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## **29 Epidemiology and Biostatistics**

Department of Epidemiology and Biostatistics  
1020 Pine Avenue West  
Montreal, QC H3A 1A2  
Canada



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**EPIB 665 S**

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### 30.3 Admission Requirements

#### General

CGPA 3.0/4.0 (second class-upper division).

TOEFL with a minimum score of 550 on the paper-based test or 213 on the computer-based test (non-Canadian applicants whose mother tongue is not English).

#### Master's

Candidates should have a B.Sc. in Food Science or a related discipline such as Chemistry, Biochemistry, or Microbiology with a minimum cumulative grade point average (CGPA) of 3.0/4.0 (second class-upper division) or 3.2/4.0 during the last two years of full-time university study. High grades are expected in courses considered by the academic unit to be preparatory to the graduate program.

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### 30.4 Application Procedures

Applicants for graduate studies through academic units in the Faculty of Agricultural and Environmental Sciences must forward supporting documents to:

Student Affairs Office (Graduate Studies)  
Macdonald Campus of McGill University  
21,111 Lakeshore  
Sainte-Anne-de-Bellevue, QC H9X 3V9  
Canada

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**FDSC 798 GRADUATE SEMINAR.** (3) Presentation on a selected topic, research proposal or research results based on progress in degree work (Ph.D.).

**May be offered as: FDSC 798D1 and FDSC 798D2, or FDSC 798N1 and FDSC 798N2.**

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## 31 French Language and Literature

Département de langue et littérature françaises  
Pavillon Peterson  
3460, rue McTavish  
Montréal (QC) H3A 1X9  
Canada

Téléphone: (514) 398-6883  
Télécopieur: (514) 398-8557  
Courriel: grad.littfran@mcgill.ca  
Site Web: [www.arts.mcgill.ca/programs/french](http://www.arts.mcgill.ca/programs/french)

*Directeur* — Professeur François Ricard

*Directrice des études de 2<sup>e</sup> et 3<sup>e</sup> cycles  
et de la recherche* — Professeure Jane Everett

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### 31.1 Staff

#### *Professeurs*

M. Angenot; L. Phil. Romane, Dr. Phil. & Lettres (Bruxelles),  
M.S.R.C. (*James McGill Professor*)  
G. Di Stefano; Dr. ès L.(Turin), Dipl.Phil., Dr. 3<sup>e</sup> Cy.(Paris -  
Sorbonne)  
J.-P. Duquette; L. ès L.(Montr.), Dr. 3<sup>e</sup> Cy.(Paris X - Nanterre)  
Y. Lamonde; M.A.(Montr.), M.A., Ph.D.(Laval)  
F. Ricard; M.A.(McG.), Dr. 3<sup>e</sup> Cy.(Aix-Marseille), M.S.R.C. (*James  
McGill Professor*)  
Y. Rivard; M.A.(McG.), Dr. 3<sup>e</sup> Cy.(Aix-Marseille)  
J. Terrasse; L. Phil. Romane, Dipl. Phil., Dr. Phil. & Lettres  
(Bruxelles)

#### *Professeurs agrégés*

M. Biron; M.A.(Montr.), Dr.Phil & Lettres(Liège) (*Chaire de  
recherche du Canada en littérature québécoise et littératures  
francophones*)  
C. Bouchard; M.A.(Montr.), Dr. 3<sup>e</sup> Cy.(Paris VII - Jussieu)  
J.-P. Boucher; M.A.(McG.) Dr. 3<sup>e</sup> Cy.(Besançon)  
A. Chapdelaine; M.A., Dr. 3<sup>e</sup> Cy.(Paris VII - Jussieu)  
D. Desrosiers-Bonin; M.A., Ph.D.(Montr.) (*William Dawson  
Scholar*)  
N. Doiron; M.A., Ph.D.(Montr.)  
J. Everett; M.A.(Carl.), Ph.D.(McG.)  
G. Lane-Mercier; M.A.(Montpellier), Ph.D.(McG.)

#### *Professeur adjoint*

F. Charbonneau; M.A., Ph.D.(Montr.)

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### 31.2 Programmesont

Le choix des séminaires que fait l'étudiant doit être approuvé par le Directeur des études au moment de l'inscription. La Commission des admissions du Département peut accorder des dérogations au règlement des inscriptions à la Maîtrise en fonction du dossier de chaque étudiant, en reconnaissant un maximum de six crédits déjà obtenus dans une autre université.

Une partie de la scolarité (maximum de 6 crédits) peut être suivie dans un autre département de McGill qui offre des cours dans le domaine des Humanités de l'annuaire des Études supérieures et postdoctorales, ou dans une autre université, pourvu que les cours et séminaires y soient de même niveau que les cours 600 ou 700 offerts par le Département. Dans tous les cas, l'étudiant doit obtenir l'autorisation du Directeur des études de 2e et 3e cycles et de la recherche, qui ne sera accordée que si les cours en question cadrent avec le programme d'études du candidat.

**Recherche (M.A.II)**

L'étudiant peut présenter un mémoire de critique littéraire ou un mémoire d'écriture littéraire. Il peut aussi compléter son programme de maîtrise sans rédiger de mémoire, mais en exécutant d'autres travaux de recherche.

Dans le cas de la maîtrise avec mémoire, la composante recherche du programme est de 24 crédits (FREN 699).

La composante recherche du programme de maîtrise sans mémoire est aussi de 24 crédits (FREN 600: 3 crédits, FREN 698:



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**FREN 713 SÉMINAIRE DE RECHERCHE 4. (3)**

**FREN 723 16E SIÈCLE 1. (3)**

**FREN 728 17E SIÈCLE 3. (3)**

**FREN 731 18E SIÈCLE 3. (3)**

**FREN 737 20E SIÈCLE 1. (3)**

**FREN 762 THÈME DE LITTÉRATURE**

- pass courses GEOG 631D1/GEOG 631D2 and GEOG 698 (12 credits), which deal with the preparation of the thesis proposal;
- attend such additional courses as the Chair and the student's thesis supervisor think fit; and,
- submit a thesis GEOG 699 (24 credits) in an appropriate area of geographical inquiry.

**M.A. – Neotropical Environment** (48 credits)

Candidates must:

- pass the required courses: ENVR 610 and BIOL 640 (6 credits total).
- pass one 3-credit course chosen from POLI 644; SOCI 565, ENVR 611, ENVR 612, ENVR 680, BIOL 553, BIOL 641, GEOG 498, AGRI 550.
- pass one 3-credit Geography graduate course.
- Participation in the MSE-Panama Symposium presentation in Montreal is required.
- pass courses GEOG 631D1/GEOG 631D2 and GEOG 698 (12 credits), which deal with the preparation of the thesis proposal;
- submit a thesis GEOG 699 (24 credits) on a topic approved by the advisor.

**M.A. – Social Statistics Option** (48 credits)

Candidates must:

- pass the equivalent of two graduate courses (6 credits), selected according to guidelines of the Department. Senior undergraduate courses in other departments may be substituted for some of this requirement with the permission of the Department of Geography;
- pass GEOG 634 (or suitable substitute) (3 credits);
- pass GEOG 688 or ECON 688 or POLI 688 or SOCI 688 (3 credits);
- pass courses GEOG 631D1/GEOG 631D2 and GEOG 698 (12 credits), which deal with the preparation of the thesis proposal;
- attend such additional courses as the Chair and the student's thesis supervisor think fit; and,
- submit a thesis GEOG 699 (24 credits) on a topic approved by the Social Statistics Option advisor.

**M.Sc. – Neotropical Environment** (48 credits)

Candidates must:

- pass the required courses: ENVR 610 and BIOL 640 (6 credits total).
- pass one 3-credit course chosen from POLI 644; SOCI 565, ENVR 611, ENVR 612, ENVR 680, BIOL 553, BIOL 641, GEOG 498, AGRI 550.
- pass one 3-credit Geography graduate course.
- Participation in the MSE-Panama Symposium presentation in Montreal is required.
- pass courses GEOG 631D1/GEOG 631D2 and GEOG 698 (12 credits), which deal with the preparation of the thesis proposal;
- submit a thesis GEOG 699 (24 credits) on a topic approved by the advisor.

**Ph.D. Degree**

Candidates must:

- attend a minimum of two graduate courses (6 credits) and such additional courses as the Chair and the student's supervisory committee think fit;
- pass course GEOG 631D1/GEOG 631D2 which deals with the preparation of the thesis proposal;
- pass a comprehensive examination (GEOG 700, GEOG 701, GEOG 702) the form of which is detailed in a document available from the Department; and,

- submit a thesis based on original research in an appropriate area of geographical inquiry.

**Ph.D. – Neotropical Environment**

Candidates must:

- pass the required courses: ENVR 610 and BIOL 640 and such additional courses as the Chair and the student's supervisory committee think fit.
- pass one 3-credit course chosen from POLI 644; SOCI 565, ENVR 611, ENVR 612, ENVR 680, BIOL 553, BIOL 641, GEOG 498, AGRI 550.
- Participation in the MSE-Panama Symposium presentation in Montreal is required.
- pass course GEOG 631D1/GEOG 631D2 which deals with the preparation of the thesis proposal;
- pass a comprehensive examination (GEOG 700, GEOG 701, GEOG 702) the form of which is detailed in a document available from the Department; and,
- submit a thesis based on original research in an appropriate area.

**32.6 Courses and Seminars for Advanced Undergraduates and Graduates**

Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.

Term(s) offered (Fall, Winter, Summer) may appear after the credit weight to indicate when a course would normally be taught. Please check Class Schedule to confirm this information.

**Note:** All undergraduate courses administered by the Faculty of Science (courses at the 100- to 500-level) have limited enrolment. The course credit weight is given in parentheses after the title.

- Denotes courses not offered in 2003-04.

**GEOG 500 GEOGRAPHY OF REGIONAL IDENTITY.** (3) (Fall) (3 hours) (Restriction: Graduate students and final year undergraduates and/or those who have taken GEOG 408) The response of diverse regional groups in Europe to the centripetal tendencies of national institutions. The course draws upon examples from a variety of European regions. Contemporary regional issues will be contextualised within a spatial framework of historical geography.

**GEOG 501 MODELLING ENVIRONMENTAL SYSTEMS.** (3) (Fall) (1.15 hours lecture, 0.58 hours seminar, 0.69 hours project, 0.58 hours laboratory) (Restriction: open only to U2 or U3 students who have completed six or more credits from courses at the 300 level of Atmospheric and Oceanic Sciences, Biology, Chemistry, Earth and Planetary Sciences, Geography, Natural Resource Sciences, or a McGill School of Environment domain, or permission of the instructor) (Prerequisites: MATH 139 or MATH 140, MATH 141, and MATH 203, or equivalent) (Enrolment limited to 20 students by availability of workstations) Most problems in environmental science deal with weak relationships and poorly defined systems. Model development and simulation will be used in this course to help improve understanding of environmental systems. Simulation of environmental systems is examined, focusing on problem definition, model development and model validation.

**GEOG 502 GEOGRAPHY OF NORTHERN DEVELOPMENT.** (3) (Fall) (3 hours) Analysis of the evolution of development policies and their spatial implications in circumpolar areas with an emphasis on the application of geographical concepts. Special attention is given to indigenous peoples and new immigrant populations in northern North America.

- **GEOG 503 METHODS OF REGIONAL ANALYSIS.** (3) (Winter) (3 hours) (Prerequisite: GEOG 311)

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**GEOG 504 INDUSTRIAL RESTRUCTURING - GEOGRAPHIC IMPLICATIONS.** (3) (Fall) (Prerequisites: GEOG 311 or permission of instructor) The objective of this seminar course is to develop an understanding of the geographical consequences of a variety of new forms of economic and social organization that are emerging



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GERM 650 German Linguistics and Philosophy 1. (3)  
GERM 656 Literary Theory and Criticism 2. (3)  
GERM 658 Literary Theory and Criticism 4. (3)  
GERM 660 Comparative Literature Studies 1. (3)  
GERM 661 Comparative Literature Studies 2. (3)  
GERM 666 Theoretical Approach - Teaching German 2. (3)  
GERM 675 Research Seminar. (3)  
GERM 680 Research Paper 1. (6)  
GERM 681 Research Paper 2. (6)  
GERM 682 Research Paper 3. (6)  
GERM 690 Thesis Research 1. (9)  
GERM 691 Thesis Research 2. (9)  
GERM 692 Thesis Research 3. (12)  
GERM 701D1 Ph.D. Comprehensive Examination. (0)  
GERM 701D2 Ph.D. Comprehensive Examination. (0)  
GERM 790 Ph.D. Language Requirement. (6)

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## 34 Hispanic Studies

Department of Hispanic Studies  
688 Sherbrooke Street West, Room 425  
Montreal, QC H3A 3R1  
Canada

Telephone: (514) 398-6683

Fax: (514) 398-1748

E-mail: [hispanic.studies@mcgill.ca](mailto:hispanic.studies@mcgill.ca)

Web site: [www.arts.mcgill.ca/programs/hispanic](http://www.arts.mcgill.ca/programs/hispanic)

*Chair* — J. Pérez-Magallón

*Chair of Graduate Program* — J. Pérez-Magallón

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### 34.1 Staff

**M.A. Degree without thesis (48 credits)**

Requirements:

- Coursework – 8 three-credit courses (24 credits)
- Research – 2 three-credit courses in Hispanic Bibliography (HISP 603, HISP 604) (6 credits)
- Two Guided Research Projects – 18 credits

All candidates pursuing the M.A. without thesis must complete HISP 615. Candidates choosing to focus their research on the literature of Spain will take HISP 616. Those wishing to specialize in the literature of Spanish America will take HISP 617.

At the conclusion of each Research Project, students will be required to produce an extended essay, or series of essays, during a 48-hour period with full access to critical material. Each of these essays will focus upon themes and issues central to the particular field of research and will be examined by at least two faculty members. Normally, the examinations for each of these projects will be offered only once during the academic year and always in the same rotation: "Medieval and Golden Age Literature" in December, and both "Modern and Contemporary Spanish Literature" and "Modern and Contemporary Spanish-American Literature" in April.

All candidates pursuing the M.A. without thesis, both full- and part-time, are expected to complete their degree requirements within 18 months, and must successfully complete at least one of their Guided Research projects during the first 12 months. It is expected that most students will require 3 terms to complete their degrees. In accordance with the regulations established by the Graduate and Postdoctoral Studies Office, students in non-thesis programs who do not take at least 12 credits per term are considered to proceed toward their degree on a part-time basis.

**Ph.D. Degree Requirements**

1. Six 3-credit courses.
2. Proficiency in Spanish, and when appropriate in Portuguese, as well as a functional ability in French and English. A reading knowledge of a fourth language will be determined according to the needs of the candidate's research program.
3. HISP 701 Comprehensive Examinations, Oral and Written.
4. HISP 713 Reserach Seminar in Hispanic Studies.
5. Doctoral dissertation on an appropriate area of original research.

All courses, comprehensive examinations and language requirements will normally be completed before the dissertation topic is formally approved. A dissertation proposal should be submitted to the Graduate Committee of the Department of Hispanic Studies for approval no later than the end of the second year of full-time doctoral studies.

All general regulations of the Graduate and Postdoctoral Studies Office regarding the Ph.D. degree shall apply.

**Required Academic Activities:** All candidates preparing their dissertation are required to give an annual formal presentation of their research to the Department, normally beginning in their third year of full-time doctoral studies.

**34.6 Courses**

Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.

**Note:** All undergraduate courses administered by the Faculty of Arts (courses at the 100- to 500-level) have limited enrolment.

The course credit weight is given in parentheses after the title.

**Courses to be offered in 2003-04:**

**HISP 603 HISPANIC BIBLIOGRAPHY 1.** (3)

**HISP 604 HISPANIC BIBLIOGRAPHY 2.** (3)

**HISP 615 MEDIEVAL AND GOLDEN AGE LITERATURE: GRP.** (9) An investigation of the principal themes and critical issues in medieval and Golden-Age Spanish literature. Attention will also focus on a comparison with similar problems in colonial Spanish-American literature. Project.

**HISP 616 MODERN AND CONTEMPORARY SPANISH LITERATURE: GRP.** (9) An investigation of the principal themes and critical issues in nineteenth- and twentieth-century Spanish literature. Project.

**HISP 617 MODERN AND CONTEMPORARY SPANISH-AMERICAN LITERATURE: GRP.** (9) An investigation of the principal themes and critical issues in nineteenth- and twentieth-century Spanish-American literature. Project.

**HISP 619 TOPICS IN LITERARY THEORY.** (3)

**HISP 663 SPANISH LITERATURE SINCE CIVIL WAR**

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## 35 History

Department of History  
Stephen Leacock Building, Room 625  
855 Sherbrooke Street West  
Montreal, QC H3A 2T7  
Canada

Telephone: (514) 398-3977

Fax: (514) 398-8365

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

Web site: [www.arts.mcgill.ca/programs/history](http://www.arts.mcgill.ca/programs/history)

Chair — Brian Lewis

Chair of Graduate Programs — Leonard Moore

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### 35.1 Staff

#### *Emeritus Professors*

Michael P. Maxwell; B.A.(Sir G.Wms.), M.A., Ph.D.(McG.)

Albert Schachter; B.A.(McG.), D.Phil.(Oxon) (*Hiram Mills Emeritus Professor of Classics*)

#### *Professors*

Valentin J. Boss; B.A.(Cantab.), Ph.D.(Harv.)

Myron J. Echenberg; M.A.(McG.), Ph.D.(Wis.)

John W. Hellman; B.A.(Marq.), M.A., Ph.D.(Harv.) (*on leave Winter 2004*)

Peter Hoffmann; Ph.D.(Munich), F.R.S.C. (*William Kingsford Professor of History*)

Gershon D. Hundert; B.A., M.A.(Ohio St.), Ph.D.(Col.) (*Leonor Segal Professor of Jewish Studies*) (*joint appoint. with Jewish Studies*)

Philip D. Longworth; M.A.(Oxon)

Carman I. Miller; B.A. B.ED.(Acadia), M.A.(Dal.), Ph.D.(Lond.)

