved by the Environment Option Committee.

Comprehensives

GEOG 700	(0)	Comprehensive Examination 1
GEOG 701	(0)	Comprehensive Examination 2
GEOG 702	(0)	Comprehensive Examination 3

11.6.10 Doctor of Philosophy (Ph.D.); Geography — Gender and Women's Studies

The graduate option in Gender and Women's Studies is an interdisciplinary program for students who meet the degree requirements in Geography who wish to earn 9 credits of approved coursework focusing on gender and women's studies, and issues in feminist research and methods. The student's doctoral thesis must be on a topic centrally relating to issues of gender and/or women's studies.

Thesis

A thesis for the doctoral degree must constitute original scholarship and must be a distinct contribution to knowledge. It must show familiarity with previous work in the field and must demonstrate ability to plan and carry out research, organize results, and defend the approach and conclusions in a scholarly manner. The research presented must meet current standards of the discipline; as well, the thesis must clearly demonstrate ho

BIOL 640	(3)	Tropical Biology and Conservation
ENVR 610	(3)	Foundations of Environmental Policy
GEOG 631	(3)	Methods of Geographical Research
GEOG 700	(0)	Comprehensive Examination 1
GEOG 701	(0)	Comprehensive Examination 2
GEOG 702	(0)	Comprehensive Examination 3

Elective Courses

3 credits, at the 500-level or higher, on environmental issues to be chosen in consultation with and approved by the student's supervisor AND the Neotropical Environment Options Director

11.7 Mathematics and Statistics

11.7.1 Location

Department of Mathematics and Statistics
Burnside Hall, Room 1005
805 Sherbrooke Street West
Montreal, QC H3A 0B9
Canada

Telephone: 514-398-3800
Fax: 514-398-3899
Email: grad.mathstat@mcgill.ca
Website: www.math.mcgill.ca

11.7.2 About Mathematics and Statistics

The Department of Mathematics and Statistics offers programs that can be focused on applied mathematics, pure mathematics, and statistics leading to master's degrees (M.A. or M.Sc.), with program options in Bioinformatics and in CSE (Computational Science and Engineering). The research groups are: Algebra Category Theory; Theory and Logic; Geometric Group Theory; Algebraic Geometry; Discrete Mathematics; Mathematical Physics; Analysis and its Applications; Differential Geometry; Number Theory; Applied Mathematics; Differential Equations; and Probability and Statistics. In the basic master's

A master's degree with high standing is required, in addition to the requirements listed above for the master's program. Students may transfer directly from the master's program to the Ph.D. program under certain conditions. Students without a master's degree, but with exceptionally strong undergraduate training, may be admitted directly to Ph.D. 1.

11.7.3.2 Application Procedures

McGill's online application form for graduate program candidates is available at *www.mcgill.ca/gradapplicants/apply*.

See *section 6.3: Application Procedures (for All Admissions Starting Summer 2013)* for detailed application procedures.

11.7.3.2.1 Additional Requirements

The items and clarifications below are additional requirements set by this department:

- Research Proposal
- Applicants in pure and applied mathematics should provide a GRE score report, if available

For more details, please consult the website at *www.math.mcgill.ca/students/graduate/application*.

11.7.3.3 Dates for Guaranteed Consideration

Canadian	International	Special/Exchange/Visiting
Fall: May 1	Fall: Feb. 1	Fall: Same as Canadian/International
Winter: Oct. 15	Winter: Sept. 15	Winter: Same as Canadian/International
Summer: N/A	Summer: N/A	Summer: N/A

Revision, October 2012. End of revision.**xceptional 1 765Pl0 1 76..843140.9804 0.9216 0.8431 RGET402.16 533.227 m402.16 548 0 1 7611 0848**

Professors

William J. Anderson; B.Eng., Ph.D.(McG.)

Henri Darmon; B.Sc.(McG.), Ph.D.(Harv.), F.R.S.C. (*James McGill Professor*)

Stephen W. Drury; M.A., Ph.D.(Cant.)

