To : Members of Graduate Council

From : Christina Bryce

Assistant Graduate Secretary

The next meeting of Graduate Council will be held on Tuesday April 19th at 9:30 am via Zoom.

Listed below are the agenda items for discussion.

Please email cbryce@mcmaster.ca if you are unable to attend the meeting.

#### AGENDA

- I. Minutes of the meeting of March 15<sup>th</sup>, 2022
- II. Business arising
- III. Report from the Vice-Provost and Dean of Graduate Studies
- IV. Report from the Graduate Associate Deans
- V. Report from the Associate Registrar and Graduate Secretary
- VI. Motion to Expand Allowed Hours of On-campus Work for Full-time Graduate Students
- VII. Graduate Calendar Administrative Sections
- VIII. Faculty of Business Graduate Curriculum and Policy Committee Report
- IX. Faculty of Engineering Graduate Curriculum and Policy Committee Report
- X. Faculty of Health Sciences Graduate Policy and Curriculum Committee Report
- XI. Faculty of Humanities Graduate Curriculum and Policy Committee Report
- XII. Faculty of Science Graduate Curriculum and Policy Committee Report
- XIII. Faculty of Social Sciences Graduate Curriculum and Policy Committee Report
- XIV. Spring 2022 Graduands Faculty of Health Sciences (to be distributed)



#### Graduate Council Tuesday March 15<sup>th</sup> at 9:30 am via Zoom

Present: D. Welch (Chair), M. Thompson, S. Hanna, M. Horn, B. Gupta, J. Gillett, G. Mulvale, M. Stroinska, M. Abouei, J. Kish, T. Chamberlain, W. Farmer, N. Kuhathasan, A. Roddick, D. Gillespie, G. Krishna, L. Romane, J. West-Mays, K. White, A. Shi, R. Wu, T. McDonald, D. Genuth-Olkon, Z. Samaan, S. Medeiros, K. Tsang, E. Aspenlieder, S. Baschiera (Associate Registrar and Graduate Secretary), C. Bryce, (Assistant Graduate Secretary)

Regrets: M. Dion, S. Brophy, P. McNicholas

#### I. Minutes of the meeting of February 22<sup>nd</sup>, 2022

It was duly moved and seconded, 'that Graduate Council approve the minutes of the meeting of February 22<sup>nd</sup>, 2022 as set out in the document.'

#### II. Business arising

There was no business arising.

#### III. Report from the Vice-Provost and Dean of Graduate Studies

Dr. Welch reported on the following items:

- Improvement in Covid indicators, noting that McMaster will be maintaining it's mandate until the end of the term;
- The situation in Ukraine has been a source of considerable worry, noting they've communicated with all Russian and Ukrainian students to connect them with support;
- The development of a scholars at risk strategy;
- Peak admissions season with a lot of folks in SGS working to get offers out.

In response to a question about the scholars at risk, Dr. Welch noted it would be dealing with both new admits and current learners.

#### IV. Report from the Graduate Associate Deans

Dr. Hanna (Faculty of Health Sciences) reported on the following items:

- The Graduate Plenary is scheduled for the middle of May;
- The M.Sc. in Midwifery has been approved by Quality Council and will be admitting their first cohort in the near future;
- The Community Health Graduate Diploma continued through the chain of approvals.

Dr. Thompson (Faculty of Engineering) reported on the following items:

- The submission of a proposal to eCampus Ontario for a communication course designed to help acquaint students with different communication skill requirements at the graduate level;
- Engineering Graduate Student Society initiatives;
- Making sure all students who have started virtually are getting to campus, noting hotspots still causing
  issues for grad students to join program.

Dr. Gupta (Faculty of Science) reported on the following items:

- Admissions were going well, noting applications up in certain areas and down in others;
- A successful alumni networking event;
- New staff taking on graduate mentorship in the Faculty.

#### Dr. Horn (Faculty of Humanities) reported on the following item:

• Admissions is well underway with a significant shift towards international, noting both the benefit and challenges of this.

Members discussed the potential trends around international student application and enrollment.

Dr. Mulvale (Faculty of Business) reported on the following items:

- A lot of events happening with folks coming back to campus;
- Working hard on IQAP report for the Ph.D. program, noting the Master of Finance is also well underway;
- A consulting firm has been hired to get input on MBA program which is part of a broader strategic plan for MBA:
- A lot of engagement for the Ph.D. IQAP, noting that they're quite decentralized between areas and are using the process to bring people together. She noted that survey shows stark trends between domestic and international students.

#### Dr. Gillett (Faculty of Social Science) reported on the following items:

- A new pilot program where they provide more central funding for international Ph.D. students to provide more support for their studies;
- Have also been tracking international student trends;
- The development of a Masters of Mental Health degree program.

#### V. Report from the Associate Registrar and Graduate Secretary

Ms. Baschiera reported on the following items:

- Focused efforts to get offers out, noting that they are within the boundary of time for their stated service level;
- Requests received for enhanced training at program level;
- Also turning attention to gathering requirements for improvement to admission system ahead of next season:
- Working on the graduate calendar admin sections, noting that probably the policy that will have the most attention is the policy around part-time for course-based masters.
- Work on the development of a course management policy.

Members discussed the course management policy, noting the context at the undergraduate level and gaps to be covered on the graduate side.

Ms. Romane provided information on library graduate initiatives:

- The libraries are essentially open back up to normal;
- They've initiated a books by mail service;
- The graduate study room is open;
- She is the contact person for the IQAP library report;
- She can also help students with systematic reviews, noting plans to reach out to the associate deans to talk about how best to connect with graduate students.

Members discussed how best to direct students to this information and Ms. Romane provided a link:

https://library.mcmaster.ca/services/graduate-students-library

#### VI. Teaching and Learning Certificate Changes

Dr. Aspenlieder explained that over the last year they've been thinking about the certificates that they offer and hearing feedback that students are encountering bottlenecks, noting the EDU courses are oversubscribed. They've opened up requirements for certificates to complete and will be offering a new course.

It was duly moved and seconded, 'that Graduate Council approve the changes to the Teaching and Learning Certificate of Completion as described in the documents.'

The motion was carried.

#### VII. 2022-2023 Sessional Dates

It was duly moved and seconded, 'that Graduate Council approve the 2022-2023 Sessional Dates as laid out in the document.'

The motion was carried.

#### VIII. New Awards and Award Changes

It was duly moved and seconded, 'that Graduate Council approve the new awards and changes to award as described in the document.'

The motion was carried.

## Sessional Dates **2021**<u>2022</u>-<u>2022</u><u>2023</u>

DEADLINE DATES FOR GRADUATE PROGRAMS	FALL TERM WINTER TERM		SUMMER TERM		
Gallo III ROGALIA	September - December  20212022 September - October,  2021-2022 (1HF) November - December  2021-2022 (2HF)	January - April, 20222023 January - February, 2022 2023 (1HF) March - April, 20222023(2HF)	May - August, 20222023 May - June 2022_2023 (1HF) July-August 2022_2023 (2HF)		
On-Time Registration	Tuesday, July 6-5 to Tuesday, August 32	Thursday, November 25 24 to Thursday, December 98	Thursday, March 31st 30 to Thursday, April 1413		
Class Start Dates *	Classes begin on or after September 1, 20212022- check with program for details	Classes begin on or after January 3, 20222023- check with program for details	Class start dates vary - check with program for details		
Late Registration (late fees apply)	August 4-3_to September 87_	December 10-9to January 3-3	April <del>15-<u>14</u> to</del> April <del>29</del> <u>28</u>		
Final Dates to Add Courses:		I			
Multi-term Courses	September 2423				
Single-term or 1HF Courses	September 2423	January 2120	May <u>1312</u>		
2HF Course	October <u>2221</u>	February 2524	June <u>2423</u>		
Final Dates to Drop Courses: **	ı	I			
Multi-term Courses	February 2524	July <del>29</del> 28			
Single-term Courses	November <u>1211</u>	March <u>1817</u>	July <u>1514</u>		
1HF Courses	October <u>%7</u>	February 4410	June <u>109</u>		
2HF Courses	December 109	April 8 <u>6</u>	August <u>54</u>		
Final Dates to Submit Grades:					
Multi-term Courses		May <u>21</u>	September 21		
Single-term Courses	January <mark>65</mark>	May <u>21</u>	September-21		