Desmond Morton; B.A.(R.M.C.), B.A. M.A.(Oxon), Ph.D.(Lond.) (*Hiram Mills Professor of History*)

Yuzo Ota; B.A., M.A., Ph.D.(Tokyo)

Nancy F. Partner; B.A., M.A., Ph.D.(Calif.)

T. Wade Richardson; B.A.(McG.), M.A., Ph.D.(Harv.)

Hereward Senior; M.A., Ph.D.(McG.)

Gil E. Troy; A.B., A.M., Ph.D.(Harv.)

Robin D.S. Yates; B.A., M.A.(Oxon), M.A.(Calif.), Ph.D.(Harv.)

(*James McGill Professor*) (*joint appoint. with East Asian Studies*) (*on leave 2003-04*)

Brian J. Young; B.A.(Tor.), M.A., Ph.D.(Queen's) (*James McGill Professor*)

John E. Zucchi; B.A. M.A. Ph.D.(Tor.)

#### *Associate Professors*

Paula Clarke; B.A.(Mem.), B.A.(Oxon), M.A.(Tor.), Ph.D.(Lond.)

Catherine Desbarats; B.A.(Queen's), D.Phil.(Oxon), Ph.D.(McG.)

Elizabeth Elbourne; B.A., M.A.(Tor.), D.Phil.(Oxon)

Catherine LeGrand; B.A.(Reed), M.A., Ph.D.(Stan.)

Brian Lewis; B.A., M.A.(Oxon), A.M., Ph.D.(Harv.)

Leonard Moore; A.B., M.A., Ph.D.(Calif.)

Suzanne Morton; B.A.(Trent), M.A., Ph.D.(Dal.)

Michael J. Silverthorne; B.Litt., M.A., D.Phil.(Oxon)

Faith Wallis; B.A., M.A.(McG.), Ph.D.(Tor.) (*joint appoint. with Social Studies of Medicine*)

#### *Assistant Professors*

James Delbourgo; B.A.(East Anglia), M.Phil.(Camb.), Ph.D.(Col.)

Elizabeth Digeser; B.A.(NY), M.A.(Johns H.), M.A., Ph.D.(Calif.)

Elsbeth Heaman; B.A., M.A.(McG.), Ph.D.(Tor.)

Lorenz Lüthi; Lic.Phil.I(Zürich), M.A., M.Phil., Ph.D.(Yale)

Daviken Studnicki-Gizbert; B.A.(Montr.), M.Phil., Ph.D.(Yale)

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### 35.2 Programs Offered

M.A. Degree in History.

M.A. Degree in History of Medicine. (In cooperation with the Department of Social Studies of Medicine; application is made directly to the History Department.)

Ph.D. Degree in History.

The Department is prepared to direct theses in the following fields and the Redpath, McLennan, and Osler Libraries are well equipped with printed sources for these periods and subjects.

1. British Medieval, Modern Social, Political, Cultural, Diplomatic and Military history.
2. Canadian Social, Political, Labour, Cultural, Religious and Economic history.
3. United States Colonial, Revolutionary, Modern Political and Social history.
4. Latin American history.
5. European History: French, German, Italian, East-Central European and Balkan, Russian, Medieval, Renaissance, Military, Intellectual, European Jewish history.
6. Japanese history.
7. Chinese history.
8. African history.
9. Ancient history.
10. Medical history.

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### 35.3 Admission Requirements

General: CGPA minimum: 3.3 on 4.0; TOEFL minimum: 550 on the paper-based test (213 on the computer-based test).

#### **Master in History**

Normally, candidates are required to possess a B.A. (Honours) in History consisting of 60 credits in history. Students with other undergraduate history degrees (normally including serious research components) may be considered eligible. Applicants not satisfying these conditions, but otherwise judged worthy of serious consideration will be asked to register in a Qualifying Program in which they undertake advanced undergraduate work.

#### **Master in the History of Medicine**

Candidates must have a background in either History – B.A. (Honours) or equivalent – or a degree in one of the health professions.

#### **Ph.D. in HiCa-0-7.4( Ttes mu2isting o)6.and Balkan, Russic0.004ch**

**M.A. Degree in History of Medicine**

(48 credits normally completed in two years)

The program requires the completion of 48 credits, composed of three full-year graduate seminars, plus a major research paper. Consult the Department of Social Studies of Medicine section for program details.

**Ph.D. Degree in History**

**Examination Requirements:** Candidates are required to sit an oral comprehensive examination by May at the end of the 2nd term of the Ph.D. 2 year. The examination consists of:

HIST 702 Comprehensive Examination in Major Field.

HIST 703 Comprehensive Examination in First Minor Field.

HIST 704 Comprehensive Examination in Second Minor Field.

Candidates must consult with their Director of Studies at the beginning of their Ph.D. work in order to determine their fields.

**Thesis:** With the completion of the oral comprehensive examination, candidates may proceed with their doctoral dissertation. Each Ph.D. candidate will be expected to establish an advisory committee to assist in supervising the dissertation.

**Language Requirements:** Ph.D. Candidates must offer one foreign language for examination purposes. The Department expects that candidates will have successfully demonstrated competence in the one required language by the end of their Ph.D.3 year.

It is understood that candidates may need a reading knowledge of such other languages as are required for research purposes in their major field.

**Candidates in the field of Medical History** will prepare the major field for the Comprehensive Examination with a member of the Department of Social Studies of Medicine and the two minor fields with members of the Department of History. The thesis will normally be directed by the director of the major field. In all other respects, the same rules will apply to candidates in this area as apply to other Ph.D. students in History.

**35.6 Graduate Seminars and Courses**

**Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.**

**Courses with numbers ending D1 and D2** are taught in two consecutive terms (most commonly Fall and Winter). Students must register for both the D1 and D2 components. No credit will be given unless both components (D1 and D2) are successfully completed in consecutive terms.

**Note:** All undergraduate courses administered by the Faculty of Arts (courses at the 100- to 500-level) have limited enrolment.

The course credit weight is given in parentheses after the title.

**Courses currently scheduled for 2003-04:**

**HIST 550 ROMAN HISTORY: SEMINAR.** (3) (Fall) (Restricted to Honours students or advanced undergraduates who have permission of the instructor. Also open to graduate students.) (Topic for 2003-04: Social Transformation in the Late Roman Empire.) Various topics in Roman history.

**HIST 551 ROMAN HISTORY: RESEARCH.** (3) (Winter) (Prerequisite: HIST 550) (Restricted to Honours students or advanced undergraduates who have permission of the instructor. Also open to graduate students.) In this research seminar students who have taken the Roman History Seminar (HIST 550), will undertake supervised design, research, discussion and writing of a research paper on a theme in Roman history.

**HIST 582 EUROPEAN INTELLECTUAL HISTORY.** (3) A study of selected topics in 20th century French and European intellectual

and cultural history and popular culture. Topic for 2003-04: Auto-biographical and Collective memory, Europe and North America.

**HIST 612D1 GERMAN NATIONAL SOCIALISM.** (3) (Topic for 2003-04: The German Resistance to Hitler.)

**HIST 612D2 GERMAN NATIONAL SOCIALISM.** (3)

**HIST 613D1 TOPICS: CANADIAN SOCIAL HISTORY.** (3) A seminar covering topics in Canadian Social History which vary from year to year.

**HIST 613D2 TOPICS: CANADIAN SOCIAL HISTORY.** (3)

**HIST 615D1 TOPICS IN ITALIAN HISTORY.** (3) (Topic for 2003-04: Italy during the 16th Century.)

**HIST 615D2 TOPICS IN ITALIAN HISTORY.** (3)

**HIST 640 MODERN MEDICINE SEMINAR 1.** (3) (Topic for 2003-04: The Evolution of Medical Judgment.) Reading in and discussion of a theme in the history of Western European medicine since 1700.

**HIST 641 MODERN MEDICINE SEMINAR 2.** (3) (Prerequisite: HIST 640) Research paper on a theme in the history of Western European medicine since 1700.

**HIST 655D1 TUTORIAL.** (3) If a seminar is not available in a field judged necessary to complete the program, candidates may (with the consent of their Director of Studies and that of the Chair of the Graduate Committee) do tutorial work to replace a seminar.

**HIST 655D2 TUTORIAL.** (3)

**HIST 668D1 JAPANESE INTELLECTUAL HISTORY.** (3) (Topic for 2003-04: Cultural Contacts between Japan and the Western World.)

**HIST 668D2 JAPANESE INTELLECTUAL HISTORY.** (3)

**HIST 673D1 PROBLEMS IN U.S. HISTORY.** (3) (Topic for 2003-04: Reagan.)

**HIST 673D2 PROBLEMS IN U.S. HISTORY.** (3)

**HIST 677D1 SEMINAR: EUROPEAN JEWISH HISTORY.** (3) (Topic for 2003-04: Messianism and Messianic Movements.)

**HIST 677D2 SEMINAR: EUROPEAN JEWISH HISTORY.** (3)

**HIST 678 HISTORIOGRAPHY.** (3) This seminar examines the fundamentals of historical theory: developing a clear understanding of exactly why history has a "theory". The philosophic language and modes of reasoning necessary to understand historical theory are introduced.

**HIST 679 HISTORICAL METHODS.** (3) An examination of the major approaches to historical interpretation through the reading of important works of historical scholarship.

**HIST 691 M.A. RESEARCH PAPER 1.** (6)

**HIST 692 M.A. RESEARCH PAPER 2.** (6)

**HIST 693 M.A. RESEARCH PAPER 3.** (9)

**HIST 694 M.A. RESEARCH PAPER 4.** (9)

**HIST 696 THESIS RESEARCH 1.** (12).

**HIST 697 THESIS RESEARCH 2.** (12)

**HIST 698 THESIS RESEARCH 3.** (12)

**HIST 699 TUTORIAL.** (3)

**HIST 702 COMPREHENSIVE EXAMINATION - MAJOR FIELD.** (0)

**May be offered as: HIST 702D1 and HIST 702D2.**

**HIST 703 COMPREHENSIVE EXAMINATION - FIRST MINOR FIELD.** (0)

**May be offered as: HIST 703D1 and HIST 703D2.**

**HIST 704 COMPREHENSIVE EXAMINATION - SECOND MINOR FIELD.** (0)

**May be offered as: HIST 704D1 and HIST 704D2.**



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HIST 590 Topics: The British Empire. (3)  
HIST 594D1 Topics: Tudor and Stuart England. (3)  
HIST 594D2 Topics: Tudor and Stuart England. (3)  
HIST 595D1 Seminar: Early Modern Western Europe. (3)  
HIST 595D2 Seminar: Early Modern Western Europe. (3)  
HIST 604D1 Colonial America. (3)  
HIST 604D2 Colonial America. (3)  
HIST 610D1 Seminar: Topics - Medieval History. (3)  
HIST 610D2 Seminar: Topics - Medieval History. (3)  
HIST 611D1 Seminar: Traditional Chinese History. (3)  
HIST 611D2 Seminar: Traditional Chinese History. (3)  
HIST 614D1 Topics: Latin American History. (3)  
HIST 614D2 Topics: Latin American History. (3)  
HIST 618 Readings in East Asian History. (3)  
HIST 619 Ancient Medicine Seminar 1. (3)  
HIST 620 Ancient Medicine Seminar 2. (3)  
HIST 627D1 Seminar: Eastern Europe. (3)  
HIST 627D2 Seminar: Eastern Europe. (3)  
HIST 628D1 Topics in Russian History. (3)  
HIST 628D2 Topics in Russian History. (3)  
HIST 631D1 Topics: U.S. Social History. (3)  
HIST 631D2 Topics: U.S. Social History. (3)  
HIST 634D1 Modern British History since 1867. (3)  
HIST 634D2 Modern British History since 1867. (3)  
HIST 636 Medieval Medicine Seminar 1. (3)  
HIST 637 Medieval Medicine Seminar 2. (3)  
HIST 643D1 Canadian History to 1867. (3)  
HIST 643D2 Canadian History to 1867. (3)  
HIST 656D1 Tutorial. (3)  
HIST 656D2 Tutorial. (3)  
HIST 671D1 Seminar: American Society - Civil War - 1920. (3)  
HIST 671D2 Seminar: American Society - Civil War - 1920 (3)  
HIST 683D1 History of Montreal. (3)  
HIST 683D2 History of Montreal. (3)

G. Rouleau; B.Sc., M.D.(Ott.), Ph.D.(Harv.) (*Medicine and Psychiatry*)  
R. Rozen; B.Sc., Ph.D.(McG.) (*Pediatrics and Biology*)  
C. Scriver; B.A., M.D.,C.M.(McG.)

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## 36 Human Genetics

Department of Human Genetics  
Stewart Biological Sciences Building  
1205 avenue Docteur Penfield, N5/13  
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Canada

Telephone: (514) 398-4198  
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Web site: [www.mcgill.ca/humangenetics](http://www.mcgill.ca/humangenetics)

Chair — D.S. Rosenblatt

Program Directors:

*M.Sc. in Genetic Counselling* — R. Palmour

*M.Sc. and Ph.D. in Human Genetics* — R. St-Arnaud

Graduate Program Coordinator — L. Benner

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### 36.1 Staff

Professors

E. Andermann; M.Sc., Ph.D., M.D.,C.M.(McG.) (*Neurology and Neurosurgery*)

V. Der Kaloustian; B.A.(Acad.), M.Sc., Ph.D., M.D.,C.M.(McG.),  
D.Sc.(Acad.), F.R.S.C., F.R.C.P.S.(C) (*Pediatrics*)

A. Duncan; B.Sc.(Queen's), Ph.D.(Edin.) (*Pathology and Pediatrics*)

K. Glass; M.A.(Barat), B.C.L., D.C.L.(McG.) (*Pediatrics*)

K. Morgan; B.S., M.S., Ph.D (Mich.) (*Medicine*)

R. Palmour; B.A.(Texas W.), Ph.D.(Texas) (*Psychiatry and Biology*)

D. Radzioch; M.Sc., Ph.D.(Jagiellonian, Krakow) (*Medicine*)

D.S. Rosenblatt; M.D.,C.M.(McG.) (*Medicine, Pediatrics and Biology*)

ship award. Deadlines for scholarship applications may be anywhere from October to February.

### 36.3 Admission Requirements

#### M.Sc. in Genetic Counselling

**Prerequisites:** Bachelor's degree - minimum CGPA 3.0 on 4.0. Recent (5 years or less) university-level courses in the Basic Sciences (basic biology, cell and molecular, biochemistry, principles of human genetics or basic genetics with a significant "human" component); and a *minimum* of two Social Sciences (social psychology, abnormal psychology).

**Prerequisites or corequisites:** Recent (5 years or less) university-level course in statistics.

Applicants must have obtained some experience (either paid or volunteer) working in a counselling or advisory capacity, ideally in a health care setting.

The Test of English as a Foreign Language (TOEFL) is required of students who have graduated from a non-English university outside of Canada. A score of 600 on the TOEFL paper-based test (250 on the computer-based test) is the **minimum** standard for admission.

#### M.Sc. and Ph.D. in Human Genetics

**Prerequisites:** B.Sc. – minimum CGPA 3.0/4.0 or 3.2/4.0 for the last two full-time academic years. Applicants must have a minimum of 6 credits in cellular and molecular biology or biochemistry, 3 credits in mathematics or statistics and 3 credits in genetics. Graduate Record Examination (GRE) scores are not required, but may be submitted. The Test of English as a Foreign Language (TOEFL) is required of students who have graduated from a non-English language university outside of Canada. A score of 600 on the TOEFL paper-based test (250 on the computer-based test) or 7 on the IELTS, is the minimum standard for admission.

Admission is based on an evaluation by the Graduate Training Committee and on acceptance by a research director who can provide adequate funding for personal and research expenses. Prospective graduate students are encouraged to contact staff members with whom they wish to study before applying for admission.

### 36.4 Application Procedures

#### M.Sc. in Genetic Counselling

Applications will be considered upon receipt of:

1. application form,
2. two original transcripts,
3. two original letters of reference,
4. statement of purpose,
5. test results for international students: TOEFL or IELTS,
6. application fee of \$60.00 (credit card, money order or certified cheque in Canadian funds).

Applications and documentation must be received by February 15. Interviews will be arranged during the weeks of April 15 – May 1 for the top 18 candidates. Admission to the program will be based on academic record, reference letters, statement of purpose and interview.

Applications should be sent to Ms. Laura Benner at the Departmental address above.

#### M.Sc. and Ph.D. in Human Genetics

Applications will be considered upon receipt of:

1. application form,
2. two original transcripts,
3. two original letters of reference,
4. supervisor selection form,
5. test results for international students: TOEFL or IELTS,
6. application fee of \$60.00 (credit card, money order or certified cheque in Canadian funds).

Deadlines for applications and all supporting documents are March 1 for September admission and October 1 for January

admission (international applications for January admission due August 1).

Applications should be sent to: Ms. Laura Benner at the Departmental address above.

McGill's on-line application form for graduate program candidates is available at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

### 36.5 Program Requirements

#### M.Sc. in Genetic Counselling

Students must complete 48 credits for the M.Sc. in Genetic Counselling.

**Required Courses – Phase I** (year 1) (27 credits)

**Required Courses – Phase II** (year 2) (18 credits)

**Complementary Course** (3 credits)

#### M.Sc. and Ph.D. in Human Genetics

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

All graduate students are required to participate regularly in the various seminar series and journal clubs offered by the Department.

#### M.Sc. Requirements

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**Course Requirements** – Students are required to take 12 course credits. These courses may be taken in Human Genetics or in other departments and must be numbered 500 or higher. Additional courses may be required if the student's background is insufficient. A graduate pass (B- or better) is mandatory for all courses required for the Ph.D. degree.

