Faculty of Engineering, including the Schools of Architecture and Urban Planning (Graduate)

Programs, Courses and University Regulations

2011-2012

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Archival copies are available at www.mcgill.ca/study.

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

1. McGill University reserves the right to make changes to the information contained in this online publication - including correcting errors, altering fees, schedules of admission, and credit requirements, and revising or cancelling particular courses or programs - without prior notice.
2. In the interpretation of academic regulations, the Senate is the final authority.
3. Students are responsible for informing themselves of the University's procedures, policies and regulations, and the specific requirements associated with the degree, diploma, or certificate sought.
4. All students registered at McGill University are considered to have agreed to act in accordance with the University procedures, policies and regulations.
5. Although advice is readily available on request, the responsibility of selecting the appropriate courses for graduation must ultimately rest with the student.
6. Not all courses are offered every year and changes can be made after publication. Always check the Minerva Class Schedule link at https://banweb.mcgill.ca/pban1/bwckschd.p_disp_dyn_sched for the most up-to-date information on whether a course is offered.
7. The academic publication year begins at the start of the Fall semester and extends through to the end of the Winter semester of any given year. Students who begin study at any point within this period are governed by the regulations in the publication which came into effect at the start of the Fall semester.
8. Notwithstanding any other provision of the publication, it is expressly understood by all students that McGill University accepts no responsibility to provide any course of instruction, program or class, residential or other services including the normal range of academic, residential and/or other services in circumstances of utility interruptions, fire, flood, strikes, work stoppages, labour disputes, war, insurrection, the operation of law or acts of God or any other cause (whether similar or dissimilar to those enumerated) which reasonably prevent their provision.

Note: Throughout this publication, "you" refers to students newly admitted, readmitted or returning to McGill.

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9.4 Ph.D. Comprehensiv

2.3 General Statement Concerning Higher Degrees

Graduate and Postdoctoral Studies (GPS) administers all programs leading to graduate diplomas, certificates and higher degrees. It is responsible for the admission of candidates, the supervision of their work and for recommending to Senate those who may receive the degrees, diplomas and certificates.

3 Important Dates 2011-2012

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

4 Graduate Studies at a Glance

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

Agricultural and Environmental Sciences

: Agricultural Economics

: Animal Science

: Bioresource Engineering

: Dietetics and Human Nutrition

: Food Science and Agricultural Chemistry

: Natural Resource Sciences

: Parasitology

: Plant Science

Arts

:

Medicine

: Microbiology and Immunology

: Neuroscience (Integrated Progr

Master of Architecture Degrees

M.Arch. programs offered:

M.Arch. (professional degree) (Non-Thesis) in Design Studio and Design Studio – Directed Research

M.Arch. (post-professional degree) (Non-Thesis); specializations in Architectural History and Theory, Cultural Mediations and Technology, Urban Design and Housing

Master of Arts Degrees

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

Anthropology (Thesis and Non-Thesis); options in Development Studies, Environment, Gender and Women's Studies, Medical Anthropology

Art History (Non-Thesis); option in Gender and Women's Studies (Non-Thesis)

Classics (Thesis and Non-Thesis)

Communication Studies (Thesis and Non-Thesis); option in Gender and Women's Studies

Economics (Thesis and Non-Thesis); options in Development Studies (Non-Thesis) and Social Statistics (Non-Thesis)

Education (Thesis and Non-Thesis)

English (Thesis and Non-Thesis)

French (Thesis and Non-Thesis); option in Gender and Women's Studies

Geography; options in Development Studies, Environment, Gender and Women's Studies, Neotropical Environment, Social Statistics

German Studies (Thesis and Non-Thesis)

Hispanic Studies (Thesis and Non-Thesis)

History (Thesis and Non-Thesis); options in Development Studies (Thesis and Non-Thesis), European Studies (Thesis and Non-Thesis), Gender and Women's Studies (Thesis and Non-Thesis), History of Medicine (Non-Thesis)

Islamic Studies; option in Gender and Women's Studies

Italian Studies (Thesis and Non-Thesis)

Jewish Studies (Thesis and Non-Thesis)

Kinesiology and Physical Education (Thesis and Non-Thesis)

Linguistics (Non-Thesis)

Mathematics and Statistics (Thesis and Non-Thesis)

Music (Thesis and Non-Thesis)

Philosophy; option in Bioethics

Political Science (Thesis and Non-Thesis); options in Development Studies (Thesis and Non-Thesis), European Studies (Thesis and Non-Thesis), Gender and Women's Studies (Non-Thesis), Social Statistics (Non-Thesis)

Psychology

Religious Studies (Thesis and Non-Thesis); options in Bioethics and Gender and Women's Studies

Russian

Sociology (Thesis and Non-Thesis); options in Development Studies (Thesis and Non-Thesis), Environment, Gender and Women's Studies (Thesis and Non-Thesis), Medical Sociology (Thesis and Non-Thesis), Social Statistics (Non-Thesis), Neotropical Environment

Master of Business Administration Degrees

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

Finance

Global Strategy and Leadership

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Educational Psychology (Thesis and Non-Thesis)
Educational Leadership (Thesis, Non-Thesis, and Non-Thesis Coursework); option in Gender and Women's Studies (Thesis and Non-Thesis)
Kinesiology and Physical Education (Thesis and Non-Thesis)
Second Language Education (Thesis and Non-Thesis); option in Gender and Women's Studies (Thesis and Non-Thesis)
Teaching and Learning (MATL) (Non-Thesis)

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

Educational Psychology

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

Kinesiology and Physical Education (Thesis and Non-Thesis)

Master's Degree in Engineering

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

Aerospace Engineering (Project)
Biomedical Engineering; option in Bioinformatics
Chemical Engineering (Thesis and Project); option in Environmental Engineering (Project)
Civil Engineering and Applied Mechanics (Thesis and Project); option in Environmental Engineering (Project)
Electrical Engineering (Thesis and Project); option in Computational Science and Engineering
Mechanical Engineering (Thesis and Project); option in Computational Science and Engineering
Mining and Materials Engineering (Thesis and Non-Thesis); options in Environmental Engineering (Non-Thesis), Mining (Non-Thesis), and Metals and Materials (Non-Thesis)

Other degrees:

Master of Management (M.M.) is offered in Manufacturing Management (see Department of Mechanical Engineering and Faculty of Management).
Master of Science (M.Sc.) is offered in Chemical Engineering, Ci

A program leading to the degree of Sanctae Theologiae Magister (S.T

Communication Sciences and Disorders
Human Nutrition
Nursing
Occupational Health
Occupational Therapy
Plant Science
Physical Therapy

Other degrees:

Master of Science, Applied (OT)
Master of Science, Applied (PT)

Master of Social Work Degrees

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

Special program:

M.S.W. with B.C.L. and LL.B.

Master of Urban Planning Degree

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

Options: Transportation Planning and Urban Design.

4.3 Doctoral Degrees

Two categories of programs lead to higher degrees at McGill University: master's programs and doctoral programs.

The following doctoral degrees are offered (*see below for more information about sub-specializations*):	**Prerequisites:**
Doctor of Civil Law (D.C.L.)	B.C.L. or LL.B. and usually LL.M. See Law.
Doctor of Music (D.Mus.)	M.A. in Composition (D.Mus. in Composition) or an master's degree in Performance, and professional and teaching experience (D.Mus. in Performance). See Music.
	An undergraduate degree relevant to the 428tg f

Biology; options in Bioinformatics, Developmental Biology, Environment, and Neotropical Environment
Biomedical Engineering; option in Bioinformatics
Bioresource Engineering; options in Environment, and Neotropical Environment
Chemical Engineering
Chemistry; option in Chemical Biology
Civil Engineering and Applied Mechanics
Classics
Communication Studies; option in Gender and Women's Studies
Communication Sciences and Disorders; option in Language Acquisition
Computer Science; option in Bioinformatics
Counselling Psychology
Earth and Planetary Sciences; option in Environment
Economics
Educational Psychology
Educational Studies; option in Gender and Women's Studies
Electrical Engineering
English
Entomology; options in Environment, and Neotropical Environment
Epidemiology and Biostatistics
Food Science and Agricultural Chemistry
French; option in Gender and Women's Studies
Geography; options in Environment, Gender and Women's Studies, and Neotropical Environment
German
Hispanic Studies
History
Human Genetics; option in Bioinformatics
Human Nutrition
Information Studies
Islamic Studies; option in Gender and Women's Studies
Linguistics; option in Language Acquisition
Management
Mathematics and Statistics; option in Bioinformatics
Mechanical Engineering
Medicine, Experimental; option in Environment
Microbiology and Immunology
Microbiology (Macdonald Campus); options in Bioinformatics, and Environment
Mining and Materials Engineering
Music; option in Gender and Women's Studies
Neuroscience
Nursing; option in Psychosocial Oncology
Occupational Health Sciences
Parasitology; options in Bioinformatics, and Environment
Pathology
Pharmacology and Therapeutics; option in Chemical Biology
Philosophy; options in Environment, and Gender and Women's Studies
Physics
Physiology; option in Bioinformatics
Plant Science; options in Bioinformatics, Environment, and Neotropical Environment
Political Science
Psychology; options in Language Acquisition, and Psychosocial Oncology
Rehabilitation Science
Religious Studies; option in Gender and Women's Studies
Renewable Resources; options in Environment, and Neotropical Environment
Russian
School/Applied Child Psychology
Social Work
Sociology; options in Environment, and Gender and Women's Studies
Surgery, Experimental

The following joint Ph.D. programs are offered:

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

4.4 Postdoctoral Research

See *section 8: Postdoctoral Research* for information about postdoctoral research at McGill University.

5 Program Requirements

5.1 Master's Degrees

Residence Requirements – Master's Degrees

Refers to the number of terms (or years) students must be registered on a full-time basis to complete their program. Students are NOT permitted to graduate

Language Requirements – Master's Degrees

Most master's degree programs do not include language requirements, but candidates who intend to proceed to a doctoral degree should take note of any language requirements and are strongly advised to take the examinations in at least one language while working for the master's degree.

5.2 Doctoral Degrees

Residence Requirements – Doctoral

Refers to the numbers of terms (or years) students must be registered on a full-time basis to complete their program. Students are not permitted to graduate until they have fulfilled the residence requirement (or paid the corresponding fees) in their program.

Candidates entering Ph.D. 1 must follow a program of at least three years residency at the University; this is a minimum requirement, and there is no guarantee that the work of the degree can be completed in this time, but students are expected to complete within the maximum specified period. Only exceptional candidates holding a bachelor’s degree will be considered for direct admission to Ph.D. 1 level.

It is required that candidates spend the greater part of each summer working on their theses, and those who do not do so are unlikely to complete a satisfactory thesis in the prescribed minimum time (see “Vacation Policy for Graduate Students and Postdocs”).

A student who has obtained a master's degree at McGill University or at an approved institution, in a relevant subject and is proceeding to a Ph.D. degree will, on the recommendation of the department, be admitted to Ph.D. 2; in this case, the residency requirement for the program is two years.

In the doctoral program, students must be registered on a full-time basis for one more year after completion of the residency (i.e., Ph.D. 4 year) before continuing as additional session students until completion of the program.