1HF Courses	October 2221	February 2524	September 21
2HF Courses	January <u>-65</u>	May <u>21</u>	September 21
Final Date to Submit Results of Incomplete (INC) Grades for Previous Term with Permission of Associate Dean	March 4 <u>3</u>	July <u>87</u>	November 4 <u>3</u>

#### **Thesis**

	FALL <del>2021</del> 2022	SPRING <del>2022</del> 2023	FALL <del>2022</del> 2023
Final Date to Initiate Thesis Defence in Mosaic***	June <u>2524</u>	January 2+20 (Health Sci.) February 21 (All others)	June 24 <u>23</u>
Final Date to Submit Master's Theses to Departments (Prior to Defense)	August 65	March 4 <u>3</u>	August <u>54</u>
Final Date to File Theses with Graduate Studies and Complete Degree Requirements****		1	ı
- Faculty of Health Sciences	September 27	April 1March 31	September 26
- All Other Faculties	September 27	April 2228	September 26

The University welcomes and includes students, staff, and faculty from a wide range of cultural, traditional, and spiritual beliefs. As per the Policy on Academic Accommodation for Religious, Indigenous and Spiritual Observances, the University will arrange reasonable accommodation of the needs of students who observe religious holy days other than those already accommodated by ordinary scheduling and statutory holidays. For more information, please refer to https://www.mcmaster.ca/policy/Students-AcademicStudies/AcademicAccommodation-Observances.pdf

Graduate students may only enroll in undergraduate courses with the approval of their supervisor or graduate program. Students are responsible for meeting the deadlines and requirements of the undergraduate course as presented in class and in the undergraduate calendar. Graduate students will be graded under the graduate grading scale.

Programs may establish earlier deadlines to add/drop courses but these dates must clearly be communicated to students. Students taking courses outside of their home program of study, must follow the rules of the program in which the course is offered. Please note that the last date to cancel a course or registration with no academic penalty is not the same as the last date to be eligible for a refund.

<sup>\*</sup>The precise dates of commencement of courses are determined by the program; students are urged to contact their program for details. SGS maintains the 13-week graduate instruction period; however, if a course does not fall into the traditional 13-week period, the graduate program will inform students of important dates and deadlines in the course syllabus. There is no official fall break or reading week for graduate students (except MBA). Students should check with their program and their course instructor(s) as to whether classes will be held during these periods. Please see

sections 1.3 (Responsibilities of Graduate Students to the University) and 2.5.6 (Vacations) of the calendar for more information.

- \*\*All courses on a student's record after these dates will require a grade. Exceptions require submission of an In-Program Request Form. Graduate programs may establish earlier deadlines for completion of course work and may prescribe penalties for late completion of work and for failure to complete work, provided that these penalties are announced at the time the instructor makes known to the class the methods by which student performance shall be evaluated.
- \*\*\*Please note the following black-out periods in which standard Ph.D. defences cannot be scheduled: December 14th to January 8th inclusive and August 16th to 20th inclusive. Please refer to the SGS website for information about the timeline for scheduling your defence with these dates in mind.
- \*\*\*\*A final thesis is the corrected, approved version of the thesis which is uploaded to MacSphere following the Final Oral Examination. Note there is no grace period at the end of December or April for final thesis submission and completion of degree requirements.

#### **Convocation Dates**

Please consult the link below for convocation dates:

https://registrar.mcmaster.ca/dates-and-deadlines/#tab-3

## **Graduate Study at McMaster University**

When McMaster moved to its current graduate organization, the aims of graduate work were described as "the highest development of the powers of reasoning, judgment, and evaluation in intellectual concerns; specialized training in professional skills; initiation into research or scholarly work and development of a capacity for its successful and independent pursuit; the fruitful pursuit of research and scholarly work". This description remains as valid today as it was then.

Research is central to graduate work, and McMaster's strong research orientation has a pronounced effect on the character of its graduate programs. The numerous research achievements of McMaster faculty members have been recognized by grants, prizes, medals, and fellowships in academic societies. Such distinctions attest to the qualifications and dedication of faculty members in developing and disseminating knowledge. The education that McMaster faculty provide is valuable not only for the graduate student's career but also for the student's development as a person.

The following sections outline the general graduate academic regulations of the University. Students must read and comply with both these regulations and those set out by their Program elsewhere in this Graduate Calendar, as applicable.

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

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

## 1.1 Programs of Study

McMaster University offers graduate programs that lead to one of the following degrees or diplomas:

Graduate Diplomas in Advanced Neonatal Nursing, Critical Leadership, Clinical Behavioural Sciences, Clinical Epidemiology, Community Engaged Research, Gender Studies and Feminist Research, Nuclear Engineering, Primary Health Care Nurse Practitioner (PHCNP), Professional Accountancy, Water Without Borders

Master of Arts in Anthropology, Classics, Communication and New Media, Cultural Studies and Critical Theory, Economics, Economic Policy, English, French, Gender Studies and Feminist Research, Geography, Globalization, Health and Aging, History, Global Politics, Philosophy, Political Science, Religious Studies, Sociology, and Work and Society;

Master of Biomedical Discovery and Commercialization

Master of Business Administration

Master of Applied Science in Biomedical Engineering, Chemical Engineering, Civil Engineering, Computational Science and Engineering, Electrical and Computer Engineering, Engineering Physics, Materials Engineering, Mechanical Engineering, Software Engineering

Master of Communications Management

Master of Engineering in Civil Engineering, Computational Science and Engineering, Computing and Software, Electrical and Biomedical Engineering, Electrical and Computer Engineering, Engineering Physics, Manufacturing Engineering, Nuclear Engineering (UNENE), Systems & Technology

Master of Engineering Design

Master of Engineering Entrepreneurship and Innovation

Master of Engineering and Public Policy

Master of Finance

Master of Financial Math

Master of Health Management

Master of Public Health

Master of Public Policy

Master of Science in Biochemistry, Biology, Chemical Biology, Chemistry, Child Life and Pediatric Psychosocial Care, Cognitive Science of Language, Computational Science and Engineering, Computer Science, Earth and Environmental Sciences, eHealth, Geography, Global Health, Health and Radiation Physics, Health Research Methodology, Health Science Education, Kinesiology, Materials Science, Mathematics, Medical Sciences, Midwifery, Neuroscience, Nursing, Occupational Therapy, Physics and Astronomy, Physiotherapy, Psychology, Psychotherapy, Radiation Sciences (Radiation Biology), Radiation Sciences (Medical Physics), Rehabilitation Science, Speech Language Pathology, and Statistics.

Master of Social Work

Master of Technology Entrepreneurship and Innovation

MD/Ph.D. in Medicine and Biochemistry, Medicine and Biomedical Engineering, Medicine and Health Policy, Medicine and Health Research Methodology, Medicine and Medical Sciences, and Medicine and Neuroscience.