**Ph.D. Qualifying Examination** – The Qualifying exam is a format of evaluation of the student's ability to proceed to the attainment of the Ph.D. Students must pass the Qualifying Examination (HGEN 701) no later than 15 months from the date of registration in the program. Students who transfer from the Master's program



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### **37.3 Admission Requirements**

#### **M.A. and Certificate Programs**

1. Applicants to the M.A. and Certificate programs must hold a Bachelor's degree from a recognized university. A minimum standing equivalent to a CGPA of 3.0 on 4.0, or 3.2 out of 4.0 for the last two full-time academic years, is required. A concentration of courses related to the area chosen for graduate work is usually required. (See #5, below.) Applicants who lack some requirements may be admitted as Qualifying or Special Stu-

EDER 626 (3) Topics: Value in Education  
 EDER 649 (3) Education: Multicultural Societies  
 3 credits to be selected from the following courses:  
 EDEC 706 (3) Textual Approaches to Research  
 EDEM 690 (3) Research Methods  
 EDEM 692 (3) Qualitative Research Methods

**Elective Courses** (15 credits)

**MASTER OF ARTS IN CULTURE AND VALUES IN EDUCATION (Non-thesis Option – Jewish Education)**  
 (45 credits)

This program is designed to offer a graduate-level point of entry into the teaching profession for students who typically will have completed a B.A. with minor or major in Jewish studies. The M.A. will not provide Quebec Government teacher certification (in Quebec certification is at the B.Ed. level) but Jewish schools presently have the right to hire non-certified teachers of Jewish studies.

Students interested in doing a research-focused M.A. in the area of Jewish education should follow one of the other graduate degree offerings within the area of Culture and Values in Education.

**Required Courses** (21 credits)

**Complementary Courses** (24 credits)

**MASTER OF ARTS IN SECOND LANGUAGE EDUCATION (Thesis Option)** (45 credits)  
**Required Courses** (9 credits)

**Complementary Courses** (12 credits)

**Thesis Component – Required** (24 credits)

**MASTER OF ARTS IN SECOND LANGUAGE EDUCATION (Non-thesis)** (45 credits)  
**Required Courses** (12 credits)

**Complementary Courses** (9 credits)

**Elective Courses** (24 credits)

**37.5.2 M.A. in Second Language Education**

This program combines theoretical and applied studies in second language education. The M.A. (Thesis option) is a research-oriented degree, approximately half of which consists of thesis research. The M.A. (Non-thesis option), consisting entirely of course work, is less research-oriented and suitable for practitioners interested in professional development with a theoretical orientation.

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### 37.5.3 M.A. in Educational Studies

This program enables graduate students to explore areas of education with special concern for the relationship between curriculum and educational leadership. The program includes the social, cultural and ideological factors that influence formal and informal contexts for learning. Particular attention is paid to the content and activity of the curriculum and to the ways in which leadership at local, national, and international levels affects the nature and practice of education. There are two possible concentrations from





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**Other courses:**

EDEE 661 Global Education. (3)

**37.6.4 EDEM – Admin & Policy Studies in Education**

**Courses currently scheduled for 2003-04:**

**EDEM 603 INDIVIDUAL READING COURSE.** (6) Independent study of an approved topic with the guidance of a faculty advisor.

**May be offered as: EDEM 603D1 and EDEM 603D2.**

**EDEM 609 ISSUES IN EDUCATIONAL STUDIES.** (3) The purpose is to explore critically the contemporary trends, issues, historical contexts and implications in curriculum and leadership through processes that engage students with each other and various members of the Department.

**EDEM 610 LEADERSHIP IN ACTION.** (3) Teaching of the use of reflective practice as a means of developing individual theories of action in educational settings. It provides students with the knowledge, skills and attitudes necessary to engage in processes that can improve individual and organizational performance. Special emphasis will be given to communication, problem solving and decision-making.

**EDEM 616 INDIVIDUAL READING COURSE.** (3) Independent study of an approved topic with the guidance of a faculty advisor.

**EDEM 620 MEANINGS OF LITERACY.**

**EDER 626 TOPICS: VALUE IN EDUCATION.** (3) In-depth examination of topics in values in education. Content will vary from year to year and will be announced prior to registration. (Examples: Spirituality and Education; Patterns of Moral/Spiritual Development; Ethics and Education.)

**EDER 633 SPECIAL PROJECT.** (12) (Prerequisite: Completion of program course requirements. For non-thesis students only.) An investigation into an educational problem, or issue, or innovative practice in the student's area of concentration, supervised by the student's supervisor and with departmental approval. The student will complete the Special Project by submitting a monograph, project report or production, accompanied by a written component.

**EDER 633D1 SPECIAL PROJECT.** (6) (Students must also register for EDER 633D2) (No credit will be given for this course unless both EDER 633D1 and EDER 633D2 are successfully completed in consecutive terms) (EDER 633D1 and EDER 633D2 together are equivalent to EDER 633) An investigation into an educational problem, or issue, or innovative practice in the student's area of concentration, supervised by the student's supervisor and with departmental approval. The student will complete the Special Project by submitting a monograph, project report or production, accompanied by a written component.

**EDER 633D2 SPECIAL PROJECT.** (6) (Prerequisite: EDER 633D1) (No credit will be given for this course unless both EDER 633D1 and EDER 633D2 are successfully completed in consecutive terms) (EDER 633D1 and EDER 633D2 together are equivalent to EDER 633) See EDER 633D1 for course description.

**EDER 649 EDUCATION: MULTICULTURAL SOCIETIES.** (3) Majority-minority relations and their implications for educational policy and practice.

**EDER 690 THESIS PREPARATION 1.** (6) A supervised comprehensive study and written review of the 8.1 4.14812revie 8.1 4 ompleteT1TD-( co6 602.2795 Tm-0J14.1c9ive)8 e i4(revi)7(e 8.1 4 S7.4(.2shis )7.4topi-0.0t)9.

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EDSL 603D2 Individual Reading Course 1. (3)  
EDSL 624 Educational Sociolinguistics. (3)  
EDSL 644 Sociolinguistique et enseignement du français LS. (3)  
EDSL 647 Developpement Curriculaire. (3)

- f) a dissertation judged to contain original research. Upon approval of the dissertation, "pass" must be received at the final oral examination.

#### **Graduate Diploma in Islamic Studies**

With a B.A. in Islamic Studies (or its equivalent), applicants may be admitted to this non-degree program, which requires the completion of 30 credits of course work *in one academic year*. Candidates will choose a minimum of 18 credits from graduate courses in Islamic Studies and a maximum of 12 credits from graduate courses in related fields. If awarded this Diploma with high standing, they may be allowed to proceed to a higher degree in Islamic Studies.

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### **38.6 Courses for Higher Degrees**

#### **Students preparing to register**

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**M.A., thesis option:**

**Required Courses** (12 credits)

**Complementary Courses** (9 credits)

**Thesis Component – Required** (24 credits)

A maximum of 6 credits of graduate courses may be taken outside the Italian Studies Department, upon the advice of the Supervisor and with the permission of t

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## 40 Jewish Studies

Department of Jewish Studies  
3438 McTavish Street, Room 202  
Montreal, QC H3A 1X9  
Canada

Telephone: (514) 398-6543  
Fax: (514) 398-5158

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

Web site: [www.arts.mcgill.ca/programs/jewish](http://www.arts.mcgill.ca/programs/jewish)

Chair — Gershon Hundert

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### 40.1 Staff

#### Professors

Gershon Hundert; B.A., M.A.(Ohio St.), Ph.D.(Col.) (*Leonor Segal Professor of Jewish Studies*) (joint appoint. with History)  
B. Barry Levy; B.A., M.A., B.R.E.(Yeshiva), Ph.D.(N.Y.U.)

#### Associate Professors

David Aberbach; B.A.(U.C.,Lon.) M.Litt. Ph.D.(Oxon)  
Lawrence Kaplan; B.A.(Yeshiva), M.A., Ph.D.(Harv.)  
Eugene Orenstein; B.A.(C.C.N.Y.), M.A., Ph.D.(Col.)

#### Assistant Professors

Eric Caplan; B.A., M.A., Ph.D.(McG.) (*joint appoint. with Integrated Studies in Education*)  
Carlos Fraenkel; B.A., M.A., Ph.D.(F.U. Berlin)  
Yael Halevi-Wise; B.A.(Heb.U.), M.A.(Georgetown), Ph.D.(Prin.) (*joint appoint. with English*)

#### Adjunct Professor

Ruth Wisse; M.A.(Col.), Ph.D.(McG.)

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### 40.2 Programs Offered

M.A. in Jewish Studies. (An *ad hoc* Ph.D. in Jewish Studies may be offered. Please contact the Department.)

The Department of Jewish Studies offers both thesis and non-thesis M.A. Programs:

The **thesis** option is intended for students interested in one of two specific areas: the History of Jewish Interpretation of the Bible or East European Jewish Studies. These areas are broadly construed to accommodate the range of research interests in the Department.

The **non-thesis** program permits students to acquire a generalist degree in Jewish Studies with advanced work in the areas of Jewish History, Thought and Literature.

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### 40.3 Admission Requirements

All applicants to the graduate program must hold an Honours B.A. in Jewish Studies or the equivalent. Students whose backgrounds are, in the opinion of the staff, inadequate in one or more areas will be required to pursue qualifying programs to eliminate these deficiencies.

Students seeking admission to the History of Jewish Interpretation of the Bible or to the non-thesis option must demonstrate competence in Hebrew. Those pursuing a program in East European Jewish Studies, or the non-thesis option, must demonstrate fluency in either Yiddish or Hebrew.

Applicants are also required to submit samples of their academic work in Jewish Studies as well as the appropriate references, transcripts and examination scores. A personal interview is strongly recommended but not required.

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### 40.4 Application Procedures

Applications will be considered upon receipt of:

1. application form,
2. official transcripts,
3. letters of reference,
4. \$60 application fee,
5. GRE scores (if applicable),
6. samples of applicant's academic work.

Deadline for admission in September:

Ph.D. applications – January 6

M.A. applications – February 1.

Note: there are no January admissions.

Application inquiries should be addressed to the Graduate Coordinator, (514) 398-3977. E-mail: [graduate.jewishst@mcgill.ca](mailto:graduate.jewishst@mcgill.ca).

McGill's on-line application form for graduate program candidates is available at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

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### 40.5 Program Requirements

#### M.A. (thesis) Degree (45 credits)

Thesis option students must specialize in one of the following two areas:

- Area I: The History of Jewish Interpretation of the Bible (includes additional language requirement, as noted below);
- Area II: East European Jewish Studies.

#### M.A., with thesis

##### Area I – The History of Jewish Interpretation of the Bible

##### Required Courses (9 credits)

JWST 510 (3) Jewish Bible Interpretation 1es80.2667 -1.8667b.2(ewish Bible )-7.4(In

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#### Complementary Courses

##### Complementary Courses (12 credits)

##### Thesis Component – Required (24 credits)

Students must also master an additional language (not Hebrew) in which primary documents of Jewish Bible Interpretation have been written; in most cases, this will be Aramaic, but classical Arabic and Greek are accepted. Mastery is normally determined by an examination administered by the Department.

#### M.A., with thesis

##### Area II – East European Jewish Studies

##### Required Course (3 credits)

##### Complementary Courses (18 credits)

##### Thesis Component – Required (24 credits)

#### M.A., non-thesis option (45 credits)

##### Required Course (3 credits)





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topical analysis of a major issue in the history of Jewish Bible interpretation.

**JWST 692 M.A. THESIS 3.** (12) Preparation of the thesis.

**JWST 694 M.A. THESIS 4: AREA I.** (3) A directed reading project devoted to the modern critical scholarship on one Biblical work.

**JWST 695 M.A. THESIS 1: AREA II.** (3) Bibliographical introduction to the field and preparation of a research proposal in East European Jewish Studies.

**JWST 696 M.A. THESIS 2: AREA II.** (6) Preparation of a research report and presentation of a research seminar in East European Jewish Studies.

**JWST 697 M.A. THESIS 3: AREA II.** (12) Preparation and submission of an acceptable thesis in East European Jewish Studies.

**JWST 699 RESEARCH IN JEWISH STUDIES.** (3) Practical problems and resources related to research and key theoretical debates in the field will be discussed.

#### **OTHER COURSES**

JWST 502 Contemporary Hebrew Literature. (3)

JWST 523 Ancient Bible Interpretation. (3)

JWST 534 Homiletic Midrash. (3)

JWST 535 Exegetic Midrash. (3)

JWST 543 Maimonides as Parshan. (3)

JWST 544 Nachmanides as Parshan. (3)

JWST 548 Medieval Parshanut. (3)

JWST 552 Judaism and Poverty. (3)

JWST 556 Modern Parshanut 1. (3)

JWST 573 History of Hebrew Bible Text. (3)

JWST 576 Jewish Family Law. (3)

JWST 585 Tutorial: Eastern European Studies 1. (3)

JWST 586 Tutorial: Eastern European Studies 2. (3)

JWST 641 Medieval Bible Interpretation 1. (3)

JWST 671 Jewish Bible Interpretation 3. (3)

JWST 741 Medieval Bible Interpretation 2. (3)

JWST 791D1 Comprehensive Examination. (1.5)

JWST 791D2 Comprehensive Examination. (1.5)

#### **The following are also considered graduate courses in Jewish studies:**

HIST 655 Tutorial. (6)

HIST 677D1 Seminar: European Jewish History. (3)

HIST 677D2 Seminar: European Jewish History. (3)

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EDKP 550	(3)	Analyzing Instructional Behaviors
EDKP 603	(3)	Individual Readings
EDKP 607	(3)	Curriculum Innovation and Change
EDKP 616	(3)	Individual Readings
EDKP 650	(3)	Teaching in Physical Education
EDKP 654	(3)	Sport Psychology
EDKP 655	(3)	Program Development/Adapted Physical Activity
EDKP 664	(3)	Motor Learning
EDKP 665	(3)	Motor Performance of Disabled Persons
EDKP 671	(3)	Experimental Problems
EDKP 672	(3)	Experimental Problems
EDKP 695	(3)	Thesis Research 5 or complementary course
EDKP 696	(3)	Thesis Research 6 or complementary course

Students may also take courses from the Faculty of Education or the Faculty of Arts in consultation with an advisor (500-level or higher).

**Thesis Component – Required** (24 credits)

EDKP 691	(6)	Thesis Research 1
EDKP 692	(6)	Thesis Research 2
EDKP 693	(6)	Thesis Research 3
EDKP 694	(6)	Thesis Research 4

**M.A. Kinesiology and Physical Education (Non-thesis Option)** (45 credits)

Areas of concentration: Adapted Physical Activity, Psychology of Sport and Motor Behavior or Pedagogy)

**Project Component – Required** (15 credits)

EDKP 608	(15)	Special Project
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**Complementary Courses** (18 credits)

6 credits, two courses from the following list:

EDPE 575	(3)	Educational Measurement
EDKP 605	(3)	Research Methods 1
EDSL 630	(3)	Qualitative/Ethnographic Studies
or EDEM 692	(3)	Qualitative Research Methods

12 credits from the following list:

EDKP 504	(3)	Health and Lifestyle Education
EDKP 505	(3)	Sport and Physical Education in Society
EDKP 550	(3)	Analyzing Instructional Behaviors
EDKP 607	(3)	Curriculum Innovation and Change
EDKP 650	(3)	Teaching in Physical Education
EDKP 654	(3)	Sport Psychology
EDKP 655	(3)	Program Development/Adapted Physical Activity
EDKP 664	(3)	Motor Learning
EDKP 665	(3)	Motor Performance of Disabled Persons
EDKP 671	(3)	Experimental Problems
EDKP 672	(3)	Experimental Problems

Students may also take courses from the Faculty of Education or the Faculty of Arts in consultation with an advisor (500-level or higher).

**Elective Courses** (12 credits)

12 credits (normally four courses) chosen in consultation with an advisor (should be 500-level or higher).

**M.Sc. Kinesiology and Physical Education (Thesis Option)** (45 credits)

Areas of concentration: Exercise Physiology and Biomechanics

**Required Courses** (6 credits)

EDKP 605	(3)	Research Methods 1
EDPE 676	(3)	Intermediate Statistics 2 or equivalent

**Complementary Courses** (15 credits)

Students must take a minimum of 9 credits of coursework in a classroom setting in the area of concentration selected in consultation with the graduate student advisor.

EDKP 553	(3)	Physiological Assessment: Sport
EDKP 566	(3)	Biomechanical Assessment in Sport
EDKP 603	(3)	Individual Readings

EDKP 616	(3)	Individual Readings
EDKP 652	(3)	Cardio - Respiratory Exercise Physiology
EDKP 662	(3)	Metabolic/Neuromuscular Responses to Exercise
EDKP 663	(3)	Application: Exercise Physiology to Sport
EDKP 667	(3)	Sport Science – Seminar
EDKP 668	(3)	Data Acquisition in Sport Science
EDKP 671	(3)	Experimental Problems
EDKP 672	(3)	Experimental Problems
EDKP 695	(3)	Thesis Research 5
EDKP 696	(3)	Thesis Research 6

Students may also take courses from the Faculty of Science chosen in consultation with advisor (500-level or higher).

**Thesis Component – Required** (24 credits)

EDKP 691	(6)	Thesis Research 1
EDKP 692	(6)	Thesis Research 2
EDKP 693	(6)	Thesis Research 3
EDKP 694	(6)	Thesis Research 4

**M.Sc. Kinesiology and Physical Education (Non-thesis Option)** (45 credits)

Areas of concentration: Exercise Physiology and Biomechanics

**Project Component – Required** (15 credits)

EDKP 608	(15)	Special Project
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**Complementary Courses** (18 credits)

6 credits, two courses from the following list:

EDPE 575	(3)	Educational Measurement
EDKP 603	(3)	Individual Readings
EDKP 605	(3)	Research Methods
EDKP 616	(3)	Individual Readings
EDSL 630	(3)	Qualitative/Ethnographic Studies
or EDEM 692	(3)	Qualitative Research Methods

12 credits chosen from the following:

EDKP 553	(3)	Physiological Assessment: Sport
EDKP 566	(3)	Biomechanical Assessment in Sport
EDKP 652	(3)	Cardio - Respiratory Exercise Physiology
EDKP 662	(3)	Metabolic/Neuromuscular Responses to Exercise
EDKP 663	(3)	Application: Exercise Physiology to Sport
EDKP 667	(3)	Sport Science – Seminar
EDKP 668	(3)	Data Acquisition in Sport Science
EDKP 671	(3)	Experimental Problems
EDKP 672	(3)	Experimental Problems

Students may also take courses from the Faculty of Science in consultation with advisor.