Christian Genest; BSp.Sc.(UQAC), M.Sc.(Vermont), Ph.D.(Br. Col.)

Eyal Z. Goren; B.A., M.S., Ph.D.(Hebrew)

Pengfei Guan; B.Sc.(Zhejiang), M.Sc., Ph.D.(Princ.) (*Canada Research Chair*)

Jacques C. Hurtubise; B.Sc.(Montr.), D.Phil.(Oxf.) F.R.S.C.

Dmitry Jakobson; B.Sc.(MIT), Ph.D.(Princ.) (*William Dawson Scholar*)

Vojkan Jaksic; B.S.(Belgrade), Ph.D.(Calif. Tech.)

Niky Kamran; B.Sc., M.Sc.(Bruxelles), Ph.D.(Wat.), F.R.S.C. (*James McGill Professor*)

Olga Kharlampovich; M.A.(Ural St.), Ph.D.(Lenin.), Dr. of Sc.(Steklov Inst.)

Charles Roth; M.Sc.(McG.), Ph.D.(Hebrew)

F. Bruce Shepherd; B.Sc.(Vic., Tor.), M.Sc., Ph.D.(Wat.) (*James McGill Professor*)

David A. Stephens; B.Sc., Ph.D.(Nott.)

John A. Toth; B.Sc., M.Sc.(McM.), Ph.D.(MIT) (*William Dawson Scholar*)

Daniel T. Wise; B.A.(Yeshiva), Ph.D.(Princ.)

David Wolfson; B.Sc., M.Sc.(Natal), Ph.D.(Purd.)

Jian-Ju Xu; B.Sc., M.Sc.(Beijing), M.Sc., Ph.D.(Rensselaer Poly.)

Assistant Professors

Louigi Addario-Berry; B.Sc., M.Sc., Ph.D.(McG.)

Jayce Getz; A.B.(Harv.), Ph.D.(Wisc.)

Abbas Khalili; Ph.D.(Wat.)

Jean-Christophe Nave; B.Sc., Ph.D.(Calif., Santa Barbara)

Johanna Neslehova; B.Sc., M.Sc.(Hamburg), Ph.D.(Oldenburg)

Gantumur Tsogtgerel; Ph.D.(Utrecht)

Johannes Walcher; Dip, Ph.D.(ETH Zurich)

Associate Professors

Masoud Asgharian; B.Sc.(Shahid Beheshti), M.Sc., Ph.D.(McG)

Peter Bartello; B.Sc.(Tor.), M.Sc., Ph.D.(McG.) (*joint appt. with Atmospheric and Oceanic Sciences*)

Rustum Choksi; B.Sc.(Tor.) S.M., Ph.D.(Brown)

Antony R. Humphries; B.A., M.A.(Camb.), Ph.D.(Bath)

Wilbur Jonsson; M.Sc.(Manit.), Dr.Rer.Nat.(Tübingen)

Ivo Klemes; B.Sc.(Tor.), Ph.D.(Calif. Tech.)

James G. Loveys; B.A.(St. Mary's), M.Sc., Ph.D.(S. Fraser)

Neville G.F. Sancho; B.Sc., Ph.D.(Belf.)

Robert Seiringer; Dip, Ph.D.(Vienna)

Russell Steele; B.S., M.S.(Carn. Mell), Ph.D.(Wash.)

Alain Vandal; B.Sc., M.Sc.(McG.), Ph.D.(Auck.)

Adrian Vetta; B.Sc., M.Sc.(LSE), Ph.D.(MIT) (*joint appt. with Computer Science*)

Associate Members

Xiao-Wen Chang (*Computer Science*)

Luc P. Devroye (*Computer Science*)

Pierre R.L. Dutilleul (*Plant Science*)

Eliot Fried (*Mec. De*

Complementary Courses (21 credits)

At least six approved graduate courses, at the 500, 600, or 700 level, of 3 or more credits each.