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

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

Comprehensive Examinations – Doctoral

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

Language Requirements – Doctoral

Most graduate departments in the Faculties of Agricultural and Environmental Sciences, Education, Engineering, Management, Medicine, and Science do not require a language examination. Students should inquire in their departments if there are any such requirements or whether any missiom(ements)T:52 h 35yn2 Tm(v

Thesis – Doctoral

After the thesis has been received and approved, a final oral examination is held on the subject of the thesis and subjects intimately related to it. This is conducted in the presence of a Committee of at least five members presided over by a Pro-Dean nominated by Graduate and Postdoctoral Studies. The Chair of the candidate's department and the Thesis Supervisor are regularly invited to be members of the Committee; at least one member of the Committee is appointed from outside the candidate's department. Guidelines are available at *www.mcgill.ca/gps/students/thesis/guidelines*.

5.3 Ad Hoc Programs

In exceptional cases , an applicant who wishes to pursue a master's (Thesis option only) or Ph.D. program in an academic department which is not currently authorized by the *Ministère de l'Éducation, du Loisir et du Sport* (MELS) to offer graduate programs, may be admitted to an *Ad Hoc* program. The application, including a research proposal, is examined by an Admissions Committee in the department which has familiarity with the proposed research area and experience in directing graduate studies.

Once the Admissions Committee makes a favourable recommendation, Graduate and Postdoctoral Studies confirms an Advisory Committee (recommended by the academic unit) to be responsible for program planning and monitoring of research progress. The regulations are fully described in the document "Procedures for Admission in *Ad Hoc* Master's and Doctoral Programs", available from GPS.

5.4 Ad Personam Programs (Thesis Option only)

In very rare circumstances, an applicant who wishes to engage in master's (Thesis option only) or Ph.D. studies of an interdisciplinary nature involving joint supervision by two departments, each of which is authorized by the *Ministère de l'Éducation, du Loisir et du Sport* (MELS) to offer its own graduate programs, may be admitted to an *Ad Personam* program. The regulations are fully described in a document available from GPS.

5.5 Coursework for Graduate Programs, Diplomas, and Certificates

Upper-level undergraduate courses (excluding 500-level) may not be considered for degrees, diplomas, and certificates unless they are already listed as required courses in the approved program description. If an upper-level undergraduate course (excluding 500-level) is taken by a graduate student, it must come as a recommendation from the Graduate Program Director in the department. The recommendation must state if the undergraduate course is an additional requirement for the program (must obtain B- or better) or if the course is extra to the program (will be flagged as such on the record and fees will be charged). See document at *www.mcgill.ca/gps/staff/registration*.

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

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

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

6 General Admission for Graduate Studies

Note: The following admission requirements and application procedures are the minimum standard for applicants to McGill's Graduate and Postdoctoral Studies programs. Some graduate units may require additional qualifications or a higher minimum CGPA; prospective students are strongly urged to consult the unit concerned regarding specific requirements set for their program of interest.

Website: *www.mcgill.ca/gradapplicants*
Email: *servicepoint@mcgill.ca*

Deadline: Admission to graduate studies operates on a rolling basis; complete applications and their supporting documentation must reach departmental offices on or before the date for guaranteed consideration specified by the department. To be considered for entrance fellowships, where available, applicants must verify the deadlines with individual departments. Meeting minimum admission standards does not guarantee admission.

6.1 Application for Admission

Application information and the online application form are available at *www.mcgill.ca/gradapplicants/apply*. Applicants (with some exceptions) are required to ask two instructors familiar with their work to send letters of recommendation. All applicants must themselves send, or ask the appropriate university authorities to send, two official or certified copies of their complete academic record from each university-level institution attended to date. McGill graduates do not need to submit McGill transcripts. Letters of recommendation and official transcripts must be sent **directly** to the department concerned. Please note

that all documents submitted to McGill University in support of an application to be admitted, including, but not limited to transcripts, diplomas, letters of reference and test scores, become the property of McGill University and will not be returned to the applicant or issuing institution under any circumstance.

A **non-refundable** fee of $100 in Canadian funds **must** accompany each application, otherwise **it cannot be submitted**. This sum must be paid by credit card and is non-refundable when submitting the online application form. Candidates for Special, Visiting Student, and Qualifying status must apply and pay the application fee every year (i.e., every Fall term).

It is recommended that applicants submit a list of the titles of courses taken in the major subject, since transcripts often give code numbers only. **Transcripts written in a language other than English or French must be accompanied by a translation prepared by a licensed translator.** An explanation of the grading system used by the applicant's university is essential. The applicant should also indicate the major subject area in which further study is desired.

Completed applications, with supporting documents, must reach departmental offices according to individual department dates for guaranteed consideration. Applicants should contact the department concerned, or see: *www.mcgill.ca/gradapplicants/programs*. International students are advised to apply well in advance of the date for guaranteed consideration as immigration procedures may be lengthy. Applications received after the prescribed dates for guaranteed consideration may or may not be considered, at the discretion of the department. Candidates will be notified of acceptance or refusal by Graduate and Postdoctoral Studies as quickly as possible.

Admission to graduate programs at McGill is highly competitive and the final decision rests with Graduate and Postdoctoral Studies. Admission decisions are not subject to appeal or reconsideration.

6.2 Admission Requirements (minimum requirements to be considered for admission)

Applicants should be graduates of a university of recognized reputation and hold a bachelor's de

4. Has lived and attended university, or been employed, for at least four consecutive years, in a country where English is the acknowledged primary language.

Applicants who do not meet any of the above-listed conditions must demonstrate proficiency in English using ***one*** of the following options:

1. TOEFL (Test of English as a Foreign Language): minimum acceptable scores are

Competency in English		
iBT (Internet-based test)	PBT (paper-based test)	CBT (computer-based test)*
86 overall, (no less than 20 in each of the four component scores) N.B. an institutional version of the TOEFL is not acceptable.	550	* The CBT is no longer being offered and CBT results are no longer considered valid, or being reported by ETS.

2. IELTS (International English Language Testing System): a band score of 6.5 or greater.
3. MELAB (Michigan English Language Assessment Battery): a mark of 85% or higher.
4. University of Cambridge ESOL Certificate in Advanced English (CAE): a grade of “B” (Good) or higher.
5. University of Cambridge ESOL Certificate of Proficiency in English (CPE): a grade of “C” (Pass) or higher.
6. Edexcel London Test of English - Level 5 - with an overall grade of at least “Pass”.
7. McGill Certificate of Proficiency in English or McGill Certificate of Proficiency - English for Professional Communication: Certificate of Proficiency awarded. McGill Certificate of Proficiency in English or McGill Certificate of Proficiency - English for Professional Communication: Certificate of Proficiency awarded.

In each case, applicants must ensure that official test results are sent to McGill directly by the testing service. Applications cannot be considered if test results are not available. These scores are general minima; some departments may set higher requirements.

Revised – July 2008

6.5 Admission to a Qualifying Program

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

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

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

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

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

6.6 Admission to a Second Degree Program

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

6.7 Admission to Two Degree Programs

Students may, with special permission granted by Graduate and Postdoctoral Studies, be admitted to two degree programs or to two departments or 0 1 110.608 1327742.2

6.8 Admission to an Ad Personam Joint Program

Ad Personam joint graduate programs are restricted to master's Thesis option and Ph.D. programs. Students shall be admitted and registered by one department, to be known as the “first department”. Approval for the 1nt Pr

Email: *graduate.fellowships@mcgill.ca*
Website: *www.mcgill.ca/gps/students* (under Fellowships and Awards)

Graduate Fellowships and Awards Calendar: *http://coursecalendar.mcgill.ca/fellowships201112/wwhelp/wwhimpl/js/html/wwhelp.htm*

The Fellowships and Awards Section of Graduate and Postdoctoral Studies provides processing services for many sources of support for Canadian and non-Canadian students, both new to McGill and continuing. Further information on these and other sources of funding can be found in various publications on the Fellowships and Awards web pages. The *Graduate Fellowships and Awards Calendar* lists all internal awards as well as numerous external awards.

Entrance Fellowships are awarded on the basis of the application for admission, upon nomination by academic departments. Most internal fellowships are awarded in this manner – please contact the proposed academic department directly for further information.

Research Assistantships, Teaching Assistantships, and stipends from professors' research grants are handled by individual academic departments at McGill. Fellowships, assistantships, and stipends are used to make funding packages for graduate students. All assistantship and stipend inquiries should be directed to departments.

A small number of citizens from countries whose governments have entered into agreements on tuition fees with Quebec may be exempted from the supplemental tuition fees normally required of international students. All French citizens and a limited number of citizens of a country in the list, which can be found at *www.mels.gouv.qc.ca/ens-sup/ens-univ/droits_scolarite-A_pays-organisations.pdf*, are eligible for such exemptions. For more information and the necessary application materials, see this MELS website: *www.mels.gouv.qc.ca/international/index_en.asp?page=progExemp*. The list of organizations where students should apply can be accessed from this website.

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

8 Postdoctoral Research

Students must inform themselves of University rules and regulations and keep abreast of any changes that may occur. The *Postdoctoral Research* section of this publication contains important details required by students during their studies at McGill and should be periodically consulted, along with other sections and related publications.

8.1 Postdocs

Postdocs are recent graduates with a Ph.D. or equivalent (i.e., Medical Specialist Diploma) engaged by a member of the University's academic staff, including Adjunct Professors, to assist him/her in research.

Postdocs must be appointed by their department and registered with Graduate and Postdoctoral Studies in order to have access to University facilities (library, computer, etc.).

8.2 Guidelines and Policy for Academic Units on Postdoctoral Education

The general guidelines listed below are meant to encourage units to examine their policies and procedures to support postdoctoral education. Every unit hosting Postdocs should have explicitly stated policies and procedures for the provision of postdoctoral education as well as established means for informing Postdocs of policies, procedures, and privileges (e.g., orientation sessions, handbooks, etc.), as well as mechanisms for addressing complaints. Academic units should ensure that their policies, procedures and privileges are consistent with these guidelines and the Charter of Students' Rights. For their part, Postdocs are responsible for informing themselves of policies, procedures and privileges.

1. **Definition and Status**

   i. Postdoctoral status will be recognized by the University in accordance with Quebec provincial regulations. Persons may only be registered with postdoctoral status for a period of up to five years from the date they were awarded a Ph.D. or equivalent degree. Time allocated to parental or health leave is added to this period of time. Leaves for other reasons, including vacation leave, do not extend the term. Postdocs must do research under the supervision of a McGill professor, including Adjunct Professors, who are a member of McGill's academic staff qualified in the discipline in which training is being provided and with the abilities to fulfil responsibilities as a supervisor of the research and as a mentor for career development. They are expected to be engaged primarily in research with minimal teaching or other responsibilities.

2. **Registration**

   i. Postdocs must be registered annually with the University through Graduate and Postdoctoral Studies. Initial registration will require an original ore refil res disce/

i. Appointments may not exceed your registration eligibility status.

ii. In order to be registered as a Postdoc, you must be assured of financial support other than from personal means during your stay at McGill University, equivalent to the minimal stipend requirement set by the University in accordance with guidelines issued by federal and pro

– to uphold and transmit to their Postdocs the highest professional standards of research and/or scholarship;

– to provide research guidance;

– to meet regularly with their Postdocs;

– to provide feedback on research submitted by the Postdocs;

– to clarify expectations regarding intellectual property rights in accordance with the University's policy;

– to provide mentorship for career development;

– to prepare, sign, and adhere to a Letter of Agreement for Postdoctoral Education.

vi. Some examples of responsibilities of Postdocs are:

– to inform themselves of and adhere to the University's policies and/or regulations for Postdocs for leaves, for research, and for student conduct as outlined in the *Handbook on Student Rights and Responsibilities* and the *General Information, Regulations and Research Guidelines* Calendar of Graduate and Postdoctoral Studies;

– to submit a complete file for registration to Graduate and Postdoctoral Studies;

– to sign and adhere to their Letter of Agreement for Postdoctoral Education;

– to communicate regularly with their supervisor;

– to inform their supervisor of their absences.

vii. Some examples of the responsibilities of the University are:

– to register Postdocs;

– to provide an appeal mechanism in cases of conflict;

– to provide documented policies and procedures to Postdocs;

– to provide Postdocs with the necessary information on McGill University student services.