**Elective Courses** (12 credits)

12 credits (normally four courses) chosen in consultation with an advisor.

**41.6 Courses (EDKP)**

Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.

**Single term and Multi-term Courses (D1/D2, N1/N2, J1/J2/J3)**

The same course may be available as a single term offering and also as a multi-term offering. The course content and credit weight is equivalent in all modes; the only difference being the scheduling.

**Courses with numbers ending D1 and D2** are taught in two consecutive terms (most commonly Fall and Winter). Students must register for both the D1 and D2 components. No credit will be given unless both components (D1 and D2) are successfully completed in consecutive terms.

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The course credit weight is given in parentheses after the title.  
Descriptions of courses not scheduled in 2003-04 can usually

*Montréal, Paris II), F.R.S.C.(Emeritus Wainwright Professor of*

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from the testing institution to Graduate Programmes in Law. For the TOEFL, McGill's institutional code is 0935 and Law's departmental code is 03. These codes must be provided to TOEFL when requesting a test report form. For the IELTS, applicants must ask for an official report to be sent to Graduate Programmes in Law at the above address. For either test, the test must be taken sufficiently early for results to reach McGill no later than March 15 of the year of admission. Application files not completed by that date will not be considered.

French: The ability to speak or read French is an asset but not a necessity. In areas such as the study of private law in the civilian tradition or comparative private law, a reading knowledge of French is essential. Applicants should indicate their knowledge of French on the admissions questionnaire; they will be notified if French is essential to the area of study.

### **Graduate Certificate Programs**

The requirements for admission to the Graduate Certificate programs are essentially the same as for the Master's programs, except that greater weight is placed on professional experience.

Candidates desiring a Graduate Certificate in Air and Space Law who do not hold a law degree may be admitted if they have earned an undergraduate university degree in another discipline and possess sufficient professional experience to compensate for the lack of a law degree (as determined by the Graduate Admissions Committee).

### **Master's Degrees**

Candidates for admission to the LL.M. program must hold the degree of B.C.L. or LL.B. with at least second class honours, from McGill University, or its equivalent from another recognized university. This standing does not guarantee admission, however. The Graduate Admissions Committee weighs the entire file, including the applicant's references and the quality of the research proposal.

Furthermore, the Committee must consider the availability of a supervisor. If a supervisor is not available in the applicant's preferred field of study, the applicant may be refused admission or else offered admission pending a change of field of study. Except in rare cases, students are not formally assigned a supervisor at the admissions stage. During the first year of study, they are permitted to adjust their thesis topics and choose a supervisor (subject to the approval of the Associate Dean).

Transfers from a Graduate Certificate Program to the LL.M. program are permitted for students who have achieved very good marks in their course work and who satisfy the other eligibility requirements. They may apply to the Graduate Admissions Committee for transfer and, if admitted, must waive receipt of the Graduate Certificate. (If a candidate has already received the Graduate Certificate, he or she may be accepted as a candidate for the Master's degree if he or she registers for three additional terms and undertakes additional course work.)

**LL.M. specialization in Bioethics:** Requirements for admission to the Master's program in Bioethics from the base discipline Law, are the same as for admission to the LL.M.

For further information please contact the Chair, Master's Specialization in Bioethics, Biomedical Ethics Unit, 3690 Peel Street, Montreal, QC, H3A 1W9. Telephone: (514) 398-6980; Fax: (514) 398-8349; E-mail: Glass@falaw.lan.mcgill.ca.

### **D.C.L. Degree**

Applicants demonstrating outstanding academic ability will be considered for admission to the doctoral program.

Admission to the DCL program occurs only when:

- (a) the candidate has completed a graduate law degree with thesis at McGill or at another university or at a law school in another country.

**MASTER'S DEGREES**

The Master's programs consist of a course work component (normally 18 credits) and a thesis of approximately 100 pages. Candidates must remain in residence for three terms. The third term, usually devoted to thesis research, may be taken the summer of the first year, making it possible to complete residence requirements within one calendar year. If the thesis is not completed in this time, students must register for additional sessions as needed. All degree requirements must be completed within three years of the date of registration.

The thesis topic is normally determined in consultation with the supervisor early in the second term and must be approved by the Associate Dean (Graduate Studies and Research). The submitted thesis is evaluated by the candidate's supervisor and an external examiner chosen by the Graduate and Postdoctoral Studies Office. The thesis must show familiarity with previous work in the field and demonstrate the student's capacity for solid, independent analysis and for organizing results.

Exceptionally, and upon the recommendation of the Graduate Admissions Committee of the Faculty of Law, candidates may register as half-time students and complete their prescribed course work in two academic years.

**Institute of Air and Space Law  
Master of Laws (LL.M.)**

The student must take at least 18 credits of courses. Normally the student will take the following courses:

\* On occasion, students will be permitted to substitute for any of the asterisked courses, other courses selected from a list of Faculty or Institute of Comparative Law courses or courses offered by another department of the University.

Each student's final choice of curriculum is subject to the approval of the Associate Dean (Graduate Studies and Research).

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both the internal dynamic of legal phenomena and their relationship to other social phenomena.

Courses offered within this concentration include:

- Aboriginal Peoples and the Law
- Advanced Jurisprudence
- Canadian Legal History
- Canon Law
- Comparative Modern Legal History
- Feminist Legal Theory
- Islamic Law
- Jurisprudence
- Legal Theory
- Linguistic and Literary Approaches to the Law
- Research Seminars
- Roman Law
- Social and Ethical Issues in Jewish Law





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**CMPL 536 EUROPEAN COMMUNITY LAW 1.** (3) The Treaty of Rome establishing the European Community and current efforts to create a homogenous structure for commerce and competition in Europe.

**CMPL 537 EUROPEAN COMMUNITY LAW 2.** (2) The provisions of the Treaty of Rome dealing with the regulation of domestic and international commerce by the Community authorities, with particular emphasis on articles 85 and 86.

**CMPL 539 INTERNATIONAL TAXATION.** (3) Canadian tax treatment of subjects, including the export of goods and services, carrying on business in other countries, international employee transfers, international re-organizations, and international joint ventures and partnerships.

**CMPL 541 INTERNATIONAL BUSINESS ENTERPRISES.** (3) The legal and economic issues relating to the business operations of transnational enterprises.

**CMPL 543 LAW AND PRACTICE OF INTERNATIONAL TRADE.** (3) The fundamental aspects of international law governing international trade, and governmental regulation of international trade in Canada and Canada's major trading partners.

**CMPL 544 INTERNATIONAL AND DOMESTIC DOCUMENTARY SALES.** (3) The private law aspects of the seller-buyer relationship, and of the relationship between each party and a financing bank, examined comparatively and in an international setting.

**CMPL 546 INTERNATIONAL ENVIRONMENTAL LAW.** (3) Introduction to this continuously expanding and evolving branch of international law. It will focus on the particularities of the international legal system and their implications for environmental protection; economic and ethical dimensions of international environmental policy; selected environmental problems; and, discussion of new approaches to solving existing problems.

**CMPL 547 CANADIAN LEGAL HISTORY.** (3) The history of Canadian law with emphasis on social history of law and legal history of Canadian society.

**CMPL 550 COMPARATIVE CIVIL LIABILITY.** (2) A comparative law seminar on selected areas of civil liability such as products liability, medical liability, and environmental liability.

**CMPL 551 COMPARATIVE MEDICAL LAW.** (2) A comparative study of selected medicolegal problems, including civil and criminal liability of doctors and hospitals, consent, emergency services, organ transplants, and euthanasia.

**CMPL 553 INTERNATIONAL MARITIME CONVENTIONS.** (3) International maritime conventions in respect of collisions, jurisdiction, limitation of liability, and their domestic interpretation, maritime liens and mortgages, marine insurance, and salvage.

**CMPL 556 COMPARATIVE CONSTITUTIONAL PROTECTION HUMAN RIGHTS.** (2) The definition and constitutional status of fundamental freedoms under the constitution of one or more foreign jurisdictions (FRG, USA, France, etc.) with comparisons to the Canadian Charter of Rights and Freedoms.

**CMPL 558 CONTEMPORARY PRIVATE LAW PROBLEMS 2.** (2) Contemporary problems in the field of private law.

**CMPL 565 INTERNATIONAL HUMANITARIAN LAW.** (3) (Prerequisite: PUB2 105) (Restriction: Not open to first year students.) Rules governing international and internal armed conflicts; historical and philosophical foundations; constraints on means to wage war; treatment of protected individuals, including prisoners of war, civilians and peacekeepers; enforcement, including belligerent reprisals and criminal prosecution; links with norms protecting human rights, the environment and cultural property; impact of cultural diversity.

**CMPL 570 PROTECTION OF MINORITIES' RIGHTS.** (2) An international and comparative law approach to the study of the protection of racial, religious, and linguistic minorities.

**CMPL 571 INTERNATIONAL LAW OF HUMAN RIGHTS.** (3) International protection of human rights,

**CMPL 638 INDEPENDENT STUDY 4. (4)**

**CMPL 641 THEORETICAL APPROACHES TO LAW. (3)** Introduction to a variety of theoretical approaches to law, each presented by a Faculty member or guest speaker. The seminar will emphasize the importance of theoretical concerns in le

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access using a 100 Mbps connection to the University 1 Gbps fibreoptic backbone. Students will notice a significant difference in speed over the typical dial-up modem. The IT Lab contains 24 Windows-based PC workstations and a network printer available for student use. The Cataloguing Laboratory adjacent to the IT Lab has eight PCs, all equipped with CD-R/RWs.

Several courses, including the required courses GLIS 616 and GLIS 617, have formal laboratory sessions that require use of the IT Lab's hardware and software. On an informal basis, many students use the IT Lab for researching online information, typing and printing papers, developing databases, and creating multimedia presentations for various classes.

E-mail plays an important role in the School's daily activities and students are encouraged to use this facility to communicate with colleagues, faculty and staff. In addition, students maintain an open electronic mailing list called MLISSA (McGill Library and Information Studies Student's Association) and GSLIS maintains a list called MCLIS-L (McGill Library and Information Studies List).

## LIBRARY FACILITIES

**McGill Library System** Students have access to one of the continent's major research resources in the McGill Library System, which consists of fourteen libraries organized into five administrative units: Humanities and Social Sciences Library, Branch Libraries, Law Area Library, Life Sciences Area Libraries, and the Physical Sciences and Engineering Area Libraries. Altogether these libraries house over two million volumes providing a valuable collection for research and study. Additionally, a number of important electronic journal repositories can be accessed via the Library. Further information is available on the Library Web site at [www.library.mcgill.ca](http://www.library.mcgill.ca).

**Library and Information Studies Collection** The Library and Information Studies collection includes approximately 40,000 monographs and 700 periodical titles. The bulk of the collection is in the Humanities and Social Sciences Area Library, located in the same building as the School.

## Archives

Located on the same floor of the McLennan Library Building as the School, the McGill University Archives preserves and makes available to researchers of all disciplines more than 4500 m of primary documentation of permanent value generated over the past 180 years. It offers laboratory conditions for students doing independent studies, practical projects for the Archival Science course and serves as a Practicum site. The Archives also possesses a working library of materials relating to archival science and records management.

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## 43.3 Admission Requirements

### Master of Library and Information Studies (M.L.I.S.)

1. Applicants must have a bachelor's degree from a recognized university. Academic standing of at least B, or second class, upper division, or a CGPA of 3.0 out of 4.0 is required.

The School will take into account the character of the applicants' undergraduate studies and their suitability for a career in library and information services.

Courses in library and/or information studies taken before or as part of a B.A., or such courses taken in a school with a program not accredited by the American Library Association, cannot be accepted as credit toward the McGill M.L.I.S.

2. Applicants with a Bachelor's degree completed solely or primarily in a language other than English or French are required to submit documented proof of competency in oral and written English prior to admission. Such proof normally comprises the Test of English as a Foreign Language (TOEFL) with a



and tours. A number of guests from McGill and from the broader Canadian information community participate in the program. The information technology sessions include hands-on activities in the School's Information Technology Laboratory. Students have an opportunity to meet with their faculty advisors and with second-year students. A further series of seminars held throughout the year supplements the initial program.

Overseas students should plan to arrive well before the beginning of the fall term.

### **M.L.I.S. Program Requirements**

#### **Required Courses (24 credits)**

#### **Complementary Courses (24 credits)**

Students, in consultation with their advisors, design individualized programs of instruction that take advantage of their backgrounds and interests to prepare them for specialized careers. During their first term of study while they are following the required courses, students should start to investigate their options and discuss their plans with their faculty advisors.

Many courses include visits to libraries and information centres, as well as a variety of other information-related organisations.

#### **Courses Outside the School**

**Courses in other McGill Departments** McGill University offers a large number and variety of graduate-level courses. Students interested in taking a course outside the School must complete the following steps:

- a) contact the relevant instructional unit to establish any prerequisites and to ascertain how the unit handles outside registrants;
- b) obtain a current course outline;
- c) demonstrate in writing the value of the selected course within the context of an integrated program of study leading to the M.L.I.S. degree;
- d) gain the approval of their faculty advisor and the School's Director.

**Courses in other Quebec Universities** Students may take up to six credits at any other Quebec university provided the courses are not available at McGill University. Steps a) to d) outlined above should be followed by any student wishing to pursue this option.

#### **Transfer Credits – Advanced Standing**

Students may not count credits for courses taken toward another degree as credits towards the M.L.I.S. degree. In special cases credits for appropriate courses previously taken outside the School may be transferred to the M.L.I.S. program, but only with the approval of the Director, and only if negotiated at the time of admission to the program. As a rule, no more than one-third of the McGill program course work (not thesis or project) can be credited with courses from another university.

Transfer credits must be approved by the Director of the School and the Director of the Graduate and Postdoctoral Studies Office. Requests for transfer credits will only be considered at the time of admission to the M.L.I.S. program.

In special cases, students may be excused from taking a required course if they have already completed an equivalent course. In such cases, however, they must obtain the permission of the instructor and the Director and will be required to substitute

an additional complementary course bringing the total of their earned credits in the M.L.I.S. program to the normal 48.

#### **Research Colloquia**

Research Colloquia presented by guest speakers from Canada and, on occasion, other countries are open to students, as well as university staff and the Montreal information community, at various intervals throughout the year. Although not a formal part of the M.L.I.S. program, the Colloquia offer an opportunity for students to learn of current research preoccupations and developments in the field of library and information studies.

#### **43.5.2 Graduate Certificate in Library and Information Studies**

The program may be completed in either full-time or part-time study or part-time within a maximum of five years.

Each certificate student will be assigned a faculty advisor in the field of library and information studies. Each certificate of honor will be assigned a faculty advisor in the field of library and information studies.

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**Admission to the Ph.D. (*Ad Hoc*) program involves a number of steps.**

1. The applicant normally is admitted as a Ph.D.1 student.
2. The applicant must provide a brief outline of the proposed research (2-3 pages) specifying

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dition, analysis, design, implementation and evaluation of alternative solutions.

**GLIS 632 LIBRARY SYSTEMS.** (3) (Prerequisite: GLIS 617) Focuses on applied systems analysis and project management techniques in an operational environment. Includes an in-depth examination of hardware and software installations, LANs, RFPs, automation, system selection, Internet and Intranet applications, and standards for exchanging digital information.

**GLIS 633 MULTIMEDIA SYSTEMS.** (3) (Prerequisites: GLIS 617 and consent of instructor) Theoretical and applied principles of multimedia systems design. Includes knowledge representation; interfaces; storage and retrieval of text, sound, still images, animation and video sequences; authoring software; hardware options; CD-ROM/DVD and Web based systems; virtual reality; testing and evaluation. Students design and develop a small-scale system.

**GLIS 634 WEB SYSTEM DESIGN AND MANAGEMENT.** (3) (Prerequisites: GLIS 616, GLIS 617) Principles and practices of designing websites in the context of libraries and information centres. The course focuses on a conceptual approach to organizing information for the World Wide Web including design, implementation and management issues. Topics include Web development tools, markup languages, Internet security and Web server administration.

**GLIS 636 GOVERNMENT INFORMATION.** (3) (Prerequisites: GLIS 615, GLIS 616) An introduction to the structure of governments, and the nature and variety of government information. Emphasis is placed on the governments of Canada, the provinces, the United States and selected international governmental organizations. Topics include the acquisition, organization, bibliographic control and use of government information.

**GLIS 637 SCIENTIFIC/TECHNICAL INFORMATION.** (3) (Corequisites: GLIS 615, GLIS 616) Examination of the process of communication and information requirements (of/in) the scientific community; study of primary, secondary, and tertiary sources.  
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major taxonomy tools and technologies and practice in knowledge mapping and modeling. Theory and techniques of organization of both tacit and explicit knowledge at three levels: individual, community and the organization. Emphasis will be placed on the social nature of knowledge codification.

**GLIS 671 HEALTH SCIENCES INFORMATION.** (3) (Prerequisite: GLIS 615, Corequisite: GLIS 616) A survey of information services and sources (both electronic and print) for health care professionals and the general public. An exploration of the information needs of health professionals and scientists; the role of health libraries and librarians; principles of health and biomedical library practice, functions, and management.

● **GLIS 672 LAW INFORMATION.** (3) (Prerequisite: GLIS 615. Corequisite: GLIS 616)

**GLIS 689 SELECTED TOPICS IN LIBRARY AND INFORMATION STUDIES.** (3) (Corequisite: GLIS 601) To explore a topic in library and information studies which elaborates or augments the curriculum; to pursue an individualized program of directed study which will vary according to the student's interests.

● **GLIS 690 INFORMATION POLICY.** (3) (Prerequisite: GLIS 601)

**GLIS 691 SPECIAL TOPICS 1.** (3) Seminar to explore topics of particular interest to library and information studies. Topics vary from

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Term(s) offered (Fall, Winter, Summer) may appear after the credit weight to indicate when a course would normally be taught. Please check Class Schedule to confirm this information.

**Courses with numbers ending D1 and D2** are taught in two consecutive terms (most commonly Fall and Winter). Students must register for both the D1 and D2 components. No credit will be given unless both components (D1 and D2) are successfully completed in consecutive terms.

**Note:** All undergraduate courses administered by the Faculty of Arts (courses at the 100- to 500-level) have limited enrolment.