11.7.6 Master of Science (M.Sc.); Mathematics and Statistics (Thesis) — Bioinformatics (48 credits)

Thesis Courses (24 credits)

MATH 600	(6)	Master's Thesis Research 1
MATH 601	(6)	Master's Thesis Research 2
MATH 604	(6)	Master's Thesis Research 3
MATH 605	(6)	Master's Thesis Research 4

Required Course (3 credits)

COMP 616D1	(1.5)	Bioinformatics Seminar
COMP 616D2	(1.5)	Bioinformatics Seminar

Complementary Courses (21 credits)

6 credits from the following:

BINF 621	(3)	Bioinformatics: Molecular Biology
BMDE 652	(3)	Bioinformatics: Proteomics
BTEC 555	(3)	Structural Bioinformatics
COMP 618	(3)	Bioinformatics: Functional Genomics
PHGY 603	(3)	Systems Biology and Biophysics

15 credits of approved courses at the 500 or 600 level. Additional courses may be required at the discretion of the candidate's supervisory committee.

11.7.7 Master of Science (M.Sc.); Mathematics and Statistics (Thesis) — Computational Science and Engineering (47 credits)

Thesis Courses (24 credits)

MATH 600	(6)	Master's Thesis Research 1
MATH 601	(6)	Master's Thesis Research 2
MATH 604	(6)	Master's Thesis Research 3
MATH 605	(6)	Master's Thesis Research 4

Required Course

(1 credit)

MATH 669D1	(.5)	CSE Seminar
MATH 669D2	(.5)	CSE Seminar

Complementary Courses (22 credits)

(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:

CIVE 602	(4)	Finite Element Analysis
COMP 522	(4)	Modelling and Simulation
COMP 540	(3)	Matrix Computations
COMP 566	(3)	Discrete Optimization 1
MATH 578	(4)	Numerical Analysis 1
MATH 579	(4)	Numerical Differential Equations

List B - Applications and Specialized Methods Courses:

ATOC 512	(3)	Atmospheric and Oceanic Dynamics
ATOC 513	(3)	Waves and Stability
ATOC 515	(3)	Turbulence in Atmosphere and Oceans
CIVE 572	(3)	Computational Hydraulics
CIVE 603	(4)	Structural Dynamics
COMP 557	(3)	Fundamentals of Computer Graphics
COMP 558	(3)	Fundamentals of Computer Vision
COMP 567	(3)	Discrete Optimization 2
COMP 621	(4)	Program Analysis and Transformations
COMP 642	(4)	Numerical Estimation Methods
COMP 767	(4)	Advanced Topics: Applications 2
ECSE 507	(3)	Optimization and Optimal Control
ECSE 532	(3)	Computer Graphics
ECSE 547	(3)	Finite Elements in Electrical Engineering
ECSE 549	(3)	Expert Systems in Electrical Design
		Fluid Dynamics

Master of Science (M.Sc.);

- High-energy particle astrophysics: ground-based gamma-ray astronomy using the newly commissioned VERITAS telescope array and development of the next-generation detector.

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: Current research programs include 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; and Quark-Gluon Plasma, QCD.

Experimental: Current research programs in experimental nuclear physics at McGill are focused on two main axes:

- The study of heavy-ion reactions at relativistic energies to determine the properties of nuclear matter at high temperatures and density. This program is being performed at the Brookhaven National Laboratory, and at the Large Hadron Collider facility at CERN.
- 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 I379.84 593.06 Tmograngi5f7tay at one lisions

Ph.D.

Normal requirement is an 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.

11.8.3.2 Application Procedures

McGill's online application form for graduate program candidates is available at *www.mcgill.ca/gradapplicants/apply*.

See *section 6.3: Application Procedures (for All Admissions Starting Summer 2013)* for detailed application procedures.

Financial Assistance

Financial assistance will be offered to students in the form of a bursary, and teaching and research assistantships. For new students, financial support will be offered at the time of acceptance. Forms are given and filled out on registration day.

11.8.3.3 Dates for Guaranteed Consideration

Canadian	International	Special/Exchange/Visiting
Fall: Jan. 15	Fall: Jan. 15	Fall: Jan. 15
Winter: Sept. 15	Winter: Sept. 15	Winter: Sept. 15
Summer: N/A	Summer: N/A	Summer: N/A

Revision, October 2012. End of revision.