Approved by Senate, April 2000

Vacation Policy for Graduate Students and Postdocs

Category 1: An individual who has completed requirements for the Doctoral degree or medical specialty, but the degree/certification has not yet been awarded. The individual will subsequently be eligible for registration as a Postdoctoral Fellow.

Category 2: An individual who is not eligible for Postdoctoral Registration according to the MELS definition, but is a recipient of an external postdoctoral award from a recognized Canadian funding agency.

Category 3: An individual who holds a professional degree (or equivalent) in a regulated health profession (as defined under CIHR-eligible health profession) and is enrolled in a program of postgraduate medical education at another institution. The individual wishes to conduct the research stage or elective component of his/her program of study at McGill University under the supervision of a McGill professor. The individual will be engaged in full-time research with well-defined objectives, responsibilities, and methods of reporting. The application must be accompanied by a letter of permission from the home institution (signed by the Department Chair, Dean or equivalent) confirming registration in their program and stating the expected duration of the research stage. Individuals who are expecting to spend more than one year are encouraged to obtain formal training (Master's or Ph.D.) through application to a relevant graduate program.

Category 4: An individual with a regulated health professional degree (as defined under CIHR-eligible health profession), but not a Ph.D. or equi

a particular program and should be made clear to incoming students. Thesis supervisors must be chosen from academic staff in tenure-track positions. Faculty Lecturers and Research Assistants may not act as supervisors but in exceptional cases, may be co-supervisors. Emeritus Professors and Adjunct

iii. Academic units should establish criteria of excellence in supervision and graduate teaching appropriate to their disciplines and should suitably reward those who meet these criteria, e.g., in decisions concerning tenure and promotion, or merit pay awards.

iv. The maximum number of students under the direction of a single supervisor should be consistent with the ability of the supervisor to provide quality supervision, taking into account the workload of the supervisor and norms of the discipline.

v. Procedures should be established for ensuring continuity in supervision when a student is separated from a supervisor – for example, when the supervisor takes a sabbatical leave, retires from McGill or changes universities or when the student leaves to complete field work or takes a job before submitting a thesis.

Revised by Council of FGSR, April 23, 1999 and October 6, 2003

9.2 Policy on Graduate Student Research Progress Tracking

This is a new mandatory policy and procedure to track the research progress of graduate students. The policy is referred to in the amended *section 9.1: Guidelines and Regulations for Academic Units on Graduate Student Advising and Supervision* in bold print. Documents to record progress can be found on the GPS website: *www.mcgill.ca/gps/staff/forms*.

The following is a summary of the main elements of the new **mandatory** policy. The following steps must be followed for each graduate student in a thesis program:

1. Annually, the student must meet with, at minimum, their supervisor(s) and a departmental representative. This meeting can occur in the conte

The assessment and reasons for the decision must be documented and provided to the student in sufficient detail to allow the student to understand the decision, including identifying strengths and weaknesses. (A number of units have developed short forms specifically for this purpose.) In the case of oral examinations, the student should also be given feedback on presentation, logical exposition, ability to answer questions, etc.

In the case of oral exams, units may wish to consider the following: ensure that there is a reasonably detailed written assessment of the student's performance; tape the oral examination; allow the student to select a faculty member to act as a neutral observer; have one faculty member serve as a neutral chair (equivalent to a Pro-Dean); ha

At the time the request for a reread is made, the student should have already met with the faculty member responsible for the course to review the mark, or made a reasonable attempt to do so. Rereads can only be requested if a change upwards in the letter grade for the course is possible as a result of the reread. Assignments can only be reread if, together, they account for more than 20% of the course grade.

The reread by a second reader is a review of the mark, not the work assigned. It is the second reader's task to determine whether the original mark is fair and reasonable, not to give the work a totally new assessment.

1. The time limit for requesting a reread is within 30 days after posting of the final marks for the course. However, in the case of work which has been graded during the course and returned to the student, students must indicate in writing to Graduate and Postdoctoral Studies within 5 working days of receiving the graded work their intention to request a reread. This intention must be confirmed within 30 days of the posting of the final marks for the course.

   (Note: Material that is returned to a student **cannot be reread** unless arrangements have been made to ensure that the material has not been changed subsequent to the original grading; for example, the student can make a copy for the professor to retain either before handing the material in or immediately upon receiving it back from the instructor or at the point where the professor and student review the work together.

   Instructors are strongly advised to write their corrections in red pen and to write comments which help the student to understand the mark assigned.)

2. The request for a formal reread must be made by the student in writing to Graduate and Postdoctoral Studies and should specify the reasons for the request. It should include a statement indicating that the student has already met with the faculty member responsible for the course to review the mark or indicating why this has not been possible. The reread fee ($35 for an exam, $35 for a paper, $35 for one or more assignments, to a maximum of $105 per course) will be charged directly to the student’s fee account after the result of the reread is received. No fee will be charged if there is a change upwards in the letter grade for the course.
3. Administration of the reread is handled by Graduate and Postdoctoral Studies, not by the department. GPS will contact the department to obtain the work to be reread, a list of potential readers, and details of the marking. The list of potential readers must be approved by the Department Chair or Graduate Program Director. The Chair or Director must, as well, vouch for the impartiality of these readers. All communication with the second reader is conducted by GPS.

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

4. The student's and the instructor's names are blanked out to reduce the possibility of prejudice and to help meet the requirement of the Charter of Students' Rights that the re

All requests for a leave of absence for health reasons should be accompanied by the following:

- a duly completed *Leave of Absence/Non-Resident Request Form* available from *www.mcgill.ca/gps/staff/registration*;
- a written request from the student;
- a Minerva form to drop all courses for all relevant terms;
- a medical certificate.

To be acceptable, the medical certificate must contain a least the following items:

- the student's name, as well as complete contact information for the physician;
- a clear statement by the physician justifying the student's inability to perform his/her academic duties, with start and end dates;
- if the request is submitted during a term for which the leave is requested, a clear explanation as to why the health conditions in question did not prevent the normal performance of academic duties at the beginning of the semester.

No retroactive requests for leave of absence will be considered.

It remains the student's responsibility to verify their administrative situation, in particular, as it pertains to term and course registration.

9.7 Failure Policy

Please refer to *University Regulations and Resources* > *Graduate* > *Regulations* > *: Failure Policy* for information regarding the policy and procedures to follow in cases of failure.

9.8 Guideline on Hours of Work

In order to maintain full-time status, a graduate student should not work more than 180 hours per term over 15 weeks with 12 hours per week.

10 Research Policy and Guidelines, Patents, Postdocs, Associates, Trainees

Students must inform themselves of University rules and re

10.5 Guidelines for Research with Animal Subjects

Please refer to the guidelines for research involving animal subjects available at: *www.mcgill.ca/research/researchers/compliance/animal*.

10.6 Policy on Intellectual Property

Please refer to the Policy on Intellectual Property available at: *www.mcgill.ca/research/researchers/ip*.

10.7 Regulations Governing Conflicts of Interest

Please refer to the regulations governing conflicts of interest available at *www.mcgill.ca/secretariat/policies/conflictofinterest*.

10.8 Safety in Field Work

Please refer to the policies on safety in field work available at *www.mcgill.ca/ehs/fieldworksafety*.

10.9 Office of Sponsored Research

Please refer to the Office of Sponsored Research, available at: *www.mcgill.ca/research/researchers*.

10.10 Postdocs

Please see *www.mcgill.ca/gps/postdocs*.

10.11 Research Associates

A Research Associate is a senior career researcher who usually works independently, in most cases has a Ph.D. or equivalent, and is often supported directly by outside granting agencies. (*www.mcgill.ca/apo/classifications/other/research-associate*)

11 Academic Programs

The programs and courses in 48 46pG 0 0 1 .1 106.322 316.48 Tm(Aa46pD86n(Please sesi4624.422 Tm(ety l294 306.76 Tm()Tj/F2 8.1 0 0 1 345.(ety.4 most cases has

Fax: 514-398-7372
Website: *www.mcgill.ca/architecture*

11.1.2 About Architecture

M.Arch. (Professional) (Non-Thesis), M.Arch. (Post-professional) (Non-Thesis), Ph.D.

The School of Architecture at McGill University offers a professional Master of Architecture program, a post-professional Master of Architecture program, and a Ph.D. program. The M.Arch. (Professional) requires the equivalency of the B.Sc. (Architecture) degree for admittance. There are two options for the completion of this CACB-accredited degree: Design Studio (45 credits) and Design Studio Directed Research (60 credits). The M.Arch. (Post-professional) and the Ph.D. programs are for study beyond the professional degree in architecture. These programs have been conceived to respond to the needs of graduates with some professional experience who wish to acquire more specialized knowledge in architecture. The M.Arch. (Post-professional) program reflects a McGill tradition of academic inquiry and research, and provides an opportunity for a select number of students and staff to work together. The program is organized in such a way as to meet the needs of the professional practitioner and the researcher, and is intended to extend traditional architectural education as well as address new issues.

The M.Arch. (Professional) program is accredited by the Canadian Architectural Certification Board (CACB), and is recognized as accredited by the National Council of Architectural Re

section 11.1.7: Master of Architecture (M.Arch.); Post-professional (Non-Thesis) — Architectural History and Theory (45 credits)

Teaching and research in the History and Theory of Architecture program concentrates on the exploration and understanding of the complex connections between history, theory, design, and interdisciplinary concerns, particularly in the areas of philosophy and epistemology. This option is concerned with the reconciliation of ethics and poetics in architectural practice. The master's curriculum, which in most cases is also a required foundation year for a Ph.D. in the field, is simple in terms of course requirements, but demanding in terms of personal commitment to reading and writing. It is particularly suited to students with a professional background in architecture who want to explore and understand the complex connections between history, theory, and design. A thorough understanding of architecture as a cultural phenomenon, leading to a more serious definition of its true essence as it appears in history, is now regarded as crucial by practitioners and teachers who wish to come to terms with the present predicaments of architecture vis-à-vis the contradictions of the contemporary world.

section 11.1.8: Master of Architecture (M.Arch.); Post-professional (Non-Thesis) — Cultural Mediations and Technology (45 credits)

The Cultural Mediations and T

Candidates with high standing in McGill’s M.Arch. (Post-professional), or who hold an equivalent degree from another university, are eligible to apply to this program. Those who do not hav

- The electronic letters must be specific as to which program the student has applied to, and include information that would aid an admissions committee in making an informed decision.
- Letters of reference (electronic and hard copy) must be dated and must not be more than 12 months old.
- The referee must indicate his/her position and full contact information at the institution.
- Electronic letters sent from a Career Centre or Portfolio Management Company must state that the letters are confidential.

Please refer to the web page: *www.mcgill.ca/gradapplicants/apply/prepare/checklist/documents*.