The course credit weight is given in parentheses after the title.

★ Denotes courses taught only in alternate years.

#### **Undergraduate courses**

Students deficient in certain areas may be required to take some of the following undergraduate courses in addition to graduate courses.

- LING 230 Phonetics
- LING 331 Phonology 1
- LING 370 Introduction to Semantics and Pragmatics
- LING 371 Syntax 1
- LING 440 Morphology

#### **Graduate courses currently scheduled for 2003-04:**

★ **LING 520 SOCIOLINGUISTICS 2.** (3) (Fall) (Prerequisite: LING 320 or permission of instructor.) A seminar on variationist "micro-sociolinguistics", including a survey of the most important primary literature on sociolinguistic variation and introduction to sociolinguistic fieldwork.

**LING 555 LANGUAGE ACQUISITION 2.** (3) (Winter) (Prerequisites: LING 355 and LING 371 and permission of instructor) A detailed overview of recent experimental work on first language acquisition of syntax within the principles and parameters framework, concentrating on both theoretical and methodological issues.

**LING 560 FORMAL METHODS IN LINGUISTICS.** (3) (Fall) (Prerequisite: LING 370 and permission of instructor) (Not open to students who have taken MATH 240) This course presents the formal methods used in the study of language (namely, the theories of sets, relations, functions, partial orders, and lattices, as well as the principle of mathematical induction).

**LING 565 PRAGMATICS.** (3) (Winter) (Prerequisites: LING 370 and PHIL 210 or permission of the instructor) Study of the relationship between language and its contexts of use. Topics to be examined include deixis, presupposition and implicature.

**LING 571 SYNTAX 2.** (3) (Fall) (Prerequisite: LING 371) This course extends and refines the theory of grammar developed in LING 371, while introducing some primary literature and developments (in certain modules of the grammar such as phrase structure, wh-movement, and binding).

**LING 600 M.A. RESEARCH SEMINAR 1.** (3)

**LING 631 PHONOLOGY 3.** (3) (Prerequisite: LING 531 or permission of instructor.) Foundations of phonological theory, focusing on issues in segmental and prosodic structure.

**LING 635 PHONOLOGY 4.** (3) (Prerequisite: LING 631) Exploration of current topics in phonological theory.

**LING 645 MORPHOLOGY: THEORY AND ANALYSIS.** (3) (Prerequisite: LING 571 or equivalent) (C7I5 0 .:cal 53hAt, and binding2.h031.936.49in phonopX05 TJ16.563pthn pvesti.2(hog14-8of )TJ167y06 int5H132 194.9395 Tm-0

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## 45 Management

Samuel Bronfman Building  
1001 Sherbrooke Street West  
Montreal, QC, Canada H3A 1G5

Telephone: (514) 398-4066

Web site: [www.management.mcgill.ca](http://www.management.mcgill.ca)

*Dean — Gerald Ross*

*Associate Dean, Master Programs; Director, M.B.A. —  
Alfred M. Jaeger*

*Associate Dean (Academic) and Director, Ph.D. Program —  
Jan Jørgensen*

*Program Chair, International Masters Program in Practicing  
Management (IMPM) — Henry Mintzberg*

*Program Director, Master of Management (Manufacturing) —  
Tamer Boyaci*

*Program Director, McGill/McConnell Voluntary Sector —  
Frances Westley*

*Director, C.A. Program — Philippe Levy*

*Associate Director, M.B.A. — Eva Shepherd*

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### 45.1 Staff

*Emeritus Professors*

D. Armstrong; B.A., B.Com.(Alta.), Ph.D.(McG.)

R.N. Kanungo; B.A., M.

K. Leitch; B.A.(McG.); Information Systems  
P. Levy; B.Com.(C'dia), D.P.A., M.B.A.(McG.); Accounting  
S. Sepinwall; B.A.(Sir G. Wms), M.Ed.(McG.); Organizational Behaviour  
B. Smith; B.A., M.A.(Dublin) M.Sc.(Alta.), M.Sc.A.(McG.)  
Ph.D.(Queen's); Management Science  
L. Taylor; B.Sc., M.B.A.(Alta.); Organizational Behaviour  
V. Vaupshas; B.Sc., M.B.A.(McG.); Marketing  
G. Zabowski; B.Com., M.B.A.(McG.); Management Science

*Adjunct Professor*

P. Johnson; B.A.(Sir G.Wms.), C.M.C.; Entrepreneurial Studies

*Visiting Professor*

K. Moore; B.Sc.(Ambassador U.), M.B.A.(U.S.C.), Ph.D.(York);  
Marketing/Strategy and Organization

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## 45.2 Programs Offered

McGill University offers eight programs which provide graduate level education in management. All programs have been tailored to meet the special needs and demands of different groups of people. Before embarking on a graduate management education, students should, therefore, be aware of the different and unique features of each program, and select the one which best suits their aspirations and abilities.

- 1) Master of Business Administration (M.B.A.)  
may be taken on either a full-time basis (see "M.B.A. Program Requirements", page 232) or a part-time basis (see "M.B.A. Part-time Studies", page 233).
- 2) M.B.A./Law Program  
offered in cooperation with the Faculty of Law (see "M.B.A./Law Program", page 234).
- 3) M.D./M.B.A.  
offered in cooperation with the Faculty of Medicine (see "M.D./M.B.A. Program", page 234).
- 4) Post-M.B.A. Certificate  
intended for professional managers who wish to update their skills and/or broaden the base of their education. The certificate may be taken on a full-time or part-time basis. (see "Post-M.B.A. Certificate", page 239)
- 5) Ph.D. in Administration  
offered jointly by the four Montreal universities: Concordia University, École des Hautes Études Commerciales (affiliated with the Université de Montréal), McGill University, and Université du Québec à Montréal (see "Joint Ph.D. in Administration", page 242).
- 6) Master of Management – Manufacturing Management  
a 12-month academic program followed by a four-month industrial internship, offered in collaboration with the Faculty of Engineering (see "Master in Manufacturing Management", page 239).
- 7) Master of Management – International Masters Program in Practising Management (see "International Masters Programs in Practising Management (IMPM)", page 240).
- 8) Graduate Diploma in Public Accountancy (see "Diploma in Public Accountancy (Chartered Accountancy)", page 240).

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## 45.3 Admission Requirements

### 45.3.1 M.B.A. Program – Admission Requirements

Applicants with strong indications of managerial potential are desired. Given below are the minimum entrance criteria. Owing to the large number of applicants to the McGill M.B.A., merely meeting the minimum requirements will not guarantee acceptance.

- a) An undergraduate degree, from an approved college or university, with a Grade Point Average of at least 3.0 out of a possible 4.0, or a B average.
- b) A score of at least 570 on the Graduate Management Admission Test (GMAT), written within the past five years.

- c) Applicants who earned a Bachelor degree outside Canada, the United States, Australia, New Zealand or the United Kingdom, are required to take the Test of English as a Foreign Language. The TOEFL is **not** waived for graduates of four-year university programs whose language of instruction is English if the university is located in a non-English speaking country. Canadian citizens or applicants with at least three years Permanent Resident status may request a TOEFL waiver. Applicants who are not Canadian citizens and whose mother tongue is not English may be asked to demonstrate an English language competency beyond the submission of the TOEFL score. A minimum score of 600 for paper-based test or 250 for computer-based test is required.

Applicants may write the IELTS (International English Language Testing Systems) instead. A minimum overall band of 7.0 is required.

- d) A minimum of two years of full-time work experience, following completion of an undergraduate degree.
- e) Two letters of reference.

### 45.3.2 M.B.A. Part-time Studies – Admission

The McGill M.B.A. Program may also be completed on a part-time basis. This is meant to accommodate persons with full-time employment. Admission as an M.B.A. part-time student may be made twice a year, in September and in January. Admission requirements are the same as in "M.B.A. Program – Admission Requirements" on page 230.

**Note:** Students studying on a part-time basis may transfer to full-time at various stages during their studies. Students wishing to do this must meet with the Associate Director to review their schedule; see "Combined Full-time and Part-time Studies", page 233.

### 45.3.3 M.B.A. Admission – Transfer of Credits

ing). They would enter the second year of the program and complete 30 credits of M.B.A. II courses. To be accepted into the M.B.A. program such students must meet the advanced standing admission requirements as outlined above.

**Note:** Students accepted with Advanced Standing may apply for the International Exchange Program. However, the term of study spent abroad will be IN ADDITION to the 45 credits required for their M.B.A.

#### 45.3.5 Visiting Student Admission

Visiting students are graduate students registered at another university taking a course in the Faculty of Management for credit at their home university.

Quebec students may apply on-line by going to [www.crepuq.qc.ca](http://www.crepuq.qc.ca). Visiting students from outside the province of Quebec must forward an application form and \$100 fee, as well as a letter of permission from their school indicating the course(s) they are permitted to follow. The letter must also confirm that they are in good standing at their home university.

The deadlines for submission of applications are the same as admission deadlines.

### 45.4 Application Procedures

#### 45.4.1 M.B.A. Application Procedure

The McGill M.B.A. program begins in September of each year. **The deadline for receipt of application, \$100 fee and all supporting documents is February 15.**

Applications are reviewed on a rolling basis so that the earlier a file is complete, the sooner the applicant may expect to receive an answer. The undergraduate record, GMAT and TOEFL scores (where applicable), work experience, essay and letters of reference are the criteria used in making admission decisions. With the exception of a few select cases, a personal interview is not mandatory.

An on-line application form is available at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate) for use by those who wish to apply for entry to graduate studies at McGill. Applicants may also download the Application from the Faculty of Management Web site. Further information on using the paper application form is available at [www.mcgill.ca/graduate](#).

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sions, Recruitment and Registrar's Office in the James Administration Building.

#### **45.4.5 Application Procedures for other Programs**

Application procedures can be found in each program's section, as follows:

M.B.A./Law Program, page 234.

M.D./M.B.A. Program, page 234.

Master in Manufacturing Management, page 239.

Post-M.B.A. Certificate, page 239.

Joint Ph.D. in Administration, page 242.

International Masters Programs in Practising Management (IMPM), page 240.

Diploma in Public Accountancy (Chartered Accountancy), page 240.

#### **45.4.6 Procedure for accepting an Offer of Admission to the M.B.A. Program**

Those students admitted to the first year of the M.B.A. Program should forward a registration deposit fee of \$500 (Canadian or

**Double Concentrations**

Students wishing to do a Double Concentration must take five

The Integrative Course, MGCR 628, runs from September to April. Students completing the M.B.A. part-time will register for the Integrative Course while in the process of completing the last M.B.A. I courses.

Courses with a credit weight of 2 run for 9 weeks with 1 week for exams. Courses with a credit weight of 1 have 4½ weeks of class each.

**45.5.2 Second Year (M.B.A. II)**

The second year of the M.B.A. allows students to focus on a particular area of interest and to develop some specialization, or to create their own general management curriculum. Courses are offered both during the day and the evening. Students choose one of the following options to earn the 30 credits:

- 1) Five courses (15 credits) from the concentration in which the student wishes to specialize, and five elective courses (15 credits). It is not necessary to select the area of concentration until completion of the first year.

A Research Paper is an optional part of the M.B.A. which may be included as part of a concentration or replace free electives. The research paper is worth 6 credits. The Research Paper is designed to familiarize students with the process and the problems of independent research. The student is given considerable freedom in choosing research topics. Students have the opportunity to work on a one-to-one basis with a Faculty Member.

or

- 2) Ten courses (30 credits) selected as part of a General Management program.

**45.5.3 M.B.A. II Year Concentrations**

The M.B.A. II Concentrations are geared to the needs and demands of the employment market. They have been designed with considerable thought and attention to provide meaningful and useful packages of courses which will be an advantage upon graduation.

Concentrations include:

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

M.B.A. students may select a concentration or create their own General Management Curriculum.

A Concentration consists of five courses within an area. Support courses from accounting, human resource management, management science, and managerial economics are also offered to supplement the five courses within each concentration.

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Summer 2b – May and June:

One 3-credit elective course and one 6-credit independent study course. Total credits: 9

The entrance and course requirements for the M.B.A.<sup>3</sup> program are identical to those of the full-time program.

For further information, contact the M.B.A.<sup>3</sup> staff at (514) 398-1539.

#### 45.5.7 Additional M.B.A. Programs

The following special programs are also available:

M.B.A. International Exchange, M.B.A. *Stage*, M.D./M.B.A., M.B.A./Japan, M.B.A./Law.

#### 45.5.8 M.B.A. International Exchange Program

Through the McGill M.B.A. Exchange Program there are exciting opportunities to study abroad.

Participation in the program gives McGill students the opportunity to spend part of the second year of the M.B.A. studying at a business school abroad. Students successfully completing the program's requirements receive both the Master's Degree from their home university and an International Management Certificate from the foreign institution which they attended. McGill is part of the Program in International Management (PIM), a consortium of the leading business schools in North America, South America, Europe, and Asia. There are exchanges with both PIM and non-PIM schools.

The following schools may exchange students with McGill in 2003-2004:

PIM members:

- Asian Institute of Management, Manila, Philippines
- Copenhagen Business School, Denmark
- Erasmus University, Rotterdam, The Netherlands
- ESADE (Escuela Superior de Administracion y Direccion de Empresas), Barcelona, Spain
- Fundacao Getulio Vargas, Sao Paulo, Brazil
- HEC (Hautes Études Commerciales), Jouy-en-Josas, France
- Institut Supérieur des Affaires (I.S.A.), France
- ITAM, Mexico
- ITESM, Mexico
- Luigi Bocconi, Milan, Italy

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*“Official Rules and Regulations” from the M.B.A. office. Students are responsible for reading and abiding by these rules and regulations.*

The McGill M.B.A. (Full-time) is designed as a two-year program. The academic year begins in September and ends in May. Students admitted with advanced standing may complete the program in 15 months.

#### **45.5.14 Withdrawal from the M.B.A. Program**

Students wishing to withdraw from the McGill M.B.A. program must complete a “Withdrawal Form” available from the M.B.A. office. Students will not be considered as officially withdrawn until this form is completed. Students who drop out of the program but do not complete this form will be billed for the full tuition. Refer to the General Information section of the *Graduate and Postdoctoral Studies Calendar* for further information.

#### **45.5.15 Exemptions**

M.B.A. I students may be exempted up to a maximum of 15 credits excluding the Integrative Course, based on academic proof and contingent on professors' and M.B.A. Program approval. Each credit must be replaced by a second-year credit.

#### **45.5.16 Grading and Promotion Standards**

The pass mark for each course is B- (65%).

##### **Failures**

Students are permitted one failure in the M.B.A. Program. Any subsequent failure, including an unsuccessful supplemental examination, will result in the student being asked to withdraw from the M.B.A. Program.

##### **Promotion into M.B.A. II**

Students must have obtained an overall average of at least B (70%) to be permitted to continue into second year and in order to graduate.

#### **45.5.17 Outside Elective Courses**

An outside elective is any course which is not part of the M.B.A. program. This includes courses in other faculties within McGill University or outside McGill University

Students wishing to take an elective offered in another department at McGill must first obtain approval from the Associate Director. Once approval is obtained, students must obtain permission from the department offering the course before registering for the elective with their Faculty.

All Quebec Universities have agreed to permit transfer of academic credit and fees among themselves up to a maximum of two courses (6 credits) in any one year. However, this agreement (for Canadians and Permanent Residents) ioncoue Tc-0D-J-9he elno15o1035 M(n )n6035 TwTcn up to ntoo6()0(ment6)Jn Mca maximuoTB.4(pruT91 acaN



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**MGCR 619 RESEARCH, DEVELOPMENT AND ENGINEERING. (1)**

While technology per se exists in many domains of the firm, this course focuses on the research and development domain of the firm. This is an essential function - even in low-tech industries, well managed RD&E is essential because this is what provides the attributes and performance capabilities that customers desire in the products and services sold by the firm. Thus, every manager must understand how RD&E applies knowledge to achieve new performance capabilities, producing new products or services or enhancing existing ones. In addition, managers must be aware of the special and challenging issues faced by managers of this domain. Finally, managers must be aware of how they can provide a more effective link with the RD&E function.

**MGCR 620 INFORMATION SYSTEMS. (2)** Overview of the information systems issues that influence the management of organizations. Understanding (as opposed to computation) of the impact of information technology on firm operations and benefits and limitations of information technology, as it relates to the essential core knowledge needed for day-to-day managerial activity.

**MGCR 621 INTERNATIONAL ENVIRONMENT. (2)** Overview of the international issues that influence the management of organizations. Understanding of the international environment as it relates to the essential core knowledge needed for day-to-day managerial activity.

**MGCR 622 ORGANIZATIONAL STRATEGY. (2)** Organizational strategy concerns the process through which managers position their business or unit favorably against competitors, with customers, and in accordance with societal needs. This course emphasizes the skills that managers need to assess strategic threats and opportunities, match them with internal competencies to develop a strategy, devise action plans to realize the strategy, and continually develop capabilities to keep the organization viable.

● **MGCR 628 INTEGRATIVE COURSE. (6)**

**MGCR 628D1 INTEGRATIVE COURSE. (3)** (Students must also register for MGCR 628D2) (No credit will be given for this course unless both MGCR 628D1 and MGCR 628D2 are successfully completed in consecutive terms) (MGCR 628D1 and MGCR 628D2 together are equivalent to MGCR 628) This course provides an integrative perspective to the topics in the first year core, building on progressive stages of integrative understanding from basic management skills looking inward to basic and specialized management skills looking both inward and outward. The emphasis is on pedagogic tools which focus on a holistic view of the organization, forcing an understanding of the management of the enterprise from multiple perspectives and the resolution of conflicting viewpoints.

**MGCR 628D2 INTEGRATIVE COURSE. (3)** (Prerequisite: MGCR 628D1) (No credit will be given for this course unless both MGCR 628D1 and MGCR 628D2 are successfully completed in consecutive terms) (MGCR 628D1 and MGCR 628D2 together are equivalent to MGCR 628)

**May be offered as:**

**MGCR 628J1, MGCR 628J2, and MGCR 628J3**

**MGCR 629 ETHICS IN BUSINESS. (1)** Consideration of ethical issues in management.

**MGCR 640 MANAGEMENT ACCOUNTING. (2)** The use of internally generated accounting information for decision making, planning and control purposes. The concepts and techniques involved in developing and interpreting accounting information that is relevant and useful for managers.