Doctor of Philosophy in Anthropology, Biochemistry, Biology, Biomedical Engineering, Business Administration (Accounting; Finance; Health Management; Information Systems; Management of Organizational Behaviour and Human Resources; Management Science; Marketing), Chemical Biology, Chemical Engineering, Chemistry, Civil Engineering, Classics, Cognitive Science of Language, Computational Science and Engineering, Computer Science, Earth and Environmental Sciences, Electrical and Computer Engineering, Engineering Physics, English, French, Geography, Global Health, Health Policy, Health Research Methodology, Health Studies, History, Kinesiology, Labour Studies, Materials Science and Engineering, Mathematics, Mechanical Engineering, Medical Sciences, Neuroscience, Nursing, Philosophy, Physics and Astronomy, Political Science, Psychology, Radiation Sciences (Radiation Biology), Radiation Sciences (Medical Physics), Rehabilitation Science, Religious Studies, Social Gerontology, Social Work, Sociology, Software Engineering and Statistics.

## 1.2 Responsibilities to Graduate Students

The principal responsibilities that McMaster University has for the academic endeavours of its graduate students are shared by the School of Graduate Studies, the Faculty, the Department, the Supervisory Committee, and the Faculty Advisor. The following summarizes the responsibilities of each of these bodies.

#### 1.2.1 The School of Graduate Studies

The name "": School of Graduate Studies" refers to the Vice-Provost & Dean and Associate Deans of Graduate Studies, the Graduate Council, and the registrarial duties associated with graduate administration.

The Vice-Provost & Dean of Graduate Studies provides leadership in maintaining and improving the standards of graduate scholarship in the University. These responsibilities include: being the School<sup>1</sup>/<sub>2</sub>s voice in graduate matters concerning research and its funding, scholarships and assistantships, the development of graduate programs and policy statements affecting graduate work; being the designated chair of Ph.D. dissertation oral examinations; approving the nomination of external examiners for Ph.D. theses and receiving the examiners reports. The Associate Deans of Graduate Studies routinely act as the Dean delegates. They recommend revision or development of regulations or policies affecting graduate work, refer matters of policy and curriculum to the Graduate Curriculum and Policy Committees, and deal with student appeals. In addition to acting on behalf of the Graduate Admissions and Study Committees as described below, the responsibilities of the Associate Deans include the awarding of McMaster Graduate Scholarships by acting on recommendations received from departments offering graduate work.

The Associate Graduate Registrar and Secretary of the School administers the academic affairs of students enrolled in the School of Graduate Studies. These responsibilities include: registering graduate students; assessing tuition fees; maintaining records and files for applicants and new or in-course students and arranging Ph.D. oral examinations.

## 1.2.2 The Faculty

For each Faculty there is a Graduate Admissions and Study Committee, which is chaired by an Associate Dean of the School of Graduate Studies. This committee, or the Associate Dean on its behalf, is responsible for matters concerning both incoming and in-course graduate students. More specifically, these responsibilities include:

- determining the admissibility of applicants;
- receiving reports on the progress of students and making decisions thereon, including recommendations to require a student to withdraw:
- ensuring that program requirements have been met prior to the awarding of degrees, where applicable;
- approving off-campus courses and leaves of absence; and
- deciding on applications from students for special consideration with respect to academic regulations.

In all of these matters, the Committee or the Associate Dean acts on recommendations made by departments.

## 1.2.3 The Department (or Graduate Program)

Typically, many of the duties of the Department in regard to graduate students are carried out by the Department Chair and the Graduate Advisor (in some programs these are referred to as Graduate Coordinators or Area Coordinators) for the Department. For some programs (e.g. interdisciplinary graduate programs), these duties are carried out by the Program Director, Co-Director or Associate Director and for some Health Science programs, the Assistant Dean. For purposes of graduate studies policies stated in sections 1 through 6 of the Graduate Calendar, all reference to Department Chair shall mean, in the graduate programs of the Faculty of Health Sciences, the Program Director, Co-Director, Associate Director or appropriate Assistant Dean. The departmental duties include making recommendations to the Graduate Admissions and Study Committee of the Faculty as noted above. The Department is responsible for matters such as:

- ensuring that every student has, at all times, a faculty advisor or supervisor or a properly constituted supervisory committee;
- reviewing annually each student a academic progress and reporting thereon;
- conducting comprehensive examinations and language examinations, when these are required;
- preparing and distributing guidelines and departmental regulations for supervisors and students;
- ensuring that each student is properly trained in all safety practices, guidelines, and policies for the use of any
  resources required in carrying out their work, where appropriate.

In performing those duties that relate to individual students, the Department relies on advice from the Supervisory Committee or the faculty advisor.

In those cases in which a Supervisory Committee or faculty advisor determines that a student species is unsatisfactory, and recommends that the student be required to withdraw, the Department is expected to verify the reasons for the recommendation. If the recommendation is confirmed, the Department will forward the recommendation to the Associate Dean of Graduate Studies, who will receive it and act on behalf of the Faculty Admissions and Study Committee.

If the Department is not convinced that the recommendation is appropriate, the Department may attempt to mediate between the supervisor and student, or may attempt to find an alternate Supervisory Committee or faculty advisor. If that is not possible because all members with expertise in the studentt's topic are already on the Supervisory Committee, then the Department may find it best to encourage the student to transfer elsewhere. If the student is very close to completion, the Department may advise the student to continue in the program despite the lack of Supervisory Committee support.

## 1.2.4 The Supervisory Committee or Supervisor

The Supervisory Committee, or supervisor or the faculty advisor (Section 1.2.5) when no such committee is required, provides advice to the Department as noted above. Additional responsibilities include, where applicable:

- to assist in planning and to approve the student! s program of courses and research;
- to approve the thesis proposal;
- to decide within departmental regulations, on the timing of the comprehensive examination (for doctoral students) and, where applicable, of the language and other examinations;
- to maintain knowledge of the student 's research activities and progress;
- to give advice on research;
- to provide the student with regular appraisals of progress or lack of it;
- to perform such other duties as may be required by the department;
- to report on the above matters annually, in writing, on the approved form to the department, which in turn
  will report to the Faculty Graduate Committee on Admissions and Study where applicable;

- to initiate appropriate action if the student<sup>1</sup>'s progress is unsatisfactory, including any recommendation that
  the student withdraw, for approval by the department and the Faculty committee on Graduate Admissions and
  Study:
- to decide when the student is to write the thesis and to give advice during this process;
- · to act as internal examiners for the thesis; and
- to act as members of the examination committee for the final oral defence when so appointed.

## 1.2.5 The Faculty Advisor

When a supervisory committee or supervisor is not required, a faculty advisor will be assigned by the Department. Like the supervisory committee, the advisor will provide advice to the Department as noted in Section 1.2.3 above. Their responsibilities will include: planning and approving the student's program of courses and research; deciding within departmental regulations, on the timing of the comprehensive examination, and language and other examinations; maintaining knowledge of the student's research activities and progress; giving advice on research; providing the student with regular appraisals of progress or lack of it (i.e., the student advisor have a mutual obligation to meet on a regular basis); initiating appropriate action if the student's progress is unsatisfactory, including any recommendation that the student withdraw. In course-based, professional or clinical programs, a program committee or the department chair for the program acts as the faculty advisor. The faculty advisor is expected to respond in a timely fashion to requests for clarification by the student on elements of academic and research progress.

#### 1.2.6 The Graduate Course Instructor

As noted in the *Policy on Graduate Course Outlines*, the course instructor is responsible for providing each student with evaluations of the student: sacademic performance at various stages during the course, and, whenever possible, a list of due dates. Although instructors are required to provide written course outlines at the beginning of courses, the Policy on Graduate Course Outlines also provides instructors with the opportunity to alter a course. so content to reflect shifting research interests as long as the students are informed of such changes promptly and in writing. Even in the case of changing content, best practice is for instructors to adhere to the original course outline in terms of the amount of work expected from the students, the schedule of assignments, due dates, and the evaluation scheme.