9. Course calendar descriptions of previous college and/or university studies.

10. Completed Program Comparison Chart*.

11. Applicants to graduate studies whose mother tongue is not English and who have not completed an undergraduate or graduate degree from a recognized foreign institution where English is the language of instruction or from a recognized Canadian institution (anglophone or francophone), must submit documented proof of competency in oral and written English. Before acceptance, appropriate exam results must be submitted directly from the TOEFL (Test of English as a Foreign Language) or IELTS (International English Language Testing Systems) Office. An institutional version of the TOEFL is not acceptable. Applications will not be considered if a TOEFL or IELTS test result is not available. For the TOEFL, a minimum score of 550 is required on the paper-based test (PBT), or a minimum overall score of 86 with each component score (i.e., reading, writing, speaking, listening) not less than 20 is required on the Internet-based test (iBT). (The TOEFL Institution Code for McGill University is 0935.) For the IELTS, a minimum overall band score of 6.5 is required. Please refer to the graduate admission website: *www.mcgill.ca/gradapplicants/apply/prepare/requirements/english*.

12. A comprehensive portfolio (8½" x 11" format, due no later than **January 15**) that includes the following:

- selected work from all previous design studios (please complete using one of the following): *Studio Project Description Form* [.pdf]* or *Studio Project Description Form* [.doc]*
- examples of project work from other courses;
- examples of freehand drawing and sketching;
- examples of professional work: sketches, drawings, images of models, photographs of built work (professional work includes work carried out while employed in architects' offices, as well as personal projects; please identify the architect(s) and your own roles in each project illustrated).

Please mail all support documents to:

M.Arch. (Professional) Program
School of Architecture
McGill University
Macdonald-Harrington Building
815 Sherbrooke Street West, Room 202
Montreal, QC H3A 2K6

Note: When sending packages from abroad, do not assign a monetary value on the customs declaration, otherwise customs fees will be applied.

** These documents are available in PDF or DOC format on the School of Architecture website.*

Post-professional programs:

M.Arch. (Post-professional) and Ph.D.

1. Please complete and submit an online web application at *www.mcgill.ca/gradapplicants/apply* (due January 15).

2. A non-refundable application fee of CAD$100, payable by credit card only after completing the online application.

3. Two (2) sets of official transcripts must be sent directly to the School of Architecture by the registrars of all universities previously attended. Transcripts must be received in a sealed envelope with the seal or stamp of the university across the back flap. Transcripts in languages other than English or French must be accompanied by an English or French translation provided by the institution issuing the transcript or by a certified translator.

4. Two (2) confidential letters of reference must be sent directly by the referees to the School of Architecture. Please use our report forms (*Confidential Report on Applicant* [.pdf]* or *Renseignements confidentiels sur le candidat* [.pdf]*). Any additional letters must be on university or company/business stationery (both letter and envelope). All reports and letters must be received in a sealed envelope with the signature of the referee across the back flap.

Or (electronic option):

Letters may be sent electronically via email (Post-professional M.Arch. or Ph.D.) and will be accepted if sent by university Career Centres, Electronic Portfolio Management Companies, and other document storage services. Letters sent electronically must meet the following conditions:

- The email communicating the electronic letter must be sent from a valid institutional or corporate email address (domain). Electronic letters sent from public domain addresses such as Hotmail, Gmail, Yahoo Mail or Videotron, etc., cannot be accepted.
- The electronic letters must be specific as to which program the student has applied to, and include information that would aid an admissions committee in making an informed decision.
- Letters of reference (electronic and hard copy) must be dated and must not be more than 12 months old.
- The referee must indicate his/her position and full contact information at the institution.
- Electronic letters sent from a Career Centre or Portfolio Management Company must state that the letters are confidential.

Please refer to the webpage: *www.mcgill.ca/gradapplicants/apply/prepare/checklist/documents*.

5. Master’s applicants must submit a one-page statement of objectives indicating the option chosen and the reasons for that choice. Applicants should include a clear description of their research topic, as well as a detailed explanation of why they wish to study at McGill University’s School of Architecture.

   Ph.D. applicants must submit a clear, four-page description of their research topic, as well as a detailed explanation of why they wish to study at McGill University’s School of Architecture. Ideally, the statement should also name the potential adviser and articulate the relationship between the proposed dissertation research and the scholarship of the faculty member.

6. A portfolio (8½" x 11" format) containing at least five examples of the applicant’s work. Doctoral applicants may submit evidence of research interests when a portfolio is not available.
7. At least one e

Planetary Society Visiting Professor in Architecture

Torben Berns; B.Arch.(Car.), M.Arch., Ph.D.(McG.)

Adjunct Professors

Robert Claiborne, Howard Davies, François Emond, Julia Gersovitz, Phyllis Lambert, Maria Mingallon, Joanna Nash, Mark Poddubiuk, Conor Sampson, Jozef Zorko

Course Lecturers

Tom Balaban, Sinisha Brdar, Christina Contandriopoulos, Nancy Dunton, Leila Marie Farah, Matt Fisher, Ron Jelaco, Maria Elisa Navarro Morales, Suresh Perera, Sevag Pogharian, Pierina Saia

11.1.5 Master of Architecture (M.Arch.); Professional (Non-Thesis) — Design Studio (45 credits)

This concentration requires a minimum of three terms (45 credits) for completion according to an intensive design studio-based curriculum. This option is a three-term consecutive degree (Fall, Winter, Summer) that requires full-time residence for one academic year.

Required Courses (30 credits)

ARCH 550	(3)	Urban Planning and Development
ARCH 672	(6)	Architectural Design 1
ARCH 673	(6)	Architectural Design 2
ARCH 674	(3)	Professional Practice 1
ARCH 677	(6)	Architectural Design 3
ARCH 678	(3)	Advanced Construction
ARCH 680	(3)	Field Sketching

Complementary Courses

9-15 credits selected as follows:

Group A:

6 credits of advanced-level seminars must be chosen from Group A.

ARCH 525	(3)	Seminar on Analysis and Theory
ARCH 531	(3)	Architectural Intentions Vitruvius - Renaissance
ARCH 532	(3)	Origins of Modern Architecture
ARCH 626	(4)	Critical Design Strategies
ARCH 684	(4)	Contemporary Theory 1
ARCH 685	(4)	Contemporary Theory 2

Group B:

3 credits chosen from Group B.

ARCH 512	(3)	Architectural Modelling
ARCH 514	(4)	Community Design Workshop
ARCH 515	(3)	Sustainable Design
ARCH 520	(3)	Montreal: Urban Morphology
ARCH 521	(3)	Structure of Cities
ARCH 522	(3)	History of Domestic Architecture in Quebec
ARCH 523	(3)	Significant Texts and Buildings

ARCH 526	(3)	Philosophy of Structure
ARCH 527	(3)	Civic Design
ARCH 528	(3)	History of Housing
ARCH 529	(3)	Housing Theory
ARCH 533	(3)	New Approaches to Architectural History
ARCH 534	(3)	Architectural Archives
ARCH 540	(3)	Selected Topics in Architecture 1
ARCH 541	(3)	Selected Topics in Architecture 2
ARCH 554	(2)	Mechanical Services
ARCH 555	(2)	Environmental Acoustics
ARCH 622	(3)	Critical Writing
ARCH 626	(4)	Critical Design Strategies
ARCH 679	(3)	Writing in Architecture
ARCH 684	(4)	Contemporary Theory 1
ARCH 685	(4)	Contemporary Theory 2

Note: Courses taken are to be used to fulfil one group only.

Elective Courses

0-6 credits

A maximum of 6 credits may be completed outside the School of Architecture (500- or 600-level electives).

11.1.6 Master of Architecture (M.Arch.); Professional (Non-Thesis) — Design Studio-Directed Research (60 credits)

The Directed Research concentration is a four-term, 60-credit option, which is a modified version of the regular three-term 45-credit program. This is a self-directed project-based investigation which allows for a transition to a Ph.D. program through an intensive research component.

Candidates within this concentration option are assigned a faculty adviser and engage in project-based directed research. Complementary and elective courses a 0 06d resea05.r4fredit program. 61 06d r.42.722ETj-0.504 Twe in projectAE consultation with the adviser**40**

ARCH	(4)	Critical	gies 626	Design
ARCH	(6)	Architectural	672	Design
ARCH	(6)	Architectural	673	Design
ARCH	(3)	Professional	674	Practice
ARCH	(3)	Advanced	678	Construction
ARCH	(9)	Directed	683	Research

Complementary ses Cour

(12-20 credits)

Group A:

6 wing credits courses: chosen

ARCH	(3)	Seminar Analysis	525	on and
ARCH	(3)	Architectural	Vitruvius 531	Intentions -
ARCH	(3)	Origins	Architecture 532	of

ARCH 561	(3)	Affordable Housing Seminar 1
ARCH 562	(3)	Affordable Housing Seminar 2
ARCH 602	(4)	Urban Design Seminar 1
ARCH 604	(4)	Urban Design Seminar 2
ARCH 684	(4)	Contemporary Theory 1
ARCH 685	(4)	Contemporary Theory 2

Group B:

6 credits chosen from the following courses:

ARCH 512	(3)	Architectural Modelling
ARCH 514	(4)	Community Design Workshop
ARCH 515	(3)	Sustainable Design
ARCH 517	(3)	Sustainable Residential Development
ARCH 520	(3)	Montreal: Urban Morphology
ARCH 521	(3)	Structure of Cities
ARCH 522	(3)	History of Domestic Architecture in Quebec
ARCH 523	(3)	Significant Texts and Buildings
ARCH 525	(3)	Seminar on Analysis and Theory
ARCH 526	(3)	Philosophy of Structure
ARCH 527	(3)	Civic Design
ARCH 528	(3)	History of Housing
ARCH 529	(3)	Housing Theory
ARCH 531	(3)	Architectural Intentions Vitruvius - Renaissance
ARCH 532	(3)	Origins of Modern Architecture
ARCH 533	(3)	New Approaches to Architectural History
ARCH 534	(3)	Architectural Archives
ARCH 535	(3)	History of Architecture in Canada
ARCH 536	(3)	Heritage Conservation
ARCH 540	(3)	Selected Topics in Architecture 1
ARCH 541	(3)	Selected Topics in Architecture 2
ARCH 554	(2)	Mechanical Services
ARCH 555	(2)	Environmental Acoustics
ARCH 561	(3)	Affordable Housing Seminar 1
ARCH 562	(3)	Affordable Housing Seminar 2
ARCH 564	(3)	Design for Development
ARCH 566	(3)	Cultural Landscapes Seminar
ARCH 602	(4)	Urban Design Seminar 1
ARCH 604	(4)	Urban Design Seminar 2
ARCH 622	(3)	Critical Writing
ARCH 627	(4)	Research Methods for Architects
ARCH 679	(3)	Writing in Architecture
ARCH 680	(3)	Field Sketching

ARCH 684	(4)	Contemporary Theory 1
ARCH 685	(4)	Contemporary Theory 2
ARCH 688	(3)	Directed Research 1
ARCH 689	(3)	Directed Research 2

Note: Courses taken are to be used to fulfil one group only.

Unless otherwise indicated, the above courses are restricted to students in the professional area.

Elective Courses

(0-8 credits)

A maximum of 8 credits may be completed outside the School of Architecture (500- or 600-level electives) with the approval of an assigned faculty adviser.