11.8.4 Physics Faculty

Chair

C. Gale

Director of Graduate Studies

S. Jeon

Emeritus Professors

S. Das Gupta; B.Sc., M.Sc.(Calc.), Ph.D.(McM.) (*Macdonald Emeritus Professor of Physics*)

N.B. DeTakacsy; B.Sc., M.Sc.(Montr.), Ph.D.(McG.)

C.S. Lam; B.Sc.(McG.), Ph.D.(MIT)

M.P. Langleben; B.Sc., M.Sc., Ph.D.(McG.), F.R.S.C.

S.K. Mark; B.Sc., M.Sc., Ph.D.(McG.) (*Macdonald Emeritus Professor of Physics*)

D.G. Stairs; B.Sc., M.Sc.(Qu.), Ph.D.(Harv.) (*Macdonald Emeritus Professor of Physics*)

J.O. Strom-Olsen; B.A., M.S., Ph.D.(Camb.)

M.J. Zuck

Professors

F. Corriveau; B.Sc.(Laval), M.Sc.(Br. Col.), Ph.D.(ETH)

C. Gale; B.Sc.(Ott.), M.Sc., Ph.D.(McG.) (*James McGill Professor*)

M. Grant; B.Sc.(PEI), M.Sc., Ph.D.(Tor.), F.R.S.C. (*James McGill Professor*)

P. Grutter; Dip., Ph.D.(Basel), F.R.S.C. (*James McGill Professor*)

H. Guo; B.Sc.(Sichuan), M.Sc., Ph.D.(Pitt.), F.R.S.C. (*James McGill Professor*)

D. Hanna; B.Sc.(McG.), A.M., Ph.D.(Harv.) (*Macdonald Professor of Physics*)

V. Kaspi; B.Sc.(McG.), M.A., Ph.D.(Princ.), F.R.S.C. (*Canada Research Chair*) (*Lorne Trottier Chair in Astrophysics and Cosmology*)

S. Lovejoy; B.Sc.(Camb.), Ph.D.(McG.)

N. Provatas; Ph.D.(McG.)

K. Ragan; B.Sc.(Alta.), Ph.D.(Geneva) (*Macdonald Professor of Physics*)

D.H. Ryan; B.A., Ph.D.(Dub.)