The graduate course instructor may decide to recruit one or more faculty members or field experts to give special lectures during the course. Such an invitation should be made well in advance of the lecture date. Invited instructors usually are not expected to evaluate the students. However, there may be rare cases in which an invited instructor contributes some aspect of course evaluation. In that event, the official course instructor still bears ultimate responsibility for overall evaluation and course outcome. Students should be informed of the mechanism and mode of evaluation under these circumstances.

At the graduate level, students normally are expected to actively participate in courses (i.e., contribute to discussion, be encouraged to ask questions), and instructors often award marks for participation. The ultimate aim of any graduate course is not only to convey information to and exchange information with students, but also to equip students with the confidence and ability to exchange information with others, both in the spoken word and in writing.

Instructors shall calculate and provide grades to the School of Graduate Studies for all students by the date stipulated in the Graduate Calendar, as a final mark or as an ""incomplete". Final marks shall be provided to the students in a timely manner. Although there may be rare instances in which the instructor may need to report grades before all work is complete for a student, instructors should be aware that a grade of ""incomplete" will be converted to an """F" and recorded on the student! Is transcript after the stated sessional date: ""Final Date to Submit Results of Incomplete (INC) Grades for Previous Term".

## 1.3 Responsibilities of Graduate Students to the University

Just as the University has responsibilities to graduate students, they have responsibilities to the University.

The student's responsibilities include, but are not limited to:

- Maintaining current contact information with the University, including address, phone numbers, and emergency contact information.
- Usinge the University provided e-mail address or maintaining a valid forwarding e-mail address.
- Regularly checking the official University communications channels. Official University communications are
  considered received if sent by postal mail, by fax, or by e-mail to the student designated primary e-mail
  account via their @mcmaster.ca alias.
- Accepting that forwarded e-mails may be lost and that e-mail is considered received if sent to the student's @mcmaster.ca account.

Where applicable, students are responsible for complying with such conditions as indicated in the offer of admission. Students are also responsible for complying with the regulations governing graduate students at McMaster University with respect to full- and part-time status (see sections 2.5.2 and 2.5.3). Students are further responsible for informing the School of Graduate Studies within two weeks, which acts as the official keeper of student records, of any change in personal information such as address, name, telephone number, etc. Students are also responsible for reporting through the department any change in student status, course registration, or withdrawal.

#### Courses

To receive credit for a course, each student is responsible for confirming in the Mosaic Student Center that their enrollment status is appropriate for that course. Students are responsible for ensuring that they have formally enrolled for the course through their department or graduate program.

#### Research-Based Programs

With regard to research and study, students are responsible for maintaining contact and meeting regularly with the faculty advisor, thesis/project supervisor or supervisory committee, for observing departmental guidelines, and for meeting the deadlines of the department and the School of Graduate Studies. If there is a problem with supervision, it is the student's responsibility to contact the Department Chair or Graduate Advisor. It is also the expectation that students will seek clarification when necessary on questions regarding elements of academic and research progress. The provisions for changing a supervisor are outlined in Section 3.1.

Students who undertake to write a master. sor doctoral thesis assume responsibility both for creating drafts of the thesis, upholding copyright and intellectual property rights including any research agreements between the university and outside partners, and for responding to direction from the Supervisory Committee. The student shall have the responsibility to write and ultimately to defend the thesis, and the Supervisory Committee has the responsibility to offer guidance in the course of the endeavour, and to recommend or not recommend the completed thesis for defence.

Since enrollment permits access to libraries and certain other academic facilities (including off-campus facilities), it also implies a commitment on the part of each graduate student to use such facilities in accordance with applicable rules, including all safety practices, guidelines and policies. Inappropriate behaviour that is deemed to be in violation of such practices and/or policies may lead to denial of access to the facility. If such a denial of access to facilities means that a student can no longer fulfill their academic obligations, the student will be required to withdraw involuntarily from their academic program. (see also Section 5.2)

Full-time students are obliged to be on campus, except for vacation periods or authorized off-campus status, for all three terms of the university year. Vacation entitlement is discussed in Section 2.5.8. Any student who is away from

campus for longer than one week, which is not part of the student! s vacation entitlement, requires their supervisor! s approval in writing. If this period of time exceeds two weeks, the approval of the department chair is also required. In accordance with government regulations (see Section 2.5.2 students who will be away from campus for more than four weeks require not only permission from the Department but also that of the appropriate Associate Dean of Graduate Studies and must submit a Request to be Full Time Off Campus. Note that this permission is needed for conferences, field work or studies elsewhere in the world, in order to allow the University to comply with the regulation requiring that a written explanation for such absences be lodged in the Graduate School office. Students may arrange, through the Department and the Associate Dean of Graduate Studies, to be ""full-time off-campus" for periods of up to a year. Students will also be required to complete the Risk Management Manual (RMM) 801 forms and gain approval through EOHSS. In cases of unauthorized absence the student will be deemed to have withdrawn voluntarily from graduate study and will have to petition for readmission. No guarantee of readmission or of renewal of financial arrangements can be made and a decision on readmission is not subject to appeal. An exception to this policy would be programs described in the calendar as delivering their curriculum either partially or fully in on-line formats. Please refer to details in individual program descriptions.

In order to receive a degree, the student must fulfill all departmental or program requirements and all University regulations, including those of the School of Graduate Studies. Students who have outstanding financial accounts at the end of the academic year will not receive their academic results, diplomas, or transcripts

## **General Regulations of the Graduate School**

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Please note: if there is any discrepancy between a department or program handbook and the School of Graduate Studies Calendar, then the School of Graduate Studies Calendar shall prevail.

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#### Collection of Personal Information

Under the authority of the McMaster University Act, 1976, and by applying to McMaster or by enrolling in a program at the University, students expressly acknowledge and agree that the collection, retention, use and disclosure of relevant personal information is necessary for McMaster University to:

- establish a record of the student!'s performance in programs and courses;
- to assist the University in the academic and financial administration of its affairs;
- · to provide the basis for awards and government funding; and
- to establish the student's status as a member of relevant student governmental organization.

Similarly, and in compliance with McMaster University access to information and protection of privacy policies and Canadian and Ontario privacy laws, the University provides personal information to:

- the Canadian and Ontario government for the purposes of reporting purposes; and
- to appropriate student government organizations for the purposes of allowing such organizations to
  communicate with its membership and providing student government-related services consistent with the
  enrolment by a student at the University.

By applying and/or enrolling at McMaster University the student expressly consents to this collection, retention, use and disclosure of such personal information in this manner. Questions regarding the collection or use of personal information should be directed to the University Secretary, Gilmour Hall, Room 210, McMaster University.

#### Retention of Documents

All documentation submitted in support of an application for admission (including original transcripts) becomes the property of the University and is not returnable.

If an applicant is not accepted, or fails to enroll following acceptance, their documentation <u>(including original transcripts)</u> will be destroyed at the end of the admissions cycle.

## 2.1 Admission Requirements

McMaster University seeks candidates for graduate study who show high scholarly promise. Admission to a graduate program is based on a judgement by the University that the applicant can successfully complete the graduate degree program. The University's minimum requirements are identified in this section. Degrees and grades from foreign universities are evaluated for their equivalency to McMaster's. Departments or programs may establish additional requirements, such as scores on the Graduate Record Examination (GRE). Applicants should read the admission statement for the program or department, as well as the section here. Admission is competitive: meeting the minimum requirements does not guarantee admission. Final decisions on matters of admission rest with the Graduate Admissions and Studies Committee for each Faculty or the Graduate Associate Dean acting on the committee's behalf. The admission decision is not subject to appeal.