11.1.7 Master of Architecture (M.Arch.); Post-professional (Non-Thesis) — Architectural History and Theory (45 credits)

The program consists of three semesters of coursework to be completed in 12 months. Intensive weekly seminars held during the first two terms focus on architectural history and theory. ARCH 623 (Project Preparation), taken during the second semester, culminates in a project. The studio themes engage urban issues critically, raising questions of program, form, and representation. A final document includes the project plus three papers.

Research Project (15 credits)

ARCH 624	(15)	History and Theory Project

Required Courses (30 credits)

ARCH 622	(3)	Critical Writing
ARCH 623	(3)	Project Preparation
ARCH 650	(8)	Architectural History Seminar 1
ARCH 651	(8)	Architectural History Seminar 2
ARCH 652	(4)	Architectural Theory Seminar 1
ARCH 653	(4)	Architectural Theory Seminar 2

11.1.8 Master of Architecture (M.Arch.); Post-professional (Non-Thesis) — Cultural Mediations and Technology (45 credits)

Drawing on methods in philosophy, media studies, cultural landscapes, vernacular architecture studies, and material culture, students in this option study the ways in which we conceptualize and realize the built world. How are architectural practices mediated by their broader contexts?

The program consists of three semesters of coursework, to be completed in 12 months. Intensive weekly seminars held during the first two terms focus on contemporary theory and research methods. ARCH 647 Cultural Mediations and Technology Studio is taken in tandem with ARCH 623 Project Preparation during the Winter term, culminating in the Research Report (ARCH 629).

Research Report (15 credits)

ARCH 629	(15)	Cultural Mediations and Technology Research Report

Required Courses (21 credits)

ARCH 623	(3)	Project Preparation
ARCH 627	(4)	Research Methods for Architects
ARCH 647	(6)	Cultural Mediations and Technology Studio
ARCH 684	(4)	Contemporary Theory 1
ARCH 685	(4)	Contemporary Theory 2

Complementary Courses (9 credits)

URBP 506	(3)	Environmental Policy and Planning
		Urban Environmental Planning(3)

11.2.3 Chemical Engineering Admission Requirements and Application Procedures

11.2.3.1 Admission Requirements

Admission to graduate study requires a minimum CGPA of 3.0/4.0 (or equivalent) for the complete bachelor's program or a minimum GPA of 3.2/4.0 (or equivalent) in the last two years of full-time studies. Applicants to graduate studies whose mother tongue is not English and who have not completed an undergraduate or graduate de

Associate Professors

T.M. Quinn; B.Sc.(Qu.), S.M., Ph.D.(MIT), Jr. Eng. (*CRC-Tier I*)

P. Servio; B.A.Sc., Ph.D.(Br. Col.) (*CRC-Tier II*)

N. Tufenkji; B.Eng.(McG.), M.Sc., Ph.D.(Yale), Jr. Eng. (CRC-Tier II)

V. Yargeau; B.Ch.E., M.Sc.A., Ph.D.(Sher.), Eng.

Assistant Professors

P.-L. Girard-Lauriault; B.Sc.(Montr.), Ph.D.(École Poly., Montr.)

J. Gostick; B.Eng.(Ryerson), M.A.Sc., Ph.D.(Wat.)

E. Jones; B.A.Sc.(Wat.), M.S., Ph.D.(Cal. Tech.) Jr. Eng. (*CRC-Tier II*)

A. Kietzig; Dipl.Ing.(TU Berlin), Ph.D.(Br. Col.)

Paprican Adjunct Professor

G.J. Kubes; B.Sc., M.Sc.(Prague), Ph.D.(Bratislava), P.Eng.

Adjunct Professors

T. Addona, P. Bisaillon, M. Davidovsky, A. DeMori, D. Dionne, M. Fokas, M. Mirmehrabi, M. Perrier, N. Peters, B. Sarkis, J. Simandl, S. Tadayon

11.2.5 Master of Engineering (M.Eng.); Chemical Engineering (Thesis) (45 credits)

Thesis Courses (31 credits)

CHEE 697	(6)	Thesis Proposal
CHEE 698	(12)	Thesis Research 1
CHEE 699	(13)	Thesis Research 2

Required Courses (2 credits)

CHEE 681	(1)	Laboratory Safety 1
CHEE 682	(1)	Laboratory Safety 2

Complementary Courses (12 credits)

3-4 credits of Chemical Engineering courses at the 500, 600, or 700 level.

4 credits from the following:

CHEE 611	(4)	Heat and Mass Transfer
CHEE 621	(4)	Thermodynamics
CHEE 631	(4)	Foundations of Fluid Mechanics
CHEE 641	(4)	Chemical Reaction Engineering
CHEE 651	(4)	Advanced Biochemical Engineering
CHEE 662	(4)	Computational Methods
CHEE 672	(4)	Process Dynamics and Control

4-5 credits of Chemical Engineering or other Engineering or Science courses at the 500, 600, or 700 level.

11.2.6 Master of Engineering (M.Eng.); Chemical Engineering (Non-Thesis) (45 credits)

Research Project

Project (design or research): 6 - 12 credits.

6 credits must include the following course:

CHEE 695	(6)	Project in Chemical Engineering

Complementary Courses

33-39 credits (a minimum of 18 credits in Chemical Engineering) at the 500, 600, or 700 level.

9 credits must be in an area of concentration

12 additional courses at the 500, 600, or 700 level.

11.2.7 Master of Engineering (M.Eng.); Chemical Engineering (Non-Thesis) — Environmental Engineering (45 credits)

Research Project (6 credits)

CHEE 695	(6)	Project in Chemical Engineering

Required Courses (6 credits)

CHEE 591	(3)	Environmental Bioremediation
CIVE 615	(3)	Environmental Engineering Seminar

Complementary Courses (22 credits)

Minimum of 22 credits

Data analysis course: (3 credits)

AEMA 611	(3)	Experimental Designs 1
CIVE 555	(3)	Environmental Data Analysis
PSYC 650	(3)	Advanced Statistics 1

Toxicology: (3 credits)

OCCH 612	(3)	Principles of Toxicology
OCCH 616	(3)	Occupational Hygiene

Water pollution engineering: (4 credits)

CIVE 651	(4)	Theory: Water / Wastewater Treatment
CIVE 652	(4)	Biological Treatment: Wastewaters
CIVE 660	(4)	Chemical and Physical Treatment of Waters

Air pollution engineering: (3 credits)

CHEE 592	(3)	Industrial Air Pollution Control
MECH 534	(3)	Air Pollution Engineering

Soil and water quality manag

11.3 Civil Engineering and Applied Mechanics

11.3.1 Location

Department of Civil Engineering and Applied Mechanics
Macdonald Engineering Building
817 Sherbrooke Street West
Montreal, QC H3A 2K6
Canada

Telephone: 514-398-6858
Fax: 514-398-7361
Email: *gradinfo.civil@mcgill.ca*
Website: *www.mcgill.ca/civil*

11.3.2 About Civil Engineering and Applied Mechanics

Advanced courses of instruction and laboratory facilities are available for engineering graduate students desiring to proceed to the degrees of **M.Eng., M.Sc. and Ph.D**.

Graduate studies and research are at present being conducted in the fields of structures and structural mechanics, infrastructure rehabilitation, risk engineering, fluid mechanics and hydraulics, materials engineering, soil behaviour, soil mechanics and foundations, water resources engineering, en

11.3.3 Civil Engineering and Applied Mechanics Admission Requirements and Application Procedures

11.3.3.1 Admission Requirements

The general rules of Graduate and Postdoctoral Studies apply and are detailed in the General Information section. The minimum academic standard for admission is a cumulative grade point average (CGPA) of 3.0/4.0.

Applicants to graduate studies whose mother tongue is not English and who have not completed an undergraduate or graduate degree from a recognized foreign institution where English is the language of instruction or from a recognized Canadian institution (anglophone or francophone), must write the iBT Test of English as a Foreign Language (TOEFL) and achieve an overall or total score of not less than 92 with each component score (i.e., Writing, Reading, Speaking, Listening) not less than 20. The test is administered by the Educational Testing Service and is available throughout the world. The results reach McGill approximately eight weeks after the test is taken. It is the student's responsibility to make the necessary arrangements with the examining board to write the test in the country of residence. Full information about the test and a registration form may be obtained by writing to: Test of English as a Foreign Language, Box 6191, Princeton, New Jersey 08540-6151, USA (*www.ets.org/toefl*).

11.3.3.2 Application Procedures

Applications will be considered upon receipt of:

1. application form;
2. two official transcripts;
3. two confidential letters of reference;
4. $100 application fee;
5. test results (TOEFL).

Applicants are requested to address their completed forms for admission to the Chair of the Graduate Studies Admissions Committee, Department of Civil Engineering and Applied Mechanics.

Dates for Guaranteed Consideration

For dates for guaranteed consideration, please consult the following website: *www.mcgill.ca/gradapplicants/programs*. Then select the appropriate program.

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

11.3.4 Civil Engineering and Applied Mechanics Faculty

Chair

V.T.V. Nguyen

Chair of Graduate Program

S. Gaskin

Emeritus Professors

P.J. Harris; B.Sc.(Manit.), M.Eng., Ph.D.(McG.), F.E.I.C., F.C.S.C.E., Eng.

M.S. Mirza; M.S., B.Eng.(Karachi), M.Eng., Ph.D.(McG.), F.E.I.C., F.C.S.C.E., F.A.C.I., Hon.F.I.E.P., Eng.

R.G. Redwood; B.Sc.(Brist.), M.A.Sc.(Tor.), Ph.D.(Brist.), F.C.S.C.E., FI Struct. Eng., Eng.

S.B. Savage; B.Eng.(McG.), M.S.Eng.(Cal. Tech.), Ph.D.(McG.), F.R.S.C.

Professors

V.H. Chu; B.S.Eng.(Taiwan), M.A.Sc.(Tor.), Ph.D.(MIT), Eng.

D. Mitchell; B.A.Sc., M.A.Sc., Ph.D.(Tor.), F.A.C.I., Eng.

V.T.V. Nguyen; B.M.E.(Vietnam), M.C.E.(A.I.T.), D.A.Sc.(Montrone), must writecj1 0 0 1 7 7 7 7e5Gcj1 48.042 Tm(8ce2 176.562 TmNicitchell; B.A.Sc., M.A.Sc., Pl

Associate Professors

L. Chouinard; B.Ing., M.Ing.(Montr.), B.C.L.(McG.), Sc.D.(MIT), Eng.

S.J. Gaskin; B.Sc.(Eng.)(Qu.), Ph.D.(Cant.), Eng.

R. Gehr; B.Sc.(Eng.)(Witw.), M.A.Sc., Ph.D.(Tor.), P.Eng.

S. Ghoshal; B.C.E.(India), M.S.(Missouri), Ph.D.(Carn. Mell), P.Eng.

G. McClure; B.Ing.(Montr.), S.M.C.E.(MIT), Ph.D.(Montr.), Eng.

M.A. Meguid; B.Sc.(Cairo), M.Sc., Ph.D.(W. Ont.), P

CIVE 632	(3)	Thesis Research 3
CIVE 633	(6)	Thesis Research 4
CIVE 634	(6)	Thesis Research 5
CIVE 635	(6)	Thesis Research 6

a minimum of 22 credits chosen from the following:

Data analysis:

AEMA 611	(3)	Experimental Designs 1
CIVE 555	(3)	Environmental Data Analysis
PSYC 650	(3)	Advanced Statistics 1

Toxicology:

OCCH 505	()	
OCCH 612	(3)	Principles of Toxicology

Water pollution engineering:

CIVE 651	(4)	Theory: Water / Wastewater Treatment
CIVE 652	(4)	Biological Treatment: Wastewaters
CIVE 660	(4)	Chemical and Physical Treatment of Waters

Air pollution engineering:

MECH 534	(3)	Air Pollution Engineering

Soil and water quality management:

BREE 533	(3)	Water Quality Management
CIVE 686	(4)	Site Remediation

Environmental impact:

GEOG 501	(3)	Modelling Environmental Systems
GEOG 551	(3)	Environmental Decisions

Environmental policy

URBP 506	(3)	Environmental Policy and Planning

Elective Courses

Also, 0-15 credits of graduate courses from an approved list of courses from the Faculties of Engineering, Agricultural and Environmental Sciences, Law, Management; Departments of Atmospheric and Oceanic Sciences, Biology, Chemistry, Earth and Planetary Sciences, Economics, Epidemiology and Biostatistics, Geography, Occupational Health, Political Science, Religious Studies, Sociology, and McGill School of Environment.