**MGCR 641 ELEMENTS**

● **BUSA 698 HEALTH CARE SYSTEMS.** (3)

**BUSA 699 HEALTH CARE MANAGEMENT.** (3) Course is divided into hospital goals and priorities; the basic elements and functioning of administrative and medical organization structure; the complexity of hospital management; assessment of overall as well as departmental performance. Course material, approach and assignments are strongly practice-oriented.

● **FINE 541 APPLIED INVESTMENTS.** (3)

**FINE 541D1 APPLIED INVESTMENTS.** (1.5) (Students must also register for FINE 541D2) (No credit will be given for this course unless both FINE 541D1 and FINE 541D2 are successfully completed in consecutive terms) (FINE 541D1 and FINE 541D2 together are equivalent to FINE 541) Students are exposed to practical aspects of managing investment portfolios. A principal activity of students is participation in the management of a substantial investment fund.

**FINE 541D2 APPLIED INVESTMENTS.** (1.5) (Prerequisite: FINE 541D1) (No credit will be given for this course unless both FINE 541D1 and FINE 541D2 are successfully completed in consecutive terms) (FINE 541D1 and FINE 541D2 together are equivalent to FINE 541)

**May be offered as: FINE 541J1, FINE 541J2 and FINE 541J3; or FINE 541N1 and FINE 541N2.**

**FINE 635 MANAGING MARKET VOLATILITY.** (3) (Prerequisite: FINE 639) Latest techniques of volatility estimation and option pricing, including the use of real option pricing techniques for valuation of resource investments, R & D projects, and high tech stocks.

**FINE 639 DERIVATIVES AND RISK MANAGEMENT.** (3) (Prerequisite: FINE 646) This course studies the field of investments related to options and futures. The course will concentrate on trading strategies and analytical models for valuing options and futures contracts.

● **FINE 644 CANADIAN FINANCIAL INSTITUTIONS.** (3)

**FINE 645 MONEY AND CAPITAL MARKETS.** (3) Demand for and supply of money and other financial instruments by and to banks and near banks. Simple analytical models integrating the Canadian Institutional aspects. The role of the banking sector in the money creation process. International aspects of monetary policy.

**FINE 646 INVESTMENTS AND PORTFOLIO MANAGEMENT.** (3) The prime objective is to provide the student with a rational framework for investment. The portfolio and capital market theory of FINE 650 is extended and the empirical evidence supporting these and competing hypotheses is investigated for both individual securities and portfolios.

**FINE 647 ADVANCED FINANCE SEMINAR.** (3) (Lectures for this course span both the fall and winter semesters) (Prerequisites: must have completed at least 4 finance courses and/or be taking last courses in concentration concurrently.) Selected topics will be discussed by Faculty members, invited guest speakers, and the students. Each student is required to select a topic for study and prepare a written report for presentation.

**FINE 648 APPLIED CORPORATE FINANCE.** (3) Concepts and techniques developed in earlier courses are extended and/or applied to problems faced by managers in Corporate Finance. Such problems include: working capital management, capital budgeting, capital structure, dividend policy, cost of capital and mergers and acquisitions. Stresses the application of theory and techniques and extensive use is made of case studies.

● **FINE 652 MANAGEMENT**





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but may have to take one or two qualifying courses. The program is intended for full-time as well as part-time students. Enrolment is limited.

The MMM program is a self-funded program. Tuition is \$25,000.

**General Business and Management – Required Courses**  
(11 credits)

**General Business and Management – Complementary Courses** (6 credits)

**Manufacturing and Supply Chain – Required Courses**  
(15 credits)

**Manufacturing and Supply Chain – Complementary Courses**  
(12 credits)

**Industry – Required Courses** (12 credits)

For more information, contact:

Program Coordinator, Mechanical Engineering

Telephone: (514) 398-7201

E-mail: [mmm@mecheng.mcgill.ca](mailto:mmm@mecheng.mcgill.ca)

Web site: [www.mecheng.mcgill.ca/mmm](http://www.mecheng.mcgill.ca/mmm)

or the Masters Program Office, Faculty of Management

Telephone: (514) 398-4648

of Languages and Translation at 398-6150. Intensive English courses are available through the Department of Languages and Translation in the Centre for Continuing Education.

exemptions. Credits or exemptions will NOT be granted for courses taken more than five year

### Admission Procedures

Application forms are available on-line from our Web site. The deadline dates for admissions are as follows:

- February 1 for May (Summer term)
  - June 1 for September (Fall term)
  - October 1 for January (Winter term)
- 1) Applicants must have a university degree from a recognized institution.
  - 2) All students wishing to take courses in the Diploma in Public Accountancy must complete the Application for Admission form available on the Web at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).
  - 3) Due to audit and government requirements, all students must provide proof of Canadian citizenship and/or Permanent Residency in order to maintain eligibility for Canadian fees.
  - 4) All students must make arrangements to have two official transcripts confirming the awarding of a degree sent to the Department before their application can be considered.
  - 5) An evaluation will be made granting credits in the program for equivalent courses completed (B- required) within the last five years. Academic advising is available to assist the student.
  - 6) Applicants who have been accepted to the program are required to make a \$200 (certified cheque or money order) deposit. This fee is non-refundable and will be applied to the student's fee account.

### Time Limits

The program must be completed within three years of admission. Time limits will be adjusted accordingly for those students who are granted advanced standing or who transfer from one program to another. Students exceeding the time limits may request an extension, in writing, which may be granted under special circumstances with the approval of the Department. Where appropriate a revised program of study may be recommended.

### Professional Requirements for Admission to l'ordre des comptables agréés du Québec (C.A.)

Membership in the l'Ordre des comptables agréés du Québec and the Canadian Institute of Chartered Accountants entitles Chartered Accountants to practice the profession of Chartered Accountancy.

Admission is based upon meeting the following requirements as indicated in the Chartered Accountants Act (Bill 264).

- 1) possession of a university degree from a recognized institution;
- 2) possession of the Graduate Diploma in Public Accountancy;
- 3) passing of the national Uniform Final Examination given by the Ordre and the CICA;
- 4) completion of an articling period with a firm of Chartered Accountants which is registered with the Order (minimum of two years), this can be done while registered in the CA Program;
- 5) a working knowledge of French;
- 6) Canadian citizenship or Permanent Resident status.

Further information can be obtained from: Ordre des comptables agréés du Québec, 680 Sherbrooke West, 18th floor, Montreal, Quebec, H3A 2S3. Tel: (514) 288-3256. E-mail: [info@ocaq.qc.ca](mailto:info@ocaq.qc.ca).

### ADVANCED STANDING

#### Credit / Exemptions

An official course outline of the courses taken elsewhere, and the marks obtained, must be submitted. Students who have been granted credits and/or exemptions are not permitted to register for the courses for which they have been granted credits and/or

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M. Bunge; M.A., Ph.D.(Penn.)  
H. Darmon; B.Sc.(McG.), Ph.D.(Harv.)  
S. Drury; M.A., Ph.D.(Cantab.)  
K. GowriSankaran; B.A., M.A.(Madr.), Ph.D.(Bomb.)  
J. Hurtubise; B.Sc.(Montr.), D.Phil.(Oxon)  
N. Kamran; B.Sc., M.Sc.(Bruxelles), Ph.D.(Wat.), F.R.S.C. (*James McGill Professor*)  
O. Kharlampovich; M.A.(Ural State), Ph.D.(Lenin.), Dr. of Sc., (Steklov Inst.)  
M. Makkai; M.A., Ph.D.(Bud.) (*Peter Redpath Professor of Pure Mathematics*)  
A. Miasnikov; M.Sc.(Novosibirsk), Ph.D., Dr. of Sc.(Lenin.) (*Canada Research Chair*)  
C. Roth; M.Sc.(McG.), Ph.D.(Hebrew)  
K.P. Russell; Vor. Dip.(Hamburg), Ph.D.(Calif.)  
G. Schmidt; B.Sc.(Natal), M.Sc.(S.A.), Ph.D.(Stan.)  
G. Styan; M.A., Ph.D.(Col.)  
L. Vinet; B.Sc., M.Sc., Ph.D.(Montr.), Doctorat 3<sup>e</sup> cycle(Paris VI) (*joint appoint. with Physics*)  
D. Wolfson; M.Sc.(Natal), Ph.D.(Purdue)  
K.J. Worsley; B.Sc., M.Sc., Ph.D.(Auck.)  
J.J. Xu; B.S.(Beijing), Ph.D.(Ren. Poly.)  
S. Zlobec; M.Sc.(Zagreb), Ph.D.(Northwestern)

*Associate Professors*

P. Bartello; B.Sc.(Tor.), M.Sc., Ph.D.(McG.) (*joint appoint. with Atmospheric and Oceanic Sciences*)  
E.Z. Goren; B.A., M.S., Ph.D.(Hebrew)  
A. Humphries; B.A., M.A.(Camb.), Ph.D.(Bath)  
V. Jaksic; B.S.(Belgrade), Ph.D.(Caltech)  
W. Jonsson; M.Sc.(Manit.), Dr.Rer.Nat.(Tubingen)  
I. Klemes; B.Sc.(Tor.), Ph.D.(Cal.Tech.)  
J. Labute; B.Sc.(Windsor), M.A., Ph.D.(Harv.)  
J. Loveys; B.A.(St.Mary's), M.Sc., Ph.D.(S. Fraser)  
R. Ramakrishna; B.A.(C'nell), Ph.D.(Prin.) (*Canada Research Chair*)  
R. Rigelhof; B.Sc.(Sask.), M.Sc.(Wat.), Ph.D.(McM.)  
N. Sancho; B.Sc., Ph.D.(Belf.)  
J.A. Toth; B.Sc., M.Sc.(McM.) Ph.D.(M.I.T.) (*William Dawson Scholar*)

*Assistant Professors*

M. Asgharian; B.Sc.(Shahid Beheshti), M.Sc., Ph.D.(McG)  
D. Bryant; B.Sc. Honours, Ph.D.(Canterbury) (*joint appoint. with School of Computer Science*)  
M.J. Gander; M.S.(E.T.H)(*William Dawson*)

## 46.5 Program Requirements

### Master's Degrees

Students must choose between the thesis option, which requires a thesis (24 credits) and 6 approved courses for a total of at least 22 credits, and the project option, which requires a project (15 credits) and 8 approved courses for at least 30 credits. Normally students must declare which option they choose to follow after one term. It is expected that the degree be completed in at most four terms.

The choice of courses must be approved by the advisor or thesis supervisor as well as by the Director of the Graduate Program. Some suggestions for the choice of courses in the Master's programs are:

- For students in applied mathematics: at least two of the following course sequences: MATH 487 and MATH 560; MATH 578 and MATH 579; MATH 586 and MATH 585.
- For students in pure mathematics: at least two of the following course sequences: MATH 564, MATH 565 and MATH 566; MATH 570 and MATH 571; MATH 576 and MATH 577.
- Students in statistics are required to take MATH 556 and MATH 557 and, if they intend to continue in a doctoral program, they should also take MATH 587 and MATH 589.

Master's students who wish to keep open the possibility of continuing in a doctoral program should adhere closely to these suggestions since they will provide the background necessary for the comprehensive examination which all doctoral students are required to pass.

Further courses can be chosen from the departmental list of course offerings. A comprehensive list of courses, from which annual offerings are selected, is given below.

### M.Sc. Thesis - Computational Science and Engineering (CSE) Option (minimum 47 credits)

#### Required Courses (25 credits)

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

#### Complementary Courses (minimum 22 credits)

Two courses from List A, two courses from List B, and the remaining credits to be chosen from graduate (500 or 600-level) courses in the Department of Mathematics and Statistics. Two complementary courses must be taken outside the Department of Mathematics and Statistics.

#### List A - Scientific Computing Courses:

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 514	(3)	Structural Mechanics
CIVE 572	(3)	Computational Hydraulics
CIVE 603	(4)	Structural Dynamics
CIVE 613	(4)	Numerical Methods: Structural Engineering
COMP 505	(3)	Advanced Computer Architecture
COMP 557	(3)	Computer Graphics
COMP 558	(3)	Fundamentals of Computer Vision
COMP 567	(3)	Discrete Optimization 2
COMP 621	(4)	Optimizing Compilers
COMP 642	(4)	Numerical Estimation

ECSE 507 (3) Optimization and Optimal Control

### Ph.D. Degree

To complete a Ph.D. program students must:

- pass twelve approved courses beyond the Bachelor's level;
- pass a Comprehensive Examination consisting of a written Part A, which is concerned with their general mathematical background, and an oral Part B concerned with two topics at an advanced graduate level;
- demonstrate a reading knowledge of French;
- submit a thesis judged to be an original contribution to knowledge.

## 46.6 Courses

Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.

Approximately 15 of the 600- and 700-level courses will be given.

Term(s) offered (Fall, Winter, Summer) may appear after the credit weight to indicate when a course would normally be taught. Please check Class Schedule to confirm this information.

#### Notes:

All undergraduate courses administered by the Faculty of Science (courses at the 100- to 500-level) have limited enrolment.

With the permission of the instructor, prerequisites and corequisites for courses may be waived in individual cases.

The course credit weight is given in parentheses after the title.

#### Courses currently scheduled for 2003-04:

**MATH 523 GENERALIZED LINEAR MODELS.** (4) (Winter) (Prerequisite: MATH 423 or EPIB 697) (Not open to students who have taken MATH 426) Modern discrete data analysis. Exponential families, orthogonality, link functions. Inference and model selection using analysis of deviance. Shrinkage (Bayesian, frequentist viewpoints). Smoothing. Residuals. Quasi-likelihood. Sliced inverse regression. Contingency tables: logistic regression, log-linear models. Censored data. Applications to current problems in medicine, biological and physical sciences. GLIM, S, software.

**MATH 524 NONPARAMETRIC STATISTICS.** (4) (Fall) (Prerequisite: MATH 324 or equivalent) (Not open to students who have taken MATH 424) Distribution free procedures for 2-sample problem: Wilcoxon rank sum, Siegel-Tukey, Smirnov tests. Shift model:

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power and estimation. Single sample procedures: Sign, Wilcoxon signed rank tests. Nonparametric ANOVA: Kruskal-Wallis, Friedman tests. Association: Spearman's rank correlation, Kendall's tau. Goodness of fit: Pearson's chi-square, likelihood ratio, Kolmogorov-Smirnov tests. Statistical software packages used.

**MATH 525 SAMPLING THEORY AND APPLICATIONS.** (4) (Winter) (Prerequisite: MATH 324 or equivalent) (Not open to students who have taken MATH 425) Simple random sampling, domains, ratio and regression estimators, superpopulation models, stratified sampling, optimal stratification, cluster sampling, sampling with unequal probabilities, multistage sampling, complex surveys, nonresponse.

**MATH 556 MATHEMATICAL STATISTICS 1.** (4) (Fall) (Prerequisite: MATH 357 or equivalent) Probability and distribution theory (univariate and multivariate). Exponential families. Laws of large numbers and central limit theorem.

**MATH 557 MATHEMATICAL STATISTICS 2.** (4) (Winter) (Prerequisite: MATH 556) Sampling theory (including large-sample theory). Likelihood functions and information matrices. Hypothesis testing, estimation theory. Regression and correlation theory.

**MATH 560 OPTIMIZATION.** (4) (Winter) (Prerequisite: Undergraduate background in analysis and linear algebra, with instructor's approval) Classical optimization in  $n$  variables. Convex sets and functions, optimality conditions for single-objective and multi-objective nonlinear optimization problems with and without constraints. Duality theories and their economic interpretations. Optimization with functionals. Connections with calculus of variations and optimal control. Stability of mathematical models. Selected numerical methods.

**MATH 564 ADVANCED REAL ANALYSIS 1.** (4) (Fall) (Prerequisites: MATH 354, MATH 355 or equivalents) Review of theory of measure and integration; product measures, Fubini's theorem;  $L^p$  spaces; basic principles of Banach spaces; Riesz representation theorem for  $C(X)$ ; Hilbert spaces; part of the material of MATH 565 may be covered as well.

**MATH 565 ADVANCED REAL ANALYSIS 2.** (4) (Winter) (Prerequisite: MATH 564) Continuation of topics from MATH 564. Signed measures, Hahn and Jordan decompositions. Radon-Nikodym theorems, complex measures, differentiation in  $\mathbb{R}^n$ , Fourier series and integrals, additional topics.

**MATH 570 HIGHER ALGEBRA 1.** (4) (Fall) (Prerequisite: MATH 371 or equivalent) Review of group theory; free groups and free products of groups. Sylow theorems. The category of  $R$ -modules; chain conditions, tensor products, flat, projective and injective modules. Basic commutative algebra; prime ideals and localization, Hilbert Nullstellensatz, integral extensions. Dedekind domains. Part of the material of MATH 571 may be covered as well.

**MATH 571 HIGHER ALGEBRA 2.** (4) (Winter) (Prerequisites: MATH 570 or consent of instructor) Completion of the topics of MATH 570. Rudiments of algebraic number theory. A deeper study of field extensions; Galois theory, separable and regular extensions. Semi-simple rings and modules. Representations of finite groups.

**MATH 574 ORDINARY DIFFERENTIAL EQUATIONS.** (4) (Prerequisites: MATH 325, MATH 354) Existence, uniqueness, smoothness, and dependence on initial conditions of solutions of systems of ordinary differential equations. Dynamical systems. Stable and unstable manifold theorem, Hartman-Grobman Theorem. Classification of equilibria. Liapunov functions. Limit sets, limit cycles and the Poincaré-Bendixson Theorem. The van der Pol equation. Strange attractors and Hopf bifurcation. Applications.