## 2.1.1 Admission Requirements for Master's Degree

The majority of graduate programs at McMaster University require the holding of an Honours bachelor's degree from a recognized university with at least a B+ average (equivalent to a McMaster 8.5 GPA out of 12) in the final year in all courses in the discipline, or relating to the discipline, in which the applicant proposes to do graduate work. Programs which consider applications with a mid-B average identify this in the relevant section of the calendar. In a Master's program in the Faculty of Engineering the requirement is at least a B- average (equivalent to a McMaster 7.0 GPA). Strong letters of recommendation are also required. Some programs may have different admission requirements, for example, some programs may consider professional practice or experience within the application process so please consult the program section of the calendar for details.

In recognition of the changes taking place in the structure of university education as a consequence of the Bologna Accord, three-year, first-cycle degrees that meet the criteria of the "Framework for Qualifications of the European Higher Education Area" will be accepted in place of a four-year Honours degree. Standard admission requirements will still apply. A Diploma Supplement should accompany the official transcript [item (a) under Section 2.2].

Prospective applicants who lack some background in the discipline they wish to enter should consult the Undergraduate Calendar with regard to Continuing Student status. A continuing student is a university graduate who is not currently enrolled in a degree program, but who wishes to take one or more undergraduate classes.

## 2.1.2 Admission Requirements for Ph.D. Degree

Applicants may be admitted to a regular Ph.D. program at one of three stages in their academic work: (1) after completion of a Master's program; (2) Directly from a Master's program at McMaster without completing the Master's degree; (3) in exceptional cases, directly from a Bachelor's program. Students still enrolled in a Master's with thesis program beyond 22 months must complete the degree requirements including the thesis prior to admission to the Ph.D. program.

 For applicants who hold a Master's degree, the primary requirements are distinction in their previous graduate work (equivalent to at least a McMaster B+), and strong letters of reference.

- 2. Students enrolled in a Master's program at McMaster University may be transferred to the Ph.D. program prior to completion of the Master's degree. Not sooner than two terms and no later than 22 months after initial registration in the Master's program here, students may request to be reclassified as Ph.D. students. After proper review, the department will recommend one of the following:
  - a. admission to Ph.D. studies following completion of the requirements for the Master's degree;
  - b. admission to Ph.D. studies without completion of a Master's program;
  - admission to Ph.D. studies but with concurrent completion of all requirements for a Master's degree within one term from the date of reclassification;
  - d. refusal of admission to Ph.D. studies.

In no case does successful completion of a Master's degree guarantee admission to Ph.D. studies.

For students in (b), the recommendation for admission to Ph.D. must identify which if any courses taken as a Master's student can be credited toward the requirements for the Doctoral program.

A student in (b) may re-register as a candidate for the Master's degree, provided that work to date has met the standards for the Master's program.

Students in (c) who do not complete the requirements for the Master's degree within the one term will lose their status as a Ph.D. candidate and be returned to Master's status.

- 3. In certain programs, applicants with a Bachelor's degree only, may be admitted directly to Ph.D. studies. Such students must show sufficient promise, including at least an A average. Within one calendar year the progress of students admitted to Ph.D. studies directly from a Bachelor's degree will be reviewed by their supervisory committee and the program. The program then will recommend one of the following:
  - a. proceed with Ph.D. studies;
  - b. not proceed with Ph.D. studies but re-register as a Master's candidate;
  - c. withdraw from the University.

A student admitted to a Ph.D. program who re-registers as a candidate for a Master's degree must meet all of the requirements for the Master's degree in order for it to be awarded.

#### 2.1.3 Transfer to Ph.D.

Transfers to a Ph.D. program take effect at the start of the next term, or are retroactive to September 1st for students whose request to transfer is received by the School of Graduate Studies by the end of the second week of October. Students are encouraged to transfer early (i.e., well before the end of the 5th term of their Masters) given that the time-limit on transfers described in 2.1.2 above.

## 2.1.4 Admission Requirements for Part-Time Ph.D. Degree

Admission to a part-time Ph.D. program is possible only for an individual holding a Master's degree whose circumstances preclude uninterrupted full-time doctoral studies. Because of the divergent nature of academic disciplines, part-time doctoral work is not feasible in some areas. Accordingly, no Department or Program is obligated to offer part-time doctoral work. As part of their applications prospective part-time students are required to provide a plan of study, including a clear account of when and where the thesis research is to be conducted. If facilities at the place of employment are to be used for the research, the signed agreement of the employer, recognizing the conditions surrounding graduate work, is also required. In addition, departments may have other requirements for admission to a part-time doctoral program. A part-time doctoral student must be geographically available on a regular basis, and must be able to participate regularly in departmental seminars and colloquia.

## 2.1.5 Admission of Students to a Cotutelle Ph.D. Degree

A cotutelle is a single Ph.D. awarded by two post-secondary institutions, typically from different countries. A cotutelle degree promotes and structures research collaborations in a way that allows students access to a broader range of research experience than would be available at a single institution.

Partner university arrangements may vary and students must investigate what is required to fulfill that institution's cotutelle requirements. For information on how to apply please view the Cotutelle Policy and the information available on the School of Graduate Studies website.

# 2.1.6 Admission of Students with Related Work Experience or Course Work Beyond the Bachelor's Degree

Some potential applicants may not satisfy our admission requirement. However, work experience and/or completed course work beyond the Bachelor's degree, may have some bearing on the applicant's ability to complete a graduate program. The admissions process will recognize these accomplishments as follows.

Admission to graduate studies for a student with related work experience and/or course work beyond the Bachelor's degree will be based on the following criteria:

- References from reliable sources, which specifically identify the applicant's aptitude for research and graduate education.
- University 4-year undergraduate degree or equivalent, completed more than 4 years ago, together with additional course work taken since that time.
- Significant record of workplace experience, the relevance of which will be assessed by the graduate program
  of choice

Submission of a complete resume is required to determine eligibility as a mature student. Such recommendations must be approved by the Graduate Associate Dean of the Faculty in question and evidence of ability to do graduate work will still be required.

## 2.1.7 Admission Requirements for Graduate Diploma Programs

The admission requirements for a graduate diploma are the same as are identified in Section 2.1.1 and in Section 2.1.6 (above) for admission to a Master's program.

## 2.1.8 Admission Requirements for Post-Degree Students

A Post-degree Student is one who has not been admitted to a graduate degree or diploma program but who holds a university degree and has been given permission to take a specific graduate course. Permission to take a course as a post-degree student requires the approval of the course instructor, the Department Chair, and the School of Graduate Studies. An application is required for each course. Students are allowed to take up to three courses as post-degree.

Although acceptance as a post-degree student carries no implications with respect to acceptance for a degree program in the School of Graduate Studies, the level of academic achievement expected for admission under this category is the same as that required of students admitted to a Master's program (Section 2.1.1). Courses taken as a post-degree student may be eligible for credit toward a Master's degree in a related program, to a maximum of one-half of the degree's course requirement, subject to the recommendation of the department or program to the relevant Faculty Graduate Admissions and Study Committee.

A student who has completed a relevant undergraduate degree and is not admissible to a program under current standards, may be admitted as a post-degree student with the approval of the Associate Dean to demonstrate admissibility. In such cases, any courses taken as a post-degree student will not be available for credit in a subsequent graduate program, should they be eventually considered to be admissible.

The deadline for registration is the same as for graduate degree programs (see Sessional Dates, Registration).

Post-degree students are not allowed to take graduate courses for Audit.

(Note: A Graduate Diploma is distinct from a baccalaureate, undergraduate diploma, Master's or Ph.D. degree, or diplomas and certificates awarded by the Centre for Continuing Education at McMaster University).

## 2.1.9 Non-Credit Participants in Graduate Courses

Graduate courses are not normally open to "auditors" who attend a course without the usual qualifications and without seeking academic credit. Under some circumstances, however, people who are not registered graduate students and who do not meet the requirements for admission as Post-degree (see Section 2.1.8 above) may attend a graduate course. This requires the written permission of the course instructor, the Department Chair, and the School of Graduate Studies.