11.3.9 Doctor of Philosophy (Ph.D.); Civil Engineering

Thesis

CIVE 701	(0)	Ph.D. Comprehensive Preliminary Oral Exam

Complementary Courses

6-8 credits at the 500 or 600 level taken from the Department of Civil Engineering.

11.4 Electrical and Computer Engineering

11.4.1 Location

Department of Electrical and Computer Engineering
McConnell Engineering Building, Room 602
3480 University Street
Montreal, QC H3A 2A7
Canada

Telephone: 514-398-7344
Fax: 514-398-4470
Email: *grad.ece@mcgill.ca*
Website: *www.mcgill.ca/ece*

11.4.2 About Electrical and Computer Engineering

The Department offers programs of graduate studies leading to a degree of Master of Engineering (thesis or project/non-thesis) or Doctor of Philosophy.

The research interests and facilities of the Department are very extensive, involving more than 50 faculty members and 300 postgraduate students. The major activities are divided into the following groups: Bio-Electrical Engineering, Telecommunications and Signal Processing, Systems and Control, Integrated Circuits and Systems, Nano-Electronic Devices and Materials, Photonics Systems, Computational Electromagnetics, Power Engineering, and Intelligent Systems. The Department is equipped with state-of-the-art experimental laboratories and there are numerous multidisciplinary research projects, so students are provided with an ideal environment to develop new technologies, discover novel phenomena, and design revolutionary devices.

Research Facilities

The Department has extensive laboratory facilities for all its main research areas. In addition, McGill University often collaborates with other institutions for teaching and research.

- The laboratories for research in Robotics, Control, and Vision are in the Centre for Intelligent Machines (CIM).
- Telecommunications laboratories focus their work on signal processing, broadband communications, and networking; these laboratories form part of the Centre for Advanced Systems and Communications (SYTACom), a McGill University Research Centre devoted to foster innovation in the area of communications systems and technologies via advanced research and training of highly qualified personnel.
- The Integrated Circuits and Systems Laboratory (ICaS) supports research in FPGAs, MEMS, micro- and nano-systems, VLSI architectures for digital communications and signal processing, mixed signal, RF, and micro

Graduate students can also receive financial aid through fellowships, loans, or bursaries. For more information, please refer to the Fellowships and Awards website at *www.mcgill.ca/gps*

The Department accepts most of its graduate students for September; the chance of acceptance for January is significantly lower.

Dates for Guaranteed Consideration

F

ECSE 692	(4)	Thesis Research 2
ECSE 693	(4)	Thesis Research 3
ECSE 694	(4)	Thesis Research 4
ECSE 695	(4)	Thesis Research 5
ECSE 696	(4)	Thesis Research 6
ECSE 697	(4)	Thesis Research 7

Students who choose the Thesis option must register for all 28 credits during the three terms of residency.

Complementary Courses

(18 credits minimum)

At least six 500, 600, or 700 level courses, normally with a minimum of four ECSE 500- or 600- level courses*

* Under special circumstances, and subject to Departmental approval, students may be allowed to take more than two non-Departmental courses; a letter of recommendation from their supervisor outlining the reason for such an action is required.

Under no circumstances will more than three non-Departmental courses be permitted.

Master of Engineering (M.Eng.); Electrical Engineering (Thesis) — Computational Science and Engineering (47 credits911ebCompu

List B: Applications and Specialized Methods Courses

ATOC 512	(3)	Atmospheric and Oceanic Dynamics
ATOC 513	(3)	Waves and Stability
ATOC 515	(3)	Turbulence in Atmosphere and Oceans
CIVE 572	(3)	Computational Hydraulics
CIVE 601	()	
CIVE 603	(4)	Structural Dynamics
CIVE 613	(4)	Numerical Methods: Structural Engineering
COMP 505	(3)	Advanced Computer Architecture
COMP 557	(3)	Fundamentals of Computer Graphics
COMP 558	(3)	Fundamentals of Computer Vision
COMP 567	(3)	Discrete Optimization 2
COMP 621	(4)	Program Analysis and Transformations
COMP 642	(4)	Numerical Estimation Methods
COMP 767	(4)	Advanced Topics: Applications 2

Research Project

(11-20 credits)

The credits assigned to the project can vary between 11 and 20 depending on the number of course credits taken from the following courses:

ECSE 651	(1)	M.Eng. Project 1
ECSE 652	(2)	M.Eng. Project 2
ECSE 653	(3)	M.Eng. Project 3
ECSE 654	(4)	M.Eng. Project 4
ECSE 655	(5)	M.Eng. Project 5
ECSE 656	(5)	M.Eng. Project 6

Students who choose the Non-Thesis option must register for the project courses during the three required terms of residency.

Complementary Courses

(27-36 credits)

At least nine 500-, 600-, or 700- level courses, normally with a minimum of six 500- or 600- level courses (ECSE only)*

* Under special circumstances, and subject to Departmental approval, students may be allowed to take more than three non-Departmental courses; a letter of recommendation from their supervisor outlining the reason for such an action is required.

Under no circumstance will more than four non-Departmental courses be permitted.

11.4.8 Doctor of Philosophy (Ph.D.); Electrical Engineering

Thesis

Required Courses

ECSE 701	(0)	Ph.D. Qualifying Examination
ECSE 702	(0)	Ph.D. Research Plan Proposal
ECSE 703	(0)	Doctoral Research Seminar

In addition to the successful completion of the required courses above, students must complete the courses prescribed by the student's Supervisory Committee.

11.5 Mechanical Engineering

11.5.1 Location

Department of Mechanical Engineering
Macdonald Engineering Building
817 Sherbrooke Street West, Room MD-270
Montreal, QC H3A 2K6
Canada

Telephone: 514-398-6281
Fax: 514-398-7365

Email: *gradcoordinator.mecheng@mcgill.ca*
Website: *www.mcgill.ca/mecheng/grad*

11.5.2 About Mechanical Engineering

Mechanical engineers are traditionally concerned with the conception, design, implementation, and operation of mechanical systems. Common fields of work include aerospace, energy, manufacturing, machinery, and transportation. Due to the broad nature of the discipline, there is usually a high demand for mechanical engineers with advanced training.

The Department includes more than 30 faculty members and 200 graduate students and is housed primarily within the Macdonald Engineering building, which was recently renovated. The Department contains state-of-the-art experimental facilities including a major wind tunnel facility and has extensive computational facilities. Professors within the Department collaborate widely with professors in other units, often through research centres including the Centre for Intelligent Machines (CIM), the McGill Institute for Advanced Materials (MIAM), and the Montreal Neurological Institute (MNI). The research interests within the Department are very broad and fall largely within the following five areas: i) aerodynamics, fluids, and thermal engineering; ii) mechanics of materials and structures; iii) dynamics and control; iv) design and manufacturing; and v) bioengineering. Within these areas, specific topics of research are given in the following:

Aerodynamics; fluids and thermal engineering

Experimental fluid mechanics and aerodynamics, aeroelasticity, aeroacoustics; theoretical fluid mechanics; turbulence, mixing in turbulent flows; fluid flow control; fluid-structure interactions; computational fluid dynamics, multidisciplinary optimization, computer flow visualization; heat transfer; combustion, shock wave physics, energetic materials, high-speed reacting flows, hypersonic propulsion, alternative fuels.

Mechanics of materials and structures

Composite materials: structural design, analysis, manufacturing and processing; micro/nano mechanics; MEMS/NEMS; adaptronic structures; thermomechanics,

feature of this program. The universities and the participating industries, with the cooperation of the Centre of Aerospace Manpower Activities in Quebec (CAMAQ), have formed a Coordinating Committee, CIMGAS, to arrange for industrial internships and case study courses for the students and to implement specific program dev

1. online application form;
2. $100 application fee;
3. two official versions of ALL university transcripts, including transfer-credit transcripts;
4. two official Referee Reports;
5. proof of English Proficiency test results (TOEFL or IELTS);
6. one-page statement of interest;
7. an updated list of publications;
8. a list of extra-curricular activities;
9. a current CV.

Please consult *www.mcgill.ca/mecheng/grad/admissions/doc* for further details on required application documents.

The application form for graduate program candidates is available at *www.mcgill.ca/gradapplicants/apply*. All additional information is to be submitted directly to the Graduate Admissions Coordinator in the Mechanical Engineering Department.

Dates for Guaranteed Consideration

For dates for guaranteed consideration, please consult the following website: *www.mcgill.ca/gradapplicants/programs*. Then select the appropriate program. Please also consult the Departmental website for the Dates for Guaranteed Consideration: *www.mcgill.ca/mecheng/grad/admissions/date/*.

11.5.4 Mechanical Engineering Faculty

Chair

G. Haller

Associate Chair

S. Vengallatore

Graduate Program Director

D.L. Frost

Graduate Admissions and Scholarships Director

S. Nadarajah

Graduate Aerospace Director

P. Hubert

Graduate MMM Co-Director

V. Thomson

Emeritus Professors

A.M. Ahmed; B.Sc.(Dhaka), Ph.D.(McG.), Ing. (*Thomas Workman Emeritus Professor of Mechanical Engineering*)

R. Knystautas; B.Eng., M.Eng., Ph.D.(McG.), Ing.

M.P. Païdoussis; B.Eng.(McG.), Ph.D.(Camb.), Ing., 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*)

S.J. Price; B.Sc., Ph.D.(Brist.), P.Eng.

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.), Ing., F.C.I.R.P., F.A.S.M.E., F.C.S.M.E., M.S.M.E.

Professors

M. Amabili; M.Sc.(Ancona), Ph.D.(Bologna) (*Canada Research Chair*)

Professors

J. Angeles; B.Sc., M.Sc.(UNAM Mexico), Ph.D.(Stan.), Eng., F.A.S.M.E., F.C.S.M.E., F.R.S.C. (*James McGill Professor*) (*NSERC Design Engineering Chair*)

B.R. Baliga; B.Tech.(I.I.T. Kanpur), M.Sc.(Case West.), Ph.D.(Minn.)

E. Fried; A.B.(Calif., Berk.), B.S.(Calif. Poly.), M.S., Ph.D.(Calif. Tech.) (*Canada Research Chair*)

W.G. Habashi; B.Eng., M.Eng.(McG.), Ph.D.(C'nell), Ing., F.A.S.M.E., F.C.A.E., F.R.S.C. (*NSERC-J. Armand Bombardier Industrial Research Chair*)

G. Haller; M.Sc.(Budapest), Ph.D.(Calif. Tech.) (*Faculty of Engineering Distinguished Professor*)

J.H.S. Lee; B.Eng.(McG.), M.Sc.(MIT), Ph.D.(McG.), Ing., F.R.S.C.