M. Sutton; B.Sc., M.Sc., Ph.D.(Tor.) (*Rutherford Chair in Physics*)

Associate Professors

A. Clerk; B.Sc.(Tor.), Ph.D.(C'nell) (*Canada Research Chair*)

A. Cumming; B.A.(Camb.), Ph.D.(Calif., Berk.)

K. Dasgupta; M.Sc., Ph.D.(TIFR)

M. Dobbs; B.Sc.(McG.), Ph.D.(Vic., BC) (*Canada Research Chair*)

G. Gervais; B.Sc.(Sher.), M.Sc.(McM.), Ph.D.(N'western)

M. Hilke; B.Sc., M.Sc., Ph.D.(Geneva)

G. Holder; B.Sc., M.Sc.(Qu.), Ph.D.(Chic.) (*Canada Research Chair*)

S. Jeon; B.Sc.(Seoul National), M.Sc., Ph.D.(Wash.)

G. Moore; B.S.(Harvey Mudd), Ph.D.(Princ.)

S. Robertson; B.Sc.(Calg.), M.Sc., Ph.D.(Vic., BC)

R. Rutledge; B.Sc.(USC), Ph.D.(MIT)

B. Vachon; B.Sc.(McG.), Ph.D.(Vic., BC) (*Canada Research Chair*)

A. Warburton; B.Sc.(Vic., BC), M.Sc., Ph.D.(Tor.)

P. Wiseman; B.Sc.(St. FX), Ph.D.(W. Ont.) (*joint appt. with Chemistry*)

Assistant Professors

B. Coish; Ph.D.(Basel)

D. Cooke; Ph.D.(Alta.)

P. Francois; Ph.D.(Paris VII)

S. Leslie; Ph.D.(Calif., Berk.)

Lecturers

Z. Altounian, F. Buchinger

Associate Members

M. Chacron (*Physiology*)

K. Gehring (*Biochemistry*)

P. Hayden (*Computer Science*)

M. Mackey (*Physiology*)

Z. Mi (*Electrical and Computer Engineering*)

J. Nadeau (*Biomedical Engineering*)

E. Podgorsak (*Medical Physics*)

D. Rassier (*Kinesiology*)

D. Ronis (*Chemistry*)

J. Seuntjens (*Medical Physics*)

T. Szkopek (*Electrical and Computer Engineering*)

F. Verhaegen (*Medical Physics*)

Adjunct Professors

G. Austing, J. Cadogan, F. Drolet, M. Dubé, M. Grisaru, L. Piché, A. Sachrajda

11.8.5 Master of Science (M.Sc.); Physics (Thesis) (45 credits)

Thesis Courses (30 credits)

PHYS 690	(24)	M.Sc. Thesis
PHYS 692	(6)	Thesis Project

Complementary Courses (15 credits)

12 credits at the 500, 600, or 700 le

section 11.9.7: Doctor of Philosophy (Ph.D.); Psychology — Language Acquisition

This unique interdisciplinary program focuses on the scientific exploration of language acquisition by different kinds of learners in diverse contexts. Students in the Language Acquisition Program are introduced to theoretical and methodological issues on language acquisition from the perspectives of cognitive neuroscience, theoretical linguistics, psycholinguistics, education, communication sciences and disorders, and neuropsychology.

section 11.9.8: Doctor of Philosophy (Ph.D.); Psychology — Psychosocial Oncology

The Department of Oncology, in conjunction with the Ingram School of Nursing, the Department of Psychology and the School of Social Work, has developed the cross-disciplinary Psychosocial Oncology Option (PSOO). This option is open to doctoral students in the Ingram School of Nursing and in

Revision, October 2012. End of revision.

11.9.4 Psychology Faculty

Chair

David Zuroff

Emeritus Professors

A.S. Bregman; M.A.(Tor.), Ph.D.(Yale)

D. Donderi; B.A., B.Sc.(Chic.), Ph.D.(C'nell)

V. Douglas; B.A.(Qu.), M.A., M.S.W., Ph.D.(Mich.)

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.)

J.O. Ramsay; B.Ed.(Alta.), Ph.D.(Princ.)

Revision, October 2012. Start of revision.

Professors

F.E. Aboud; B.A.(Tor.), M.A., Ph.D.(McG.)

M. Baldwin; B.A.(Tor.), M.A., Ph.D.(Wat.)

I.M. Binik; B.A.(NYU), M.A., Ph.D.(Penn.)

Associate Professors

E.S. Balaban; B.A.(Mich. St.), Ph.D.(Rockefeller)

H. Hwang; B.A.(Chung-Ang), Ph.D.(McG.)

B. Knauper; Dr. phil.(Germany, Mannheim)

M.J. Mendelson; B.Sc.(McG.), A.M., Ph.D.(Harv.)

K. Nader; B.Sc., Ph.D.(Tor.)

G. O'Driscoll; B.A.(Welles.), Ph.D.(Harv.) (*William Dawson Scholar*)

K. Onishi; B.A.(Brown), M.A., Ph.D.(Ill.)

M. Pompeiana; M.D., Ph.D.(Pisa)

Z. Rosberger; B.Sc.(McG.), M.A., Ph.D.(C'dia) (*Part-time*)

D. Titone; B.A.(NYU), M.A., Ph.D.(SUNY, Binghamton)

Assistant Professors

J. Bartz; B.A.(C'dia), M.A., Ph.D.(McG.)

I. Bradley; B.Sc., M.Sc.(Tor.), Ph.D.(Wat.) (*Part-time*)

Y. Chudasama; B.Sc., Ph.D.(Cardiff)

M. Dirks; B.A.(McM.), M.S., M.Phil., Ph.D.(Yale)

J. Ristic; B.A., M.A., Ph.D.(Br. Col.)

H.-T. Yu; B.S.(Taiwan), M.S., M.A., Ph.D.(Ill.-Urbana-Champaign)