A fee is charged for each course taken as a non-credit participant (by persons who are not registered graduate students or for graduate students in a course-charged program). See Section 4.1, Fees for Graduate Students, for more information about fees.

## 2.1.10 Visiting Students

Visiting Students are individuals who are currently registered in a graduate degree program in another university, and who have made arrangements through both their home university and a graduate program at McMaster to spend some time at McMaster as part of their degree program at the home university. While they are visiting students, they will not be enrolled in a degree program at McMaster. They are not part of any official exchange agreement including Ontario Visiting Graduate Student (OVGS) arrangement, although there may be an agreement between the McMaster program and their home institution. For more information on Ontario Visiting Graduate Student arrangements please consult Section 5.10. McMaster currently allows out-of-province and international students to visit in one of three ways: to take course work in a specific program; to conduct research in a specific lab; or to participate in an internship with a specific program or faculty member. In any case, students will be enrolled as full-time students for a maximum of one year. Visiting students do not normally pay tuition unless taking courses but in all cases, are expected to pay supplementary fees (see Section 4.1 Fees for Graduate Students). Acceptance is on the recommendation of the department or program at McMaster. For every term that the student is here in residence they must register in SGS 302. Visiting students are not permitted to audit courses.

It is necessary for international visiting students to enroll in the UHIP program to ensure adequate health insurance coverage during their stay.

## 2.1.11 Incoming Exchange Students

Exchange students are individuals who much like visiting students, are enrolled in a graduate degree program in another university and are paying fees to that university. The difference between a visiting student and an exchange student is that the exchange student participates in a formal exchange program between McMaster University and their home institution. A complete list of exchange agreements that McMaster participate in can be found on the Office of International Students Affairs webpage (http://oia.mcmaster.ca). For every term that the student is here in residence they must register in SGS 702.

Students participating in a formal exchange program are not assessed supplementary, or course fees, and are entitled to take a full course load (assuming they are registered for a full course load at their home institution). It is necessary for them to enroll in the UHIP program to ensure adequate health insurance coverage during their stay.

### 2.1.12 English Language Requirements

English is the language of instruction and evaluation at McMaster, except in the M.A. and Ph.D. programs in French. Hence it is essential that all students (except in the French program) be able to communicate effectively in English.

Applicants whose primary language is not English will be required to furnish evidence of their proficiency in the use of the English language. Such applicants are required to supply this evidence as part of their application. At the discretion of the graduate program, applicants may be exempted from this requirement if they have completed a university degree at which English is the language of instruction.

The most common evidence is a score on the International English Language Testing System (IELTS) or the Test of English as a Foreign Language (TOEFL). Equivalent scores on other recognized tests may also be considered. A full list of accepted language testing systems and their minimum requirements are given on the School of Graduate Studies website

Students taking the IELTS are required to achieve a minimum score of 6.5 with a minimum score of 5.5 in each category

TOEFL minimum requirements per Faculty are listed below, while individual programs may have higher published requirements.

- In most Faculties a minimum of 92 IBT (internet-based test) is required.
- In Business, Ph.D. and MBA programs require a minimum score of 100 with a minimum of 22 in the reading component, 22 in the listening component, 26 in the speaking component and 24 in the writing component on the IBT. The Master of Finance Program Requires a minimum score of 92.
- In Engineering the faculty requires a minimum score of 88 TOEFL (internet-based) or 6.5 IELTS. Please
  check with the program to see specific requirements, which may be higher.

Students who have completed an Academic ESL program through Canadian academic institutions may petition to have this considered in lieu of TOEFL.

## 2.2 Application for Admission

Enquiries about graduate work should be made directly to the department of interest. Our online application system is located at

https://gs.mcmaster.ca/future-students/how-to-apply/

Applications may be submitted at any time but applicants should refer to the department or program to which they are applying for department specific deadlines. However, most University scholarships and awards are adjudicated in late March or early April, so students applying later than March cannot be considered for these awards.

Applications from outside Canada should be completed at least five months before the desired date of entry in order to allow for any delays and for completing the necessary government processes such as obtaining a Canadian study permit.

#### Application Fee

Applications must be accompanied by the required application fee. This fee is non-refundable and must be paid in Canadian dollars by means of a credit card payment or electronic transfer. The fee is assessed for each program requested to review the application. The application is only assessed for the term to which the applicant applied; for additional terms, a new application must be submitted with all documents entered again and the fee paid again for review.

The following items are required before your online application will be considered complete.

- a. One official transcript of academic work completed to date, sent directly from the issuing institution. If the final transcript does not show that a completed degree has been conferred, an official copy of your diploma is also required.
- b. Two confidential letters of recommendation from instructors most familiar with your academic work or appropriate relevant experience. <u>Please note</u> that McMaster University uses the Electronic Referencing System. By entering the email address of your referee through the online application, the system will automatically send an eReference request on your behalf.
- c. see Section 2.1.12 English Language Requirements
- d. Statement of interest in pursuing graduate studies.

Programs may have additional admission requirements including, but not limited to, interviews. Please consult your program for details.

A graduate of a university outside Canada may also be required to submit a description of undergraduate and graduate courses taken in the field of specialization and in similar fields.

## 2.3 Transfer/Advance Credit and Determination of Course Equivalency

#### Transfer Credit

Application for transfer credit is normally done through the admissions process or via a Request for In-Program Course Adjustments before taking the course for in course students and in both cases requires an Associate Dean's approval. Credits from other institutions must have been received in the last 5 years with a minimum grade of B-. In general, no credits used towards a previous degree or used as a basis of admission will be approved as credit toward a McMaster graduate degree. Normally, a maximum of 50% of the course degree requirements only will be approved for transfer credit. Approved transfer credit appears as a course with a grade notation of T on the student's transcript. Official transcripts from the original institution are required to update the student's transcript.

Credits from other institutions can be used to substitute a specific McMaster University course requirement; however, the student may be required to take additional courses. Students wishing to apply for advance credit or course requirement equivalency should normally inquire when they apply or accept an offer of admission. Requests after admission should be submitted to the program office for consideration using a petition for special consideration.

#### Advance Credit

Eligible students enrolled in a program with an advanced credit option may request advance credit for up to two courses based on courses taken in their undergraduate degree at McMaster. For full details, please refer to descriptions of the individual programs. Requests for advance credit are done by petition to the Associate Dean of the Faculty once enrolled in the graduate program.

In some cases, course taken for credit as part of a diploma program may be considered for advanced standing credit in subsequent master's programs.

Courses taken at the 500-level in a student's undergraduate career at McMaster may be considered for advanced credit.

## 2.4 Acceptance

Graduate programs perform the initial assessment of completed applications. Applicants may be accepted conditionally before completing their present degree programs. Conditions must be cleared by the deadline date specified in the offer letter.

Official offer letters are sent only by the School of Graduate Studies, and are valid only for the program and term stated in the admission letter. Successful applicants are required to respond through the Applicant Portal to the offer of admission prior to the response deadline. Some programs require a deposit fee. The value of the deposit fee will be deducted from the student's tuition fees. If circumstances develop making it impossible for a student to begin graduate work in the specified term, the department and the School reserve the right to revoke the offer of admission, and any financial aid offered.

The graduate program and the University reserve the right to revoke an offer of admission if any submitted materials are falsified, if a final transcript does not meet admission requirements or if it contains an annotation about an academic integrity or code of conduct matter.