D.F. Mateescu; M.Eng.(Poli. U. Buch.), Ph.D.(Rom. Acad. Sci.), Doctor Honoris Causa(Poli. U. Buch.), A.F.A.I.A.A., F.C.A.S.I.

A.K. Misra; B.Tech.(I.I.T., Kgp.), Ph.D.(Br. Col.), P.Eng., F.A.A.S., A.F.A.I.A.A. (*Thomas Workman Professor of Mechanical Engineering*)

L. Mongeau; B.Sc., M.Sc.(École Poly., Montr.), Ph.D.(Penn St.), Ing. (*Canada Research Chair*)

M. Nahon; B.Sc.(Qu.), M.Sc.(Tor.), Ph.D.(McG.), Ing.

C. Pierre; B.Eng.(École Cent. Paris), M.Sc.(Princ.), Ph.D.(Duke), F.A.S.M.E. (*Canada Research Chair*)

Associate Professors

L. Cortelezzi; M.Sc., Ph.D.(Calif. Tech.)

D.L. Frost; B.A.Sc.(Br. Col.), M.S., Ph.D.(Calif. Tech.), P.Eng.

A.J. Higgins; B.Sc.(Ill.), M.S., Ph.D.(Wash.)

P. Hubert; B.Eng., M.A.Sc.(École Poly., Montr.), Ph.D.(Br. Col.), Ing. (*Canada Research Chair*)

J Kövecses; M.Sc.(U. Miskolc), Ph.D.(Hung. Acad. Sci.), Ing.

T. Lee; M.S.(Portland St.), Ph.D.(Idaho)

L. Lessard; B.Eng.(McG.), M.Sc., Ph.D.(Stan.), Ing.

R. Mongrain; B.Sc., M.Sc.(Montr.), Ph.D.(École Poly., Montr.), Ing. (*William Dawson Scholar*)

L. Mydlarski; B.Sc.(Wat.), Ph.D.(C'nell)

S. Nadarajah; B.Sc.(Kansas), M.S., Ph.D.(Stan.)

D. Pasini; M.Sc.(Pavia), Ph.D.(Brist.), Ing.

P. Radziszewski; B.Sc.(Br. Col.), M.Sc., Ph.D.(Laval), Ing.

I. Sharf; B.A.Sc., Ph.D.(Tor.)

V. Thomson; B.Sc.(Windsor), Ph.D.(McM.) (*Werner Graupe Professor of Manufacturing Automation*)

E.V. Timofeev; M.Sc., Ph.D.(S.T.U. St. Petersburg), Eng., A.F.A.I.A.A.

S. Vengallatore; B.Tech.(B.H.U), Ph.D.(MIT) (*Canada Research Chair*)

P.J. Zsombor-Murray; B.Eng., M.Eng., Ph.D.(McG.), Ing., F.C.S.M.E.

Assistant Professors

F. Barthelat; M.Sc.(Roch.), Ph.D.(N'western)

J. M. Bergthorson; B.Sc.(Manit.), M.Sc., Ph.D.(Calif. Tech.), P.Eng.

Non-Tenure-Track Faculty

H. Attia, J.A. Nemes, D. Zorbas

11.5.5 Master of Engineering (M.Eng.); Mechanical Engineering (Thesis) (45 credits)

Applicants who hold an undergraduate degree in a non-Engineering discipline – typically the Physical Sciences – may apply for the M.Sc. (Thesis) program, which is governed by the same regulations as the M.Eng. (Thesis) program.

Thesis Courses (28 credits)

MECH 691*	(3)	M.Eng. Thesis Literature Review
MECH 692	(4)	M.Eng. Thesis Research Proposal
MECH 693	(3)	M.Eng. Thesis Progress Report 1
MECH 694	(6)	M.Eng. Thesis Progress Report 2
MECH 695	(12)	M.Eng. Thesis

* Note: MECH 691 must be taken in the first term of the student's program.

Required Courses

1 credit:

MECH 609	(1)	Seminar

Complementary Courses (16 credits)

A minimum of 16 credits (500, 600, or 700 level), at least 8 of which must be from within the Faculty of Engineering. FACC courses will not count toward the complementary course credits.

11.5.6 Master of Science (M.Sc.); Mechanical Engineering (Thesis) (45 credits)

Applicants who hold an undergraduate degree in a non-Engineering discipline – typically the Physical Sciences – may apply for the M.Sc. (Thesis) program, which is governed by the same regulations as the M.Eng. (Thesis) program.

Thesis Courses (28 credits)

MECH 691*	(3)	M.Eng. Thesis Literature Review
MECH 692	(4)	M.Eng. Thesis Research Proposal
MECH 693	(3)	M.Eng. Thesis Progress Report 1
MECH 694	(6)	M.Eng. Thesis Progress Report 2
MECH 695	(12)	M.Eng. Thesis

* Note: MECH 691 must be completed in the first term of the student's program.

Required Course

1 credit:

MECH 609	(1)	Seminar

Complementary Courses (16 credits)

A minimum of 16 credits (500, 600, or 700 level), at least 8 of which must be from within the Faculty of Engineering. FACC courses will not count toward the complementary course credits.

11.5.7 Master of Engineering (M.Eng.); Mechanical Engineering (Thesis) — Computational Science and Engineering (46 credits)

Thesis Courses (28 credits)

MECH 691*	(3)	M.Eng. Thesis Literature Review
MECH 692	(4)	M.Eng. Thesis Research Proposal
MECH 693	(3)	M.Eng. Thesis Progress Report 1
MECH 694	(6)	M.Eng. Thesis Progress Report 2
MECH 695	(12)	M.Eng. Thesis

* Note: MECH 691 must be complete in the first term of the student's program.

Required Courses (2 credits)

MECH 609	(1)	Seminar
MECH 669	(1)	Computational Science Engineering Seminar

Complementary Courses (16 credits)

A minimum of 16 credits (500 level or abov

MECH 688	(6)	Industrial Stage

Complementary Courses (36 credits)

The other courses, depending on the area of concentration, will be chosen in consultation with an Aerospace Engineering Adviser. A maximum of 3 credits of FACC courses at the 500, 600, or 700 level may be credited toward the degree.

11.5.10 Master of Management (M.M.M.); Manufacturing Management (Non-Thesis) (57 credits)

Note: This program is either a 56- or 57-credit program.

Required Courses - General Business and Management (11 credits)

MGCR 651	(4)	Managing Resources
MGCR 652	(4)	Value Creation
MGSC 608	(3)	Data Decisions and Models

Complementary Courses - General Business and Management (6 credits)

6 credits from the following:

ACCT 624	(3)	Management Accounting: Planning & Control
INDR 603	(3)	Industrial Relations
ORGB 625	(3)	Managing Organizational Change
ORGB 632	(3)	Managing Teams in Organizations
ORGB 633	(3)	Managerial Negotiations
ORGB 640	(3)	The Art of Leadership
ORGB 685	(3)	Cross Cultural Management

Required Courses - Manufacturing and Supply Chain Operations (15 credits)

MECH 524	(3)	Computer Integrated Manufacturing
MGSC 602	(3)	Strategic Management of Operations
MGSC 603	(3)	Logistics Management
MGSC 605	(3)	Total Quality Management
MGSC 631	(3)	Analysis: Production Operations

Complementary Courses - Manufacturing and Suppy Chain Operations (13 credits)

(12-13 credits)

6 credits from the following:

MECH 526	(3)	Manufacturing and the Environment
MGSC 575	(3)	Applied Time Series Analysis Managerial Forecasting
MGSC 601	(3)	Management of Technology in Manufacturing
MGSC 615	(3)	Procurement and Distribution

6-7 credits from the following:

0 or 6 credits from:

Discrete Manufacturing Option

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

0-7 credits from:

Process Manufacturing Option

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

Required Courses - Industry (12 credits)

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

11.5.11 Doctor of Philosophy (Ph.D.); Mechanical Engineering

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.

Thesis

Required Courses

MECH 700	(0)	Ph.D. Literature Review
MECH 701	(0)	Ph.D. Thesis Proposal
MECH 702	(0)	Ph.D. Comprehensive Preliminary Oral Examination

11.6.3 Mining and Materials Engineering Admission Requirements and Application Procedures

11.6.3.1 Admission Requirements

Professors

Roussos Dimitrakopoulos; B.Sc.(Thessaloniki), M.Sc.(Alta.), Ph.D.(École Poly., Montr.) (*Canada Research Chair I*)

James A. Finch; B.Sc.(Birm.), M.Eng., Ph.D.(McG.), Eng., F.C.I.M., F.R.S.C. (*Gerald G. Hatch Professor*)

Raynald Gauvin; B.Ing., Ph.D.(Montr.), Eng.

Roderick I.L. Guthrie; B.Sc., Ph.D.(Lond.), D.I.C., Eng., A.R.S.M., F.C.I.M., R.R.S.C. (*William C. Macdonald Professor*)

Faramarz (Ferri) P. Hassani; B.Sc., Ph.D.(Nott.), C.Eng.(U.K. Reg.) (*George Boyd Webster Professor*)

Hani S. Mitri; B.Sc.(Cairo), M.Eng., Ph.D.(McM.), Eng.

Steve Yue; B.Sc., Ph.D.(Leeds) (*James McGill Professor*) (*Lorne Trottier Chair in Aerospace Engineering*)

One of the following courses:

Note: MIME 672D1 and MIME 672D2 should be taken concurrently

MIME 670	(6)	Research Seminar 1
MIME 672D1	(3)	Rock Mechanics Seminar
MIME 672D2	(3)	Rock Mechanics Seminar
MIME 673	(6)	Mining Engineering Seminar

Required Courses (12 credits)

Four 3-credit courses or the equivalent.

11.6.6 Master of Science (M.Sc.); Mining and Materials Engineering (Thesis) (45 credits)

Thesis Courses (27 credits)

MIME 690	(6)	Thesis Research 1
MIME 691	(3)	Thesis Research 2
MIME 692	(6)	Thesis Research 3
MIME 693	(3)	Thesis Research 4
MIME 694	(6)	Thesis Research 5
MIME 695	(3)	Thesis Research 6

Required Seminar (6 credits)

One of the following:

Note: MIME 672D1 and MIME 672D2 should be taken concurrently.

MIME 670	(6)	Research Seminar 1
	(3)	Rock Mechanics Seminar

MIME 673	(6)	Mining Engineering Seminar

Complementary Courses

(24-33 credits)

12 credits of 500-, 600-, or 700- level MIME courses

12 to 21 credits of 500-, 600-, or 700- level courses from within or

Soil and Water Quality Management Course

One of the following courses:

BREE 533	(3)	Water Quality Management
CIVE 686	(4)	Site Remediation

Environmental Impact Course

One of the following courses:

GEOG 501	(3)	Modelling Environmental Systems
GEOG 551	(3)	Environmental Decisions

or an approved 500-, 600-, or 700- level alternative.

Environmental Policy Course

URBP 506	(3)	Environmental Policy and Planning

or an approved 500-, 600-, or 700- level alternative.

Elective Courses (11 credits)

(minimum 11 credits)

Another project course and/or Engineering or non-Engineering 500-, 600-, or 700- level course subject to approval of the Department.