**MATH 576 GEOMETRY AND TOPOLOGY 1.** (4) (Fall) (Prerequisite: MATH 354) (Baill) g4m(l.3185 0 TD-0.)G7r36 d4 Tmi(the matJ Jologa)0ixslns nectedilibrh-



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## 47.1 Staff

### *Emeritus Professors*

W. Bruce; B.A.Sc., M.A.Sc.(Tor.), Eng.  
R. Knystautas; B.Eng., M.Eng., Ph.D.(McG.), Eng.  
M.P. Paidoussis; B.Eng.(McG.), Ph.D.(Canlab.), Eng., F.I.  
Mech.E., F.A.S.M.E., F.A.A.M., F.C.S.M.E., F.R.S.C., F.C.A.E.  
(*Thomas Workman Emeritus Professor of Mechanical  
Engineering*)

### *Post-Retirement*

G. Bach; B.Sc.(Alta), M.Sc.(Birm), Ph.D.(McG.)  
L. Kops; B.Eng., M.Eng., D.Sc., Eng.(Krakow Tech U.), Eng.,  
M.C.I.R.P., F.A.S.M.E., F.C.S.M.E.

### *Professors*

A.M. Ahmed; B.Sc.(Dhaka), Ph.D.(McG.), Eng. (*Thomas  
Workman Professor of Mechanical Engineering*)  
J. Angeles; B.Sc., M.Sc.(Unam Mexico), Ph.D.(Stan.), Eng.  
F.A.S.M.E., F.C.S.M.E.  
B.R. Baliga; B.Tech.(I.I.T. Kanpur), M.Sc.(Case), Ph.D.(Minn.)  
W.G. Habashi; B.Eng., M.Eng.(McG.), Ph.D.(C'nell), P.Eng.,  
F.A.S.M.E.  
J.H.S. Lee; B.Eng.(McG.), M.Sc.(M.I.T.), Ph.D.(McG.), Eng.  
D.F. Mateescu; M.Eng.(Poli. Univ. Buch.), Ph.D.(Rom. Acad. Sci.),  
Doctor Honoris Causa (Poli. Univ. Buch.), AFAIAA, FCASI  
A.K. Misra; B.Tech.(I.I.T., Kgp.), Ph.D.(Br.Col.), P.Eng.  
M. Ostoja-Starzewski; M.Eng., Ph.D.(McG.), F.A.S.M.E.  
S.J. Price; B.Sc., ng., D4(F)114.1g., DltTT2) -2.7( Os)6.7(Case), )-7.5(Ph.DD.J9FrD-049 A)TJ--6(58(FCAC.0009 Tc(anpurors)Ph.)0ase), )-78M.Sc)MAS.7.4(F)1

Students who do not hold an undergraduate engineering (or equivalent) degree and who are accepted into this option will register for the M.Sc. degree in Mechanical Engineering. This applies particularly to students engaged in interdisciplinary research. A thesis describing the candidate's research is to be submitted in accordance with the regulations of the Graduate and Postdoctoral Studies Office and is the major requirement for the degree.

**M.Eng. Thesis - Computational Science and Engineering (CSE) Option** (46 credits)

**Required Courses** (30 credits)

**Complementary Courses** 16 credits)

**M.Eng. (non-Thesis) Degree** (minimum 45 credits)

This is a course-type Master's degree which requires 12 graduate courses for completion. All candidates are required to take the following courses:

**Required Courses** (29 credits)

**Complementary Courses** (16 credits)

**M.Eng. Aerospace Degree** (minimum 45 credits)

The M.Eng. Aerospace Degree is offered to the students who wish to specialize in the general area of aerospace engineering. This degree is given in conjunction with Concordia University, École Polytechnique, Université Laval, Université de Sherbrooke, and École de Technologie Supérieure. Students registered at McGill are required to take two courses from two other institutions.

Students holding an undergraduate degree in engineering other than Mechanical Engineering are also eligible to apply for this degree. Depending on their background, students would specialize in one of the three areas:

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t n e m e l p m o C

(16 credits)

## General Business and Management – Required Courses

(11 credits)

- MGCR 611 (2) Financial Accounting
- MGCR 612 (2) Organizational Behaviour
- MGCR 616 (2) Marketing
- MGCR 641 (2) Elements of Modern Finance 1
- MGSC 608 (3) Data Decisions and Models

## General Business and Management – Complementary Courses (6 credits)

Two of the following courses:

- INDR 603 (3) Industrial Relations
- ORGB 625 (3) Managing Organizational Change
- ORGB 632 (3) Group Dynamics and Interpersonal Behaviour
- ORGB 633 (3) Managerial Negotiations
- ORGB 640 (3) Leadership, Power and Influence
- ORGB 685 (3) Cross Cultural Management

## Manufacturing and Supply Chain – Required Courses

(15 credits)

- MECH 524 (3) Computer Integrated Manufacturing
- MGSC 602 (3) Manufacturing Strategy
- MGSC 603 (3) Logistics Management
- MGSC 605 (3) Total Quality Management
- MGSC 631 (3) Analysis of Manufacturing Systems

## Manufacturing and Supply Chain – Complementary Courses (12 credits)

Two of the following four courses (6 credits):

- MECH 526 (3) Manufacturing and the Environment
- MGSC 601 (3) Management of Technology in Manufacturing
- MGSC 615 (3) The Internet and Manufacturing
- MGSC 675 (3) Applied Time Series Analysis Managerial Forecasting

and one of the following two options (6 credits):

### *Discrete Manufacturing Option*

- MECH 528 (3) Product Design
- MECH 529 (3) Discrete Manufacturing Systems

### *Process Manufacturing Option*

- CHEE 571 (4) Chemical Reaction Engineering
- CHEE 641 (3) Small Computer Applications: Chemical Engineering

## Industry – Required Courses (12 credits)

- MECH 627 (9) Manufacturing Industrial Stage
- MECH 628 (2) Manufacturing Case Studies
- MECH 629 (1) Manufacturing Industrial Seminar

For more information, contact:

Program Coordinator, Mechanical Engineering  
Telephone: (514) 398-7201  
E-mail: [mmm@mecheng.mcgill.ca](mailto:mmm@mecheng.mcgill.ca)  
Web site: [www.mecheng.mcgill.ca/mmm](http://www.mecheng.mcgill.ca/mmm)

or the Masters Program Office, Faculty of Management

Telephone: (514) 398-4648

**Ph.D. Degree** Candidates normally register for the M.Eng. degree in the first instance. However, in exceptional cases where the research work is proceeding very satisfactorily, or where the equivalent of the M.Eng. degree has been completed at another university, candidates may be permitted to proceed directly to the Ph.D. degree without submitting a Master's thesis as long as they have satisfied the course requirements for the M.Eng. degree.

Courses of study selected for a Ph.D. program will depend upon the existing academic qualifications of the candidate and those needed for effective research.

Candidates are required to pass a preliminary oral examination within twelve months of their initial registration for the Ph.D. degree.

The residence requirement for Ph.D. candidates is outlined in the General Information section of the *Graduate and Postdoctoral Studies Calendar*.

## 47.6 Courses

Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.

The course credit weight is given in parentheses after the title.

□ Denotes limited enrolment.

● Denotes courses not offered in 2003-04.

### Undergraduate Courses Approved for Higher Degrees

The following courses, available in the undergraduate curriculum of the Mechanical Engineering Department, may be selected for graduate credit provided that both of the following conditions are met: the course is recommended by the candidate's supervisor, and no equivalent course was taken during the candidate's undergraduate program.

**MECH 413 CONTROL SYSTEMS.** (3) (3-1-5) (Prerequisite: MECH 412) Stability of Linear Systems. Controller design based on root-locus and frequency response methods. Tuning of PID controllers. State-space representation of dynamic systems. Concepts of controllability and observability. Design of state feedback controller and state observer based on state-space and polynomial methods. Introduction to digital control.

**MECH 432 AIRCRAFT STRUCTURES.** (3) (3-0-6) (Prerequisites: MECH 331 and MECH 321) Plane stress and strain. Theories of failure. Plastic and viscoelastic stress-strain relations. External and internal forces in spars. Bending, deflection of beams, plastic deformation and aeroelastic distortion of wings and fuselage. Structural characteristics of wings. Torsion of wings and related critical aeroelastic design parameters; divergence and aeroelastic twist. Energy methods. Buckling in aeronautical structures. Flutter.

### Courses open to Graduate and to Qualified Undergraduate Students

**MECH 500 SELECTED TOPICS IN MECHANICAL ENGINEERING.** (3) (3-0-6) A course to allow the introduction of new topics in Mechanical Engineering as needs arise, by regular and visiting staff.

**MECH 501 SPECIAL TOPICS: MECHANICAL ENGINEERING.** (3) (3-0-6) A course to allow the introduction of new topics in Mechanical Engineering as needs arise, by regular and visiting staff.

● **MECH 515 UNSTEADY GASDYNAMICS 1.** (3) (3-1-5) (Prerequisites: MECH 341, MECH 430.) (Restriction: Not open to students who have taken MECH 615)

**MECH 522 PRODUCTION SYSTEMS.** (3) (3-0-6) Characteristics of production systems. System boundaries, input-output, feedback time-lag effects, dynamics of production systems. Design for manufacturability. Process planning, process/machine tool selection, break-even analysis, CAPP. Production planning, scheduling and control of operations; quality management. Competitive strategies; FMS, CIM. Hands-on experience with production modelling and industrial simulation software.

□ **MECH 524 COMPUTER INTEGRATED MANUFACTURING.** (3) (3-0-6) (Prerequisite: Permission of the instructor) A study of the present impact of computers and automation on manufacturing. Computer-aided systems. Information modelling. Information system structures. Study of several types of production systems. Integration issues: inter- and intra-enterprise. Laboratory experience with manufacturing software systems.

● □ **MECH 526 MANUFACTURING AND THE ENVIRONMENT.** (3) (3-0-6)

□ **MECH 528 PRODUCT DESIGN.** (3) (3-0-6) A study of the design issues present in product life cycle demands. Computer-aided systems. Rapid prototyping. Design for manufacturability. Integra-

tion of mechanics, electronics and software in products. Effect on design of product cost, maintainability, recycling, marketability.

- **MECH 529 DISCRETE MANUFACTURING SYSTEMS.**



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**MECH 578 ADVANCED THERMODYNAMICS.** (3) (3-0-6) Review of classical mechanics; Boltzmann statistics, thermodynamics of ideal gases; Fermi-Dirac and Bose-Einstein statistics, Gibbsian ensembles; elementary kinetic theory of transport processes, Boltzmann equation, Boltzmann H-theorem and entropy, KBG approximation, discussion on the solution of Boltzmann equation; Maxwell transport equations, derivation of Navier Stokes equations.

#### Courses for Graduate Students Only

**MECH 603 DESIGN PROJECT 1.** (6) A design project undertaken under the direct supervision of at least one staff member. Examination entails the writing of a report which is examined internally by the supervisor and another staff member appointed by the Mechanical Engineering Department.

**MECH 604 DESIGN PROJECT 2.** (6) A continuation of MECH 603.

**MECH 605 APPLIED MATHEMATICS 1.** (4) A brief treatment of tensor analysis. A review of complex variables. Analytical methods of solution for partial differential equations occurring with great frequency in engineering. Perturbation methods, integral methods, asymptotic methods and variational techniques. Numerical methods of solution.

**MECH 609 SEMINAR.** (1) All candidates for a Master's degree (except those in the Aerospace Program) are required to participate and to deliver one paper dealing with their particular area of research or interest.

**MECH 610 FUNDAMENTALS OF FLUID DYNAMICS.** (4) (Prerequisite: MECH 605 or permission of instructor) Conservation laws control volume analysis, Navier Stokes Equations and some exact solutions, dimensional analysis and limiting forms of Navier Stokes Equations. Vorticity, Potential flow and lift, boundary layer theory, drag, turbulence.

● **MECH 617 UNSTEADY GASDYNAMICS 2.** (4)

**MECH 627 MANUFACTURING INDUSTRIAL STAGE.** (9) (Restricted to students in the M.M.M. Program) An industrial work term is an integral component of the M.M.M. program which is to be completed under the supervision of an experienced engineer in the facilities of a sponsoring company.

● **MECH 628 MANUFACTURING CASE STUDIES.** (2) (Restricted to students in the M.M.M. Program)

**MECH 628D1 MANUFACTURING CASE STUDIES.** (1) (Students must also register for MECH 628D2) (No credit will be given for this course unless both MECH 628D1 and MECH 628D2 are successfully completed in consecutive terms) (MECH 628D1 and MECH 628D2 together are equivalent to MECH 628) Case studies on a variety of manufacturing topics are given by industry experts. To be attended by all students in the M.M.M. program.

**MECH 628D2 MANUFACTURING CASE STUDIES.** (1) (Prerequisite: MECH 628D1) (No credit will be given for this course unless both MECH 628D1 and MECH 628D2 are successfully completed in consecutive terms) (MECH 628D1 and MECH 628D2 together are equivalent to MECH 628)

● **MECH 629 MANUFACTURING INDUSTRIAL SEMINAR.** (1) (Restricted to students in the M.M.M. Program)

**MECH 629D1 MANUFACTURING INDUSTRIAL SEMINAR.** (0.5) (Students must also register for MECH 629D2) (No credit will be given for this course unless both MECH 629D1 and MECH 629D2 are successfully completed in consecutive terms) (MECH 629D1 and MECH 629D2 together are equivalent to MECH 629) A series of presentations by industry experts and manufacturing managers. To be attended by all students in the M.M.M. program.

**MECH 629D2 MANUFACTURING INDUSTRIAL SEMINAR.** (0.5) (Prerequisite: MECH 629D1) (No credit will be given for this course unless both MECH 629D1 and MECH 629D2 are successfully completed in consecutive terms) (MECH 629D1 and MECH 629D2 together are equivalent to MECH 629)

**MECH 632 THEORY OF ELASTICITY.** (4) (Evening course) The continuum concepts of stress, stress boundary conditions, principal stresses and the equations of equilibrium. Small strain theory and

principal strains. The elastic constitutive relations. The extension, torsion and flexure of mechanical components. Plane stress and plane strain. Variational principals and the finite element method. Computer techniques are

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**MDPH 601 RADIATION PHYSICS.** (3) The production and properties of directly and indirectly ionizing radiations and their interactions with matter; basic theoretical and experimental aspects of radiation dosimetry.

**MDPH 602 APPLIED DOSIMETRY.** (3) (Prerequisite: MDPH 601)



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Ph.D. degree. Candidates must hold a Major or Honours B.Sc. degree, or an M.D. degree.

Admission is based on an evaluation by the Admissions Committee, which looks for evidence of high academic achievement, and on acceptance by a research director. It is the policy of the Division that all students must be financially supported either by their supervisor or through studentships or fellowships.

In addition to the documentation currently required by the Graduate and Postdoctoral Studies Office, a letter from the candidate's research director outlining the Ph.D. project is necessary.

**M.Sc. (Specialization in Bioethics)**

Admission to the Master's program in Bioethics, from the base discipline Medicine, shall be limited to students having degrees in Medicine, Nursing, Physical and Occupational Therapy, as well as any other professional health training degree.

For further information regarding this program, please refer to the Bioethics entry.

**Graduate Diplomal ThJT<sup>2</sup>entry.**



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**EXMD 628 QUALITATIVE RESEARCH METHODOLOGY.** (3) (Restriction: permission of instructor) This course explores both broad and specific theoretical and methodological issues in qualitative research inquiry. It will discuss both traditional and contemporary paradigmatic thought underlying the qualitative enterprise and it will introduce the student to some qualitative techniques and strategies for collecting, analyzing and reporting data.

● **EXMD 630 ECONOMIC EVALUATION OF MEDICAL TECHNOLOGIES.** (3) (Offered in conjunction with the Department of Epidemiology and Biostatistics.)

**EXMD 635D1 EXPERIMENTAL/CLINICAL ONCOLOGY.** (3) The course will deal, on a site by site basis, with the incidence of cancer, present treatment, treatment outcome, underlying causes, current research and directions for development of new treatments. Chemotherapy, surgery, radiation therapy and nutrition as therapy and treatment of cancer will be included.

**EXMD 635D2 EXPERIMENTAL/CLINICAL ONCOLOGY.** (3)

**EXMD 640 EXPERIMENTAL MEDICINE TOPIC 1.** (3) Study, through guided reading, visits, practicals, assignments, of an elected and approved topic of importance in medical science.

**EXMD 690 MASTER'S THESIS R**

The Department concentrates on four key areas of research: cellular and molecular immunology, microbial physiology and genetics, molecular biology of viruses, and medical microbiology.

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### **50.3 Admission Requirements**

#### **Master's and Master's Applied**

Candidates are required to hold a B.Sc. degree in microbiology and immunology, biology, biochemistry or another related discipline; those with the M.D., D.



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**MIMM 698 MASTER'S RESEARCH 2.** (8) (M.Sc. students) Independent work under the direction of a supervisor on a research problem in the student's designated area of research.

**MIMM 699 MASTER'S RESEARCH 3.** (8) (M.Sc. students) Independent work under the direction of a supervisor on a research problem in the student's designated area of research.

**MIMM 701 COMPREHENSIVE EXAMINATION-PH.D. CANDIDATE.** (0)  
May be offered as: **MIMM 701D1** and **MIMM 701D2.**

**MIMM 704 READING AND CONFERENCE.** (3) (Ph.D. students - three of these courses required throughout the course of their degree program.) Description as for M.Sc. students.

**MIMM 705 READING AND CONFERENCE.** (3) (Ph.D. students - three of these courses required throughout the course of their degree program.) Description as for M.Sc. students.

**MIMM 706 READING AND CONFERENCE.** (3) (Ph.D. students - three of these courses required throughout the course of their degree program.) Description as for M.Sc. students.

**MIMM 707 READING AND CONFERENCE.** (3) (Ph.D. students - three of these courses required throughout the course of their degree program.) Description as for M.Sc. students.

**MIMM 711 GRADUATE SEMINARS 3.** (3) (Ph.D. students) Presentation of a maximum of three seminars topics throughout the course of their degree program.

**MIMM 712 GRADUATE SEMINARS 4.** (3) (Ph.D. students) Presentation of a maximum of three seminars topics throughout the course of their degree program.

**MIMM 713 GRADUATE SEMINARS** submit [6-page 95-720] (on, discussrng data03 Tc0.D.) 70036 To21 T111.98 J47MM 713

Course programs leading to the M.Eng. (Project) degree in Mining or Materials Engineering and the Graduate Diploma in Mining Engineering are also available.