#### 2.5 Enrollment

## 2.5.1 Continuity of Registration

All graduate students, in both the regular and part-time programs, are required to enroll and pay supplementary fees annually and tuition fees term by term (within the first month of the term) until they graduate or withdraw. If they fail to do so they do not retain the status of graduate student, will be withdrawn in good standing, and must apply for readmission if they wish at a later date to continue their studies. If the department approves re-admission, a student may be allowed to begin graduate work in the winter or summer term (January or May), in which case they will first register at the start of that term, but in any following years will enroll in September for all three terms. A department's decision on readmission is not subject to appeal. A student can either be:

- readmitted to defend if all that remains is the thesis defence and student is readmitted for one term only
- if a student needs more than one term to complete they should be readmitted to program and maintain continuous enrollment until they complete their studies

Progress is expected to be continuous and A a student who does not enroll for each term of the academic year will be withdrawn in good standing unless there is a scheduled break in the programunless the program has indicated that a one term break in study is permitted. Programs that include a scheduled break, will list it in the program-specific section of the calendar. Only one single term break per academic year is permitted and cannot be in the first or last term of the program. Scheduled breaks may be limited to a specific term in the academic year, or available in any of the three terms with approval of the program. Programs that are cohort based or which follow a specific course order, may not be

suited to scheduled breaks. In these cases, students may be required to take a Leave of Absence for up to one year in order to return to the program at the appropriate time.

See also section 3 Regulations for Degree Progression for more information on program progression.

#### 2.5.2 Definition of Full- and Part-time Status

#### Full-Time Status

A full-time graduate student must:

- a. have been admitted to a graduate program as a full-time student;
- b. be pursuing their studies as a full-time occupation;
- c. identify themself as a full-time graduate student;
- d. be designated by the university as a full-time graduate student;
- e. for most programs (and all research-based programs) be geographically available and visit the campus regularly. Other programs may have different requirements and may be conducted fully on-line. Without forfeiting full-time status, a graduate student, while still under supervision, may be away from the university (e.g. visiting libraries, doing field work, attending a graduate course at another institution, etc.) provided that, if any such period exceeds four weeks in any one term, written evidence shall be available in the Graduate Studies Office to the effect that this request has the approval of the department or program Chair and Graduate Associate Dean. For information on full time off campus please consult section 2.5.6.;
- f. be considered to be a full-time graduate student by their supervisor or equivalent (designated by the program office);
- understand that students who change status from full to part-time, do not receive any more time to complete their program and will continue to be charged tuition fees at the full-time level;
- h. understand that students who change part to full time will have their term count re-set on a ratio of 2:1.

#### Part-Time Status

Part-time studies may or may not be possible in a graduate program; where possible, it will be listed in the program entry in the SGS Calendar. Normally a student's status in the program (full or part-time) is determined at the time of admission.

Students who are registered as part-time are expected to be pursuing their studies on a part-time basis and making commensurate progress.

Transfer from part-time studies to full-time studies requires the approval of the graduate unit and may not be permitted in some programs. This will be described in the individual program section of the Graduate Calendar.

See also section 3 Regulations for Degree Progression for more information on program progression and section 4 for financial information.

## 2.5.3 McMaster University's Regulations for Full- and Part-time Status

In accordance with the above provincial regulations, McMaster requires students to register annually, and to confirm their status as a full-time graduate student. Only full-time graduate students are eligible for scholarship support.

McMaster University complies with the OCGS document "Principles for Graduate Study at Ontario's Universities" (March 2017) which, in Resolution 5, states the following:

"Full-time graduate students are expected to pursue their graduate degree on a full-time basis and make satisfactory progress toward timely completion of all program requirements. It is not possible, or desirable, for the university to monitor and enforce the employment activities of its graduate students outside the university. However, it is both possible and desirable for the university to ensure that it does not itself create a structural situation that jeopardizes the ability of the graduate student to make full-time progress towards the completion of graduate program requirements. Accordingly, OCGS is committed to the principle that full-time graduate students are employed no more than an average of 10.20 hours per week on campus,"

Full-time students who are participating in McMaster-based paid employment should work no more than an average of 10-20 hours a week to a maximum of 505-1005 hours in the academic year. Normally students who exceed this limit are asked to drop down to part-time status, to stop working or reduce their hours of work. Changing student status from full-time to part-time will affect a student's scholarship funding and OSAP status. For international students with study permits, changing to part-time status may also impact their ability to fulfil the conditions of their study permit and eligibility for the post-graduate work permit.

As defined in Section 2.5.2, the University considers full-time students to be those that have their studies as their main activity. All full-time students must be available to conduct research (as appropriate), participate in courses and the other activities required by their program. In some cases, award holders may face employment restrictions, but it is the responsibility of the student to ensure their work arrangements are compliant with the terms of their awards.

Students admitted to a degree program on a part-time basis are responsible for maintaining close contact with faculty members and students in their field of study.

Transfers between full- and part-time status must be approved in the School of Graduate Studies based on a program recommendation

Normally, registration in a graduate program at McMaster and another institution is not allowed. Where there is no overlapping time component between two programs, an application for an exception can be made to the Associate Dean responsible for the McMaster program. Please note this regulation doesn't apply to students who are within one term of completing their masters and concurrently starting their Ph.D., as outlined in 2.1, subsection 2c.

## 2.5.4 Employment Regulations

In the McMaster context, there are three terms in the School of Graduate Studies for purposes of interpreting the rule in Section 2.5.3 (above) limiting employment with the University to ten hours per week on average: Fall (September through December); Winter (January through April); and Summer (May through August). These are deemed to have 17, 17, and 18 weeks respectively. The ten-hour limit includes but is not limited to work as a Teaching Assistant at McMaster

International students must abide by the employment conditions indicated on their study permit.

## 2.5.5 Enrolment - International Students on Study Permits

International students admitted to graduate studies degree programs must apply and eventually obtain a Canadian study permit issued by Immigration, Refugees and Citizenship Canada (IRCC), provided that their program of study is longer than six months. A copy of your study permit may be required by various offices at McMaster depending on your status.

If their study permit expires prior to program completion, students must apply to extend their study permit. Make sure to submit your study permit extension application at least 30 days before your current permit expires. If your study permit expires and you have submitted your extension application before it expired, but have not received a decision yet, you can continue studying under the conditions of your expired study permit until you receive a decision. Proof of application for extension may be required by various offices at McMaster depending on your status.

There are additional rules for students whose program is delivered either partially or wholly on line. Students whose program is delivered entirely on-line do not need a study permit. Students whose program is delivered partially on-line and is longer than six months will need a study permit for the period of time when they are required to be on campus—for example to attend a residency week.

A study permit is necessary to attend programs that are not fully online and are more than 6 months in duration. An up-to-date permit is required for employment on campus and to graduate from a degree program. A copy of your permit may be required by various offices at McMaster.

For the most up-to-date information about being an international student in Canada, visit the <a href="Immigration, Refugees">Immigration, Refugees</a> and <a href="Citizenship Canada">Citizenship Canada</a> (IRCC) website. It is the student's responsibility to abide by all necessary government processes.

For information on status change to permanent resident status during the course of your study, please see section 4.1.14.

## 2.5.6 Full Time Off-Campus

On admission to a full-time program, the assumption is that a student will be full-time on-campus. This is known as being "in residence". If a student wants to spend a period of time away from the university in order to complete their research, they must apply to be full-time off campus and complete the form RMM 801.

#### 2.5.7 Leaves of Absence

Graduate students are required to be continuously registered to support the timely completion of their degree. Students may apply for a Leave of Absence in one of four categories (see below for the specifics for each type of leave):

- 1. Medical or disability leave;
- 2. Parenting leave;
- 3. Compassionate or personal leave; or,
- 4. No course available leave

#### General Notes for Leaves of Absence

Leaves of Absence ("LOA") are normally granted on a term-by-term basis. Whenever possible the LOA should start and end at the beginning of a term (i.e., January 1, May 1, or September 1). During an LOA the student will not receive supervision or be entitled to use the University's academic facilities for the purposes of academic progression. No tuition will be charged, nor will the student be eligible for any scholarship support. Please note students on an LOA have to pay applicable supplemental fees and will be able to use the services associated with those fees (please direct questions to Student Accounts). The length of time for completing the degree, and for scholarship support eligibility (see qualifier below), will be extended by the duration of the LOA on the resumption of studies. If an LOA begins or ends in the middle of a term, term count will be determined upon return in consultation with the Associate Dean.