The relevant Project course in Mining and Materials Engineering is the following:

MIME 629	(6)	Mineral Engineering Project 2

11.6.9 Doctor of Philosophy (Ph.D.); Mining and Materials Engineering

A candidate for this degree must pass a minimum of two courses assigned by the Department. These are selected on the basis of the student's previous academic training and research interests. The candidate is required to participate in an appropriate Research Seminar course and is expected to take a preliminary examination within the first year of his/her Ph.D. registration.

The candidate must submit an acceptable thesis based upon successfully completed research and must satisfy the examiners in an oral examination of the thesis.

Thesis

11.6.10 Graduate Diploma in Mining Engineering (30 credits)

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815 Sherbrooke Street West
Montreal, QC H3A 2K6
Canada

Telephone: 514-398-4075
Fax: 514-398-8376
Email: *admissions.planning@mcgill.ca*
Website: *www.mcgill.ca/urbanplanning*

11.7.2 About Urban Planning

McGill University was the first institution in Canada to offer a full-time planning program, starting in 1947. The School of Urban Planning was created in 1976 as a separate academic unit within the Faculty of Engineering. It shares a heritage building with the School of Architecture, right on the main open space of McGill's Downtown campus. The School has a strong track record of contributing to urban communities and to the profession of planning. It participates in the study of urban problems and in the formulation of policies and plans in Québec, elsewhere in Canada, and in developing regions.

The main objective of the School is to educate professional urban planners for leadership in the public, private, and not-for-profit sectors. It also prepares doctoral students for high-level research and teaching positions. The Master of Urban Planning (M.U.P.) is a two-year program with a strong emphasis on practical work in studio courses. The core program provides a general education in spatial planning in its functional, environmental, and social dimensions. Formal specializations are available in Urban Design and in Transportation Planning. M.U.P. students in the core program may also participate in the Barbados Field Study Semester, which focuses on global environmental issues. Details concerning these concentrations are available at *www.tram.mcgill.ca*, *www.mcgill.ca/urbandesign*, and *www.mcgill.ca/bfss* respectively.

The School's teaching and research activities pertain to community planning, environmental policy and planning, international development planning, land-use planning and regulation, transportation planning, and urban design. They occur at the local, national, and international levels and are often done in partnership with other McGill departments (notably Architecture, Civil Engineering, Geography, and Law) and with units at other institutions in Montréal, across Canada, and abroad. The School uses Montreal and its region as its main teaching laboratory, and it enjoys good relationships with the local, professional, and political communities.

Master of Urban Planning (M.U.P.) Program

The Master of Urban Planning (M.U.P.) program is a two-year course of study that attracts students from Québec, Canada, the U.S., and overseas. It is recognized by the Ordre des urbanistes du Québec (O.U.Q.) and the Canadian Institute of Planners (C.I.P.). Graduates may become full members of the O.U.Q. and other provincial planning associations by completing their respective internship and examination requirements. Similar requirements must be met for admission to the American Institute of Certified Planners (A.I.C.P.) and other such organizations.

Urban planning was developed as a profession in the early decades of the twentieth century thanks to joint efforts of architects, landscape architects, engineers, government reformers, lawyers, public-health specialists, and others. Today, students in the M.U.P. program come from diverse backgrounds as well, including the design professions, engineering and applied sciences, environmental and social studies, and other fields; most of them have gained some professional experience after their undergraduate studies. A key feature of planning education is learning to view issues in multidisciplinary ways and to generate equitable and efficient solutions to complex problems of urban change and development. The M.U.P. program was designed with a strong emphasis on project-based learning, i.e., practical work done in teams in a studio setting. About half of the curriculum is devoted to required courses that teach basic knowledge and skills in urban planning; the other half enables students to select courses that match their particular interests. Three studio courses, a summer internship, and a semester-long Supervised Research Project prepare them for professional practice and research. Students participate actively in professors' research programs or define their own research objectives, sometimes with their own research funding from major agencies (e.g., SSHRC, NSERC, FQRSC, FQRNT).

Graduates of the M.U.P. program work as planners, designers, and policy analysts, and as advocates and mediators, at various levels of government, in civil-society organizations, and with private consulting firms. Their expertise ranges from community planning to transportation planning, from policy-making in housing to computer-assisted decision-making. They devote their efforts in increasing numbers to sustainable development in its environment, social, and economic dimensions.

section 11.7.5: Master of Urban Planning (M.U.P); Urban Planning (Non-Thesis) (66 credits)

The M.U.P. requires two years of study, including a three-month internship with a member of a recognized planning association. Upon completion, graduates are expected to have acquired basic planning skills, a broad understanding of urban issues, and specialized knowledge in a field of their own choice.

section 11.7.6: Master of Urban Planning (M.U.P); Urban Planning (Non-Thesis) — Transportation Planning (66 credits)

The Transportation Planning option enables students to specialize in this field as part of their course of study for the M.U.P. degree. Studio courses, an internship, and a final project involve real-life work that prepares students for the professional practice of Urban Transportation Planning.

section 11.7.7: Master of Urban Planning (M.U.P); Urban Planning (Non-Thesis) — Urban Design (66 credits)

NOTE: The Urban Design option is being suspended. Students interested in Urban Design will be able to specialize in this field of practice as part of the core M.U.P. program.

The Urban Design option allows students to specialize in this field as part of their course of study for the M.U.P. degree. Studio courses, an internship, and a final project involve real-life work that prepares students for the professional practice of Urban Design.

11.7.5 Master of Urban Planning (M.U.P); Urban Planning (Non-Thesis) (66 credits)

The M.U.P. requires two years of study including a three-month internship with a member of a recognized planning association.

Research Project (15 credits)

URBP 630	(3)	Supervised Research Project 1
URBP 631	(6)	Supervised Research Project 2
URBP 632	(6)	Supervised Research Project 3

Required Courses (27 credits)

URBP 609	(3)	Planning Graphics
URBP 612	(3)	History and Theory of Planning
URBP 622	(6)	Planning Studio 1
URBP 623	(3)	Planning Studio 2
URBP 624	(6)	Planning Studio 3
URBP 633	(3)	Planning Methods
URBP 635	(3)	Planning Law

Required Internship (6 credits)

URBP 628	(6)	Practical Experience

Complementary Courses

12-18 credits

In choosing courses from the following list, students are encouraged to complete at least one course in each of the four areas of design, environment, housing, and transportation.

ARCH 515	(3)	Sustainable Design
ARCH 520	(3)	Montreal: Urban Morphology
ARCH 521	(3)	Structure of Cities
ARCH 527	(3)	Civic Design
ARCH 528	(3)	History of Housing
ARCH 529	(3)	Housing Theory
CIVE 540	(3)	Urban Transportation Planning
URBD 602	(3)	Urban Design Seminar 1: Foundations
URBD 604	(3)	Urban Design Seminar 2: Advanced Topics
URBP 501	(2)	Principles and Practice 1
URBP 504	(3)	Planning for Active Transportation
URBP 505	(3)	Geographic Information Systems
URBP 506	(3)	Environmental Policy and Planning
URBP 507*	(3)	Planning and Infrastructure
URBP 519*	(6)	Sustainable Development Plans
URBP 520*	(3)	Globalization: Planning and Change
URBP 530	(3)	Urban Environmental Planning

URBP 623	(3)	Planning Studio 2
URBP 624	(6)	Planning Studio 3
URBP 633	(3)	Planning Methods
URBP 635	(3)	Planning Law

Complementary Courses

6-12 credits from the following:

CIVE 540	(3)	Urban Transportation Planning
URBP 504	(3)	Planning for Active Transportation
URBP 506	(3)	Environmental Policy and Planning
URBP 536	(1)	Transportation Seminar 1
URBP 537	(1)	Transportation Seminar 2
URBP 538	(1)	Transportation Seminar 3
URBP 608	(3)	Advanced GIS Applications
URBP 620	(3)	Transportation Economics

Elective Courses

0-6 credits

Students may take courses at the 500- or 600-level offered by any academic unit at McGill or another Montreal university if they help students develop an in-depth knowledge of one or more subject areas in the field of planning, with the approval of the School. Frequent choices include courses in real-estate analysis, urban geography, sociology, anthropology, law, politics, and environmental science. Students must confirm prior to registration that the elective course(s) will be counted towards the M.U.P. degree.

11.7.7 Master of Urban Planning (M.U.P); Urban Planning (Non-Thesis) — Urban Design (66 credits)

The Urban Design concentration in the professionally-accredited M.U.P. degree enables students to specialize in this area of scholarship and professional practice in their second year of studies. Three studio courses, an internship, two intensive seminar courses, and a final Supervised Research Project in Urban Design enable students to prepare for professional practice as urban design specialists skilled in analysis and design development for existing (sub)urban landscapes and newly-urbanizing contexts. This option is open to students with a professional and/or undergraduate degree in Architecture, Landscape Architecture, Environmental Design, Urban Planning, or related fields. Qualified applicants are admitted to the core M.U.P. program and then apply to be placed in the concentration at the end of their first year of study. Successful applicants must meet the admission requirements for the core M.U.P. program and also demonstrate visual acuity, spatial literacy, and skills in graphic communication during their first two terms of study.

Research Project (15 credits)

URBP 630	(3)	Supervised Research Project 1
URBP 631	(6)	Supervised Research Project 2
URBP 632	(6)	Supervised Research Project 3

Required Internship (6 credits)

URBP 628	(6)	Practical Experience

Required Courses (33 credits)

URBD 602	(3)	Urban Design Seminar 1: Foundations
URBD 604	(3)	Urban Design Seminar 2: Advanced Topics
URBP 609	(3)	Planning Graphics
URBP 612	(3)	History and Theory of Planning
URBP 622	(6)	Planning Studio 1

URBP 623	(3)	Planning Studio 2
URBP 624	(6)	Planning Studio 3
URBP 633	(3)	Planning Methods
URBP 635	(3)	Planning Law

Complementary Courses

9-12 credits from the following including at least one ARCH course and one URBP course:

ARCH 515	(3)	Sustainable Design
ARCH 520	(3)	Montreal: Urban Morphology
ARCH 521	(3)	Structure of Cities
ARCH 527	(3)	Civic Design
ARCH 561	(3)	Affordable Housing Seminar 1
ARCH 562	(3)	Affordable Housing Seminar 2
ARCH 566	(3)	Cultural Landscapes Seminar
URBP 504	(3)	Planning for Active Transportation
URBP 506	(3)	Environmental Policy and Planning
URBP 530	(3)	Urban Environmental Planning
URBP 616	(3)	Selected Topics 1
URBP 619	(3)	Land Use and Transportation Planning

0-3 credits can be selected from other courses at the 500 or 600 levels in any academic unit at McGill or at another university subject to the approval of the School.

ARCH 515	(3)	Sustainable Design
ARCH 528	(3)	History of Housing
ARCH 529	(3)	Housing Theory
ARCH 550	(3)	Urban Planning and Development
URBP 501	(2)	Principles and Practice 1
URBP 505	(3)	Geographic Information Systems
URBP 530	(3)	Urban Environmental Planning
URBP 605	(3)	Graduate Seminar
URBP 607	(3)	Reading Course: Urban Planning
URBP 617	(3)	Selected Topics 2
URBP 618	(3)	Selected Topics 3
URBP 619	(3)	Land Use and Transportation Planning
URBP 625	(2)	Principles and Practice 2
URBP 626	(2)	Principles and Practice 3
URBP 627	(1)	Urban Design Competition
URBP 629	(3)	Cities in a Globalizing World