Lecturers

R. Amsel, P. Carvajal

Associate Members

Anesthesia: T. Coderre

Douglas Hospital Research Centre: S. King, J. Pruessner, H. Steiger

Jewish General Hospital: P. Zelkowitz

McGill Vision Research Centre: C. Baker, R. Hess, F.A.A. Kingdom, K. Mullen

Montreal Neurological Institute: J. Armony, L.K. Fellows, D. Guitton, M. Jones-Gotman, M. Lepage, B. Milner, E. Ruthazer, W. Sossin, V. Sziklas, R. Zatorre

Schulich School of Music: S. MacAdams

Psychiatry: D. Dunkley, M. Leyton, A. Raz

Ingram School of Nursing, Psychiatry: F. Abbott

Adjunct Professors

M. Bruck, S. Burstein, P. Delisle, P. Gregoire, D. Sookman, P. Zelazo

Affiliate Member

L. Ko

PSYC 690	(15)	Masters Research 1
PSYC 699	(12)	Masters Research 2

Required Courses (18 credits)

PSYC 601	(6)	Master's Comprehensive

EDSL 711	(2)	Language Acquisition Issues 3
LING 710	(2)	Language Acquisition Issues 2
		Doctoral Comprehensiv

SCSD 637	(3)	Developmental Language Disorders 1
SCSD 643	(3)	Developmental Language Disorders 2
SCSD 652	(3)	Advanced Research Seminar 1
SCSD 653	(3)	Advanced Research Seminar 2

11.9.8 Doctor of Philosophy (Ph.D.); Psychology — Psychosocial Oncology

The Ph.D. thesis topic must be germane to psychosocial oncology and approved by the PSO coordinating committee.

Thesis

A thesis for the doctoral degree must constitute original scholarship and must be a distinct contribution to knowledge. It must show familiarity with previous work in the field and must demonstrate ability to plan and carry out research, organize results, and defend the approach and conclusions in a scholarly manner. The research presented must meet current standards of the discipline; as well, the thesis must clearly demonstrate how the research advances knowledge in the field. Finally, the thesis must be written in compliance with norms for academic and scholarly expression and for publication in the public domain.

Required Courses (12 credits)

NUR2 705	(3)	Palliative Care
NUR2 783	(3)	Psychosocial Oncology Research
PSYC 701	(6)	Doctoral Comprehensive Examination

One graduate seminar each term during Year 2 and Year 3 chosen from seminar courses PSYC 710 to PSYC 758.

Note: The Department of Psychology does not ordinarily require an examination in a foreign language; however, all students planning on practising clinical psychology in the province of Quebec will be examined based on their proficiency in French before being admitted to the professional association.

Note: If the student has a non-McGill master's then the following courses are also required:

PSYC 650	(3)	Advanced Statistics 1
PSYC 651	(3)	Advanced Statistics 2
PSYC 660D1	(3)	Psychology Theory
PSYC 660D2	(3)	Psychology Theory

Complementary Course (3 credits)

One of the following courses:

PSYC 507	(3)	Emotions, Stress, and Illness
PSYC 753	(3)	Health Psychology Seminar 1
SWRK 609	(3)	Understanding Social Care
SWRK 668	(3)	Living with Illness, Loss and Bereavement

11.10 Redpath Museum

11.10.1 Location

Redpath Museum
859 Sherbrooke Street West
Montreal, QC H3A 0C4
Canada

Telephone: 514-398-4086
Fax: 514-398-3185
Website: www.mcgill.ca/redpath

11.10.2 About Redpath Museum

The Redpath Museum is a unique interdisciplinary unit within the Faculty of Science offering graduate training in research devoted to biosystematics, ecology, conservation biology and evolutionary biology

Adjunct Professors

Robert Holmes, Henry M. Reiswig, Michael Woloch