Special programs are available for those holding degrees in subjects other than Metals and Materials or Mining Engineering (e.g., Chemical or Mechanical Engineering, Chemistry, Physics, Engineering Geology).

### 51.3 Admission Requirements

The Graduate Diploma in Mining Engineering is open to graduates with suitable academic standing in any branch of engineering or science. It is designed to provide a sound technical mining engineering background to candidates intending to work in the minerals industry.

The M.Eng. (thesis) degree is open to graduates holding the B.Eng. degree or its equivalent in Metals and Materials Engineering, Mining Engineering, or other related engineering fields.

The M.Sc. (thesis) degree is open to graduates holding the B.Sc. degree or its equivalent in Metallurgy, Geology or related fields. A high academic standing at the undergraduate level is required for admission to these programs.

The Master of Engineering (Project) program (Metals and Materials Option) is primarily designed to train people with appropriate engineering or scientific backgrounds to allow them to work effectively in the metals and materials industries. Industrial experience is favourably viewed for entrance into the program, but is not considered a necessity.

The Master of Engineering (Project) program (Mining Option) is primarily designed for graduates from mining engineering programs who have received adequate academic training in modern mining technology, mineral economics, computer programming and probabilities and statistics. Students without this academic training must follow a qualifying term of courses established by the Mining Program Director. Industrial experience is favourably viewed for entrance into the program, but is not considered a necessity.

Ph.D. degree applicants may either be "directly transferred" from the M.Eng. or M.Sc. program (see below) or hold an acceptable Master's degree in Metals and Materials Engineering or other related fields. The Ph.D. degree is awarded in the appropriate field.

### 51.4 Application Procedures

Applications will be considered upon receipt of:

1. application form;
2. two official copies of transcripts;
3. letters of reference;
4. \$60 CDN application fee;
5. TOEFL test results.

All information is to be submitted directly to the Graduate Secretary in the Department of Mining, Metals and Materials Engineering.

Deadlines:

March 1 – Fall admission

July 1 – Winter admission

November 1 – Summer admission

McGill's on-line application form for graduate program candidates is available at [www.mcgill.ca/applying/graduate](http://www.mcgill.ca/applying/graduate).

### 51.5 Program Requirements

#### Graduate Diploma in Mining Engineering

This program consists of 30 credits of course work, and normally requires one academic year of full-time study to complete. Candidates are required to take an integrated group of courses (including MIME 673 Mining Engineering Seminar), selected in consultation with the Program Adviser and based on their academic background.

#### M.Eng. and M.Sc. (Thesis) Degrees

The programs consist of 45 credits of course work, seminars and research. The candidate must pass a minimum number of courses, normally equivalent to 12 credits, chosen in consultation with a supervisor and based on his/her academic background and research interests.

In addition, the candidate must participate in an appropriate Research Seminar course and submit an acceptable thesis based on a series of successfully completed research courses.

#### Direct Transfer from

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## 51.6 Graduate Courses

Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.

**Courses with numbers ending D1 and D2** are taught in two consecutive terms (most commonly Fall and Winter). Students must register for both the D1 and D2 components. No credit will be given unless both components (D1 and D2) are successfully completed in consecutive terms.

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

The courses in this Department have been numbered to conform with the following classification sy





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There are opportunities for graduate students to obtain funding by being hired as assistants through the Faculty of Music. Positions are available as: teaching assistants, apprentice writers for program notes, sound recording technicians, dubbing technicians, correctors, and invigilators. Inquiries should be directed to the Chair of the Department of Theory or the Chair of the Department of Performance, as appropriate.

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### 52.3 Admission Requirements

#### Masters' Degrees

Applicants for the Master's degree must hold a B.Mus. or a B.A. degree with a Major or Honours in Music including considerable work done in the area of specialization.

All applicants (except those for performance and sound recording) will be required to take placement examinations. Applicants found to be deficient in their background preparation may be required to take certain additional undergraduate courses.

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MUHL 388 Twentieth-Century Opera  
MUHL 390 The German Lied

**D.Mus. Degree**

Applicants for the D.Mus. degree in Composition must hold an M.Mus. degree in Composition, or its equivalent, and must submit scores and/or tapes of their compositions at the time of application.

Applicants for the D.Mus. degree in Performance Studies must hold an M.Mus. degree in Performance, or its equivalent; are required to pass an entrance audition and interview; and must submit samples of written work and a statement of research interests.

**Ph.D. Degree**

Applicants for the Ph.D. degree must hold an M.A., or a Bachelor's degree equivalent to a McGill Honours degree, in Music Technology, Music Education, Music History, or Theory. Applicants with a Bachelor's degree will normally be admitted to the

MUGT, MUHL, MUPP, MUTH.

One additional graduate 3-credit seminar.

Recitals:

MUPG 660 Solo Recital 1 and MUPG 667 Solo Recital 2 (one of these could optionally include some chamber music).

**Master of Music – Performance: Chamber Music** (48 credits)

(All instruments except Piano, Early Music Instruments, Organ, Harp and Double Bass.)

MUPG 620, MUPG 621, MUPG 622 Performance Tutorials.

**One** of MUPP 690, MUPP 691, MUPP 692, MUPP 693, MUPP 694 or MUPP 695 Performance Practice Seminar.

Electives:

One graduate 3-credit seminar with the prefix MUCO, MUGS, MUGT, MUHL, MUPP, MUTH.

One additional graduate 3-credit seminar.

Recitals:

MUPG 661 Chamber Music Recital 1 and MUPG 668 Chamber Music Recital 2 (one of these could optionally include some solo music).

Ensembles:

**Three terms** of MUEN 660 Chamber Music Ensemble.

**Master of Music – Performance: Solo Piano** (49 credits)

MUPG 620, MUPG 621, MUPG 622 Performance Tutorials.

MUPG 681 and MUPG 682 Piano Seminars.

**One** of MUPP 690, MUPP 691, MUPP 692, MUPP 693, MUPP 694 or MUPP 695 Performance Practice Seminar.

Electives:

One graduate 3-credit seminar at the 500- or 600-level with the prefix MUCO, MUGS, MUGT, MUHL, MUPP, MUTH.

Recitals:

MUPG 660 Solo Recital 1 and MUPG 667 Solo Recital 2 (one of these could optionally include some chamber music).

Ensembles:

Three credits from the following: MUEN 579 Song Interpretation before 1800, MUEN 660 Chamber Music Ensemble, MUEN 679 Advanced Song Interpretation, MUEN 684 Studio Accompanying, MUEN 694 Contemporary Music Ensemble, MUEN 697 Orchestra.

**Master of Music – Performance: Chamber Music - Piano**

(49 credits)

MUPG 620, MUPG 621, MUPG 622 Performance Tutorials.

MUPG 681 and MUPG 682 Piano Seminars.

**One** of MUPP 690, MUPP 691, MUPP 692, MUPP 693, MUPP 694 or MUPP 695 Performance Practice Seminar.

Electives:

One graduate 3-credit seminar at the 500- or 600-level with the prefix MUCO, MUGS, MUGT, MUHL, MUPP, MUTH.

Recitals:

MUPG 661 Chamber Music Recital 1 and MUPG 668 Chamber Music Recital 2 (one of these could optionally include some solo music).

Ensembles:

Three credits from the following: MUEN 579 Song Interpretation before 1800, MUEN 660 Chamber Music Ensemble, MUEN 679 Advanced Song Interpretation, MUEN 684 Studio Accompanying, MUEN 694 Contemporary Music Ensemble, MUEN 697 Orchestra.

**Master of Music – Performance**

**Piano Accompaniment** (45 credits)

MUPG 620, MUPG 621, MUPG 622 Performance Tutorials.

**One** of MUPP 690, MUPP 691, MUPP 692, MUPP 693, MUPP 694 or MUPP 695 Performance Practice Seminar **or** MUPG 690 Vocal Styles and Conventions.

Electives:

One graduate 3-credit seminar with the prefix MUCO, MUGS, MUGT, MUHL, MUPP, MUTH.

One additional graduate 3-credit seminar.

Recital/Exam:

MUPG 665D1/MUPG 665D2 Accompanying Recital 1 and MUPG 663 Quick Study Examination (to be successfully completed before the first recital is performed).

Ensembles:

**Two terms** of MUEN 679 Advanced Song Interpretation and MUEN 684 Studio Accompanying.  
**or three terms** of MUEN 596 Opera Repetiteur.

**Master of Music – Performance: Orchestral Training**

(45 credits) (All orchestral instruments except Harp.)

MUPG 620, MUPG 621, MUPG 622 Performance Tutorials.

**One** of MUPP 690, MUPP 691, MUPP 692, MUPP 693, MUPP 694 or MUPP 695 Performance Practice Seminar.

Electives:

One graduate 3-credit seminar with the prefix MUCO, MUGS, MUGT, MUHL, MUPP, MUTH.

One additional graduate 3-credit seminar.

Recital/Exam:

MUPG 660 Solo Recital 1

MUPG 664 Repertoire Examination.

Ensembles:

**Three terms** of MUEN 697 Orchestra.

**Master of Music – Performance: Opera Performance**

(45 credits)

MUPG 620, MUPG 621 and MUPG 622 Performance Tutorials.

MUIN 600, MUIN 601 and MUIN 602 Vocal Repertoire Coaching.

**One** of MUPP 690, MUPP 691, MUPP 692, MUPP 693, MUPP 694, or MUPP 695 Performance Practice Seminar, or MUPG 690 Vocal Styles and Conventions

Electives:

**One** graduate 3-credit seminar with the prefix MUCO, MUGS, MUGT, MUHL, MUPP, MUTH.

**One** additional graduate 3-credit seminar (this must be one of MUPG 690, MUPG 691, MUPG 692, MUPG 693, or MUPG 694).

Recitals:

MUPG 656 Vocal Quick Study

MUPG 657 Opera Performance Exam 1

MUPG 658 Opera Performance Exam 2

**Master of Music – Performance: Vocal Opera Coach**

(45 credits)

MUPG 620, MUPG 621 and MUPG 622 Performance Tutorials.

MUPG 646 and MUPG 647 Score- and Sight-Reading.

MUPG 670 and MUPG 671 Advanced Continuo.

**One** of MUPP 690, MUPP 691, MUPP 692, MUPP 693, MUPP 694, or MUPP 695 Performance Practice Seminar, or MUPG 690 Vocal Styles and Conventions

Electives:

**One** graduate 3-credit seminar with the prefix MUCO, MUGS, MUGT, MUHL, MUPP, MUTH.

**One** additional graduate 3-credit seminar (this must be one of MUPG 690, MUPG 691, MUPG 692, MUPG 693, or MUPG 694).

Recitals:

MUPG 653 Opera Coach Exam 1

MUPG 654 Opera Coach Exam 2

MUPG 655 Opera Coach Quick Study

**Master of Music – Performance: Vocal Performance**

(49 credits)

MUPG 620, MUPG 621 and MUPG 622 Performance Tutorials.

MUIN 600 and MUIN 601 Vocal Repertoire Coaching.

**One** of MUPP 690, MUPP 691, MUPP 692, MUPP 693, MUPP 694, or MUPP 695 Performance Practice Seminar, or MUPG 690 Vocal Styles and Conventions.

Electives:

**One** graduate 3-credit seminar with the prefix MUCO, MUGS, MUGT, MUHL, MUPP, MUTH.





MUPG 725

OR MUPG 730, MUPG 731, MUPG 732, MUPG 733

Vocal Repertoire Coaching (4 terms, voice candidates only):

MUIN 700, MUIN 701, MUIN 702, MUIN 703

Four graduate level courses (3 credits each) to be chosen from among the Faculty's course offerings in consultation with the advisory committee. Three of the four courses should be in the Department of Theory; one of the four may be replaced with a supervised special project approved by the advisory committee and the performance graduate subcommittee.

MUGS 701 Comprehensive Examination Part 1 and

MUGS 702 Comprehensive Examination Part 2.

Recitals:

MUPG 760 Doctoral Recital 1

MUPG 767 Doctoral Recital 2

MUPG 770 Doctoral Lecture - Recital Project

The lecture-recital includes the presentation and submission of a research paper on its subject.

Details concerning the comprehensive examinations, composition performance, thesis and academic regulations are available from the Admissions Officer, Faculty of Music or the Secretary for Graduate Studies, Faculty of Music.

#### PH.D. DEGREE REQUIREMENTS

The Ph.D. requires a minimum of three years of full-time resident study (6 full-time terms) beyond a Bachelor's degree. A candidate who holds a Master's degree in the area of specialization may, on the recommendation of the Department, be permitted to count the work done for the Master's degree as the first year of resident study.

Ten 3-credit graduate courses approved by the Department (the Doctoral Tutorial will be considered a course for purposes of this requirement). Applicants who have completed an M.A. degree before entering the Ph.D. program will be required to complete at least five approved 3-credit graduate courses beyond the M.A. requirements.

Language reading examinations in two foreign languages (one foreign language for students in music education; none required for students in sound recording and music technology). Normally, one of these will be German and the other related to the candidate's field of research. A third language may be required if considered necessary for the candidate's research. Students whose mother tongue is French are exempt from the French Language Reading examination.

Comprehensive examinations, MUGS 701 Comprehensive Examination Part 1 and MUGS 702 Comprehensive Examination Part 2. The language reading examinations must be passed before a candidate will be permitted to sit the Comprehensive Examinations.

Participation in MUGS 705 Colloquium. Ph.D. students are required to attend four terms of the Doctoral Colloquium. Regular attendance and at least one presentation on their thesis research in the Colloquium during the course of their doctoral studies is required.

Doctoral Dissertation. All courses and language requirements and the comprehensive examinations must be successfully completed before the dissertation is submitted.

The course credit weight is given in parentheses after the title.

● Denotes courses not offered in 2003-04.

#### SEMINARS

Enrolment in seminars will normally be limited to 10. Each year a selection of the following courses are offered:

MUCO 631 Seminar in 20th-Century Music 1. (3) (3 hours)

MUCO 632 Seminar in 20th-Century Music 2. (3) (3 hours)

MUCO 633 Seminar in 20th-Century Music 3. (3) (3 hours)

MUCO 634 Seminar in 20th-Century Music 4. (3) (3 hours)

MUCO 635 Seminar in 20th-Century Music 5. (3) (3 hours)

MUCO 636 Seminar in 20th-Century Music 6. (3) (3 hours)

MUGT 610 Seminar - Music Education 1. (3) (3 hours)

MUGT 611 Seminar - Music Education 2. (3) (3 hours)

MUGT 612 Seminar - Music Education 3. (3) (3 hours)

MUGT 613 Seminar - Music Education 4. (3) (3 hours)

MUHL 680 Seminar in Musicology 1. (3) (3 hours)

MUHL 681 Seminar in Musicology 2. (3) (3 hours)

MUHL 682 Seminar in Musicology 3. (3) (3 hours)

MUHL 683 Seminar in Musicology 4. (3) (3 hours)

MUHL 684 Seminar in Musicology 5. (3) (3 hours)

MUHL 685 Seminar in Musicology 6. (3) (3 hours)

MUHL 692 Seminar in Music Literature 1. (3) (3 hours)

MUHL 693 Seminar in Music Literature 2. (3) (3 hours)

MUHL 694 Seminar in Music Literature 3. (3) (3 hours)

MUHL 695 Seminar in Music Literature 4. (3) (3 hours)

MUHL 696 Seminar in Music Literature 5. (3) (3 hours)

MUHL 697 Seminar in Music Literature 6. (3) (3 hours)

MUMT 610 Computer Music Seminar 1. (3) (3 hours)

MUMT 611 Computer Music Seminar 2. (3) (3 hours)

MUMT 612 Computer Music Seminar 3. (3) (3 hours)

MUMT 613 Computer Music Seminar 4. (3) (3 hours)

MUMT 614 Computer Music Seminar 5. (3) (3 hours)

MUMT 615 Computer Music Seminar 6. (3) (3 hours)

MUMT 690 Media Theory and Practice Seminar 1. (3) (3 hours)

MUMT 691 Media Theory and Practice Seminar 2. (3) (3 hours)

MUMT 692 Media Theory and Practice Seminar 3. (3) (3 hours)

MUMT 693 Media Theory and Practice Seminar 4. (3) (3 hours)

MUMT 694 Media Theory and Practice Seminar 5. (3) (3 hours)

MUMT 695 Media Theory and Practice Seminar 6. (3) (3 hours)

MUPP 690 Performance Practice Seminar 1. (3) (3 hours)

MUPP 691 Performance Practice Seminar 2. (3) (3 hours)

MUPP 692 Performance Practice Seminar 3. (3) (3 hours)

MUPP 693 Performance Practice Seminar 4. (3) (3 hours)

MUPP 694 Performance Practice Seminar 5. (3) (3 hours)

MUPP 695 Performance Practice Seminar 6. (3) (3 hours)

MUTH 652 Seminar in Music Theory 1. (3) (3 hours)

MUTH 653 Seminar in Music Theory 2. (3) (3 hours)

MUTH 654 Seminar in Music Theory 3. (3) (3 hours)

MUTH 655 Seminar in Music Theory 4. (3) (3 hours)

MUTH 656 Seminar in Music Theory 5. (3) (3 hours)

MUTH 657 Seminar in Music Theory 6. (3) (3 hours)

Topics for graduate seminars vary from year to year and are normally chosen according to the individual instructor's areas of research expertise. A list of detailed seminar descriptions can be found on the Faculty of Music Web site prior to Fall registration.

## 52.6 Graduate Courses

Students preparing to register should consult the Web at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) (click on Class Schedule) for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled after this Calendar went to press. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.

Courses with numbers ending D1 and D2 are taught in two consecutive terms (most commonly Fall and Winter). Students must register for both the D1 and D2 components. No credit will be given unless both components (D1 and D2) are successfully completed in consecutive terms.

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*Seminar in Musicology:* Beethoven Style Periods; The "Roman de Fauvel"; The German Lied; Problems in Verdi Studies; Studies in the Wagner Operas.

*Seminar in Music Literature:* The Music of Bela Bartok; The Symphonies of Beethoven; The Nineteenth-century French

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