It is understood that when a student takes a LOA, the duration of the leave will not be counted as time towards the time limits in which the student is required to complete or make progress in his or her graduate studies program. On occasion a student may take a leave of absence starting mid-term. This may have impacts on tuition, pay and term count, students should contact their program office or the School of Graduate Studies for more information.

Students should be aware that in the event of an LOA, continuation of the same research project and/or supervisor cannot be guaranteed. In order that the student's supervisor and/or program can make suitable arrangements to cover ongoing responsibilities during the student's LOA, students are expected to provide as much notice as possible of the intention to take a LOA.

Note: Students who hold fellowships, scholarships or grants from NSERC, SSHRC, CIHR, or OGS should be aware that these agencies or any other external funding source may have policies governing the interruption and continuation of awards that may differ from the University's policy on LOA. Students holding such awards and who intend to keep them are responsible for ensuring that any LOA taken does not conflict with the granting agency's regulations. The appropriate agency should be contacted for details.

Students returning earlier than planned from an LOA must provide written notice to the School of Graduate Studies a minimum of four weeks in advance of the new return date.

LOA affecting Teaching Assistantship duties are covered by the Collective Agreement with Local 3906 (Unit 1) of the Canadian Union of Public Employees. Please refer to the collective agreement for additional information: http://www.workingatmcmaster.ca/elr/collective-agreements/cupe-unit1/

Alternatively, the student may request to withdraw (Change of Status Form). Should the student opt to withdraw, they may be eligible for reinstatement at the University's discretion upon reapplication.

Please note in all cases leaves of absence have the potential to impact term counts. Students on a leave will have their term counts adjusted - if they are off for one or two months out of a term, the term is counted, in cases where they are off three or four month the term is not counted toward their overall term count.

For international students with study permits, an authorized leave longer than 150 days will impact your ability to fulfil the conditions of your study permit. This may result in losing your study permit and student status. You may also be required to leave Canada.

#### 1. Medical or disability leave:

A medical or disability LOA is permitted for reasons of illness or disability, provided that the request is supported by adequate medical documentation. Absences are approved for up to 12 months at a time.

Students wishing to return from a medical LOA must provide a medical note indicating they are fit to continue with their studies.

#### 2. Parenting leave:

A parenting LOA is intended to assist parents in successfully combining their graduate studies and family responsibilities with minimum financial and/or academic impact. The University will provide the following arrangement for parents requiring parenting leave from their studies at the time of pregnancy, birth or adoption and/or to provide care during the child's first year.

According to the Employment Standards Act 200 - May 7, 2018 version Part XIV, a "parent" includes: "a person with whom a child is placed for adoption and a person who is in a relationship of some permanence with a parent of a child and who intends to treat the child as his or her own".

While students are not covered by the Employment Standards Act, McMaster grants students a Parenting Leave for a maximum of four consecutive terms. A student electing not to take the maximum amount of time available for Parenting Leave will not have the option of taking any unused portion at a later date. Students returning from a leave

should consult with their programs and should note that course availability may be affected by the timing of their return

Eligible students can also apply for a Parenting Grant. More information on this is available on the School of Graduate Studies Website at the following link: https://gs.mcmaster.ca/awards-funding/parenting-grant.

A parenting LOA or a portion thereof may be taken concurrently with a Pregnancy and/or Parental Leave from employment, in accordance with the Employment Standards Act, 2000, should the student also be an employee of the University.

#### 3. Compassionate or personal leave:

Students who have successfully completed at least one full year in a graduate program may apply for an LOA once for up to one year for personal circumstances, or work experience provided that the student's supervisor and the department support the request.

An LOA will not be granted to pursue another program of study.

Under certain circumstances the Vice-Provost and Dean of Graduate Studies may allow for a special leave of absence. In this case, application should be made directly to the Vice-Provost and Dean of Graduate Studies.

#### 4. No course available leave:

This leave is available only for graduate programs that have indicated on their website that the 'no course available leave' is an option. This leave is available to students who have yet to complete course work and no suitable course is offered in a given term; the student may petition for a 'no course available leave' for that term. This leave is not available if the student is registered in a program that requires a thesis/dissertation or a major research paper.

#### 2.5.8 Vacations

Full-time graduate students are expected to be on campus for all three terms of the university year, as specified in Section 1.3. In addition to statutory holidays (see Sessional Dates) and the closure of the University normally late December until early January, normal vacation entitlement for a graduate student is two weeks of vacation during the year, to be scheduled by mutual agreement with the research supervisor. An exception to this allotment requires approval from the supervisor or in the supervisor's absence a member of the supervisory committee.

Students who are also employees of the University must seek vacation approval from their employment supervisor and are entitled to vacation time pursuant to the terms of their employment contract.

## 2.5.9 Appeals and Petitions for Special Consideration

The University wishes to assist students with legitimate difficulties. It also has the responsibility to ensure that degree, program and course requirements are met in a manner that is equitable to all students. Please note that academic accommodation requests related to a disability are processed under the Academic Accommodation of Students with Disabilities policy. This includes accommodation requests for Permanent Disability, Temporary Disability, and Retroactive Accommodation.

In those instances where a student acknowledges that the rules and regulations of the University have been applied fairly, but is requesting that an exception be made because of special circumstances (compelling medical, personal, or family reasons) the student may submit, in a prompt and timely manner, a Petition for Special Consideration. The appropriate form is available on the School of Graduate Studies website. The student's supervisor and Associate Chair are normally required to provide their independent assessments of the student's statement in the petition. Supporting documentation will be required but will not ensure approval of the petition. The authority to grant petitions lies with the

School of Graduate Studies and is discretionary. It is imperative that students make every effort to meet the originally-scheduled course requirements and it is a student's responsibility to write examinations as scheduled.

In accordance with the Student Appeal Procedures, decisions made on Petitions for Special Consideration cannot be appealed to the Senate Board for Student appeals. Where any student feels there may have been discrimination on grounds in a protected social area as outlined in the Ontario Human Rights Code, they may contact the Equity and Inclusion Office to discuss initiating a complaint (Room 212 of the McMaster University Student Centre). In Health Sciences, Graduate Students should also consult the Advisor on Professionalism in Clinically-Based Education.

## 2.6 Academic Progression and Graduate Curriculum

This section pertains to course and milestone requirements for both Master's and Doctoral studies. A McMaster course is a body of work which is graded using the graduate student grading scale and consists of attending lectures, seminars or other organized activities (e.g. online discussions, experiential learning, etc.). Normally the beginning and end dates for courses should coincide with the beginning and end dates of University sessions.

## 2.6.1 Definition of 'Good Academic Standing'

To be considered to be in good academic standing a student must do the following as outlined in Section 1.3:

- enroll annually (excluding leaves of absence) until graduation, withdraw, or be withdrawn in good standing due to time limit;
- pay fees as required;
- comply with the regulations of the School of Graduate Studies as set out in this calendar and;
- make satisfactory progress toward the completion of the degree as outlined in section 2.6 Academic Progression.

Failure to maintain the good academic standing may impact the students' ability to receive scholarship funding and/or continue in the program. Students may be required to withdraw or may be prevented from registering for the subsequent academic year if they do not comply with the regulations outlined in this calendar, including failure to maintain satisfactory academic progress.

#### 2.6.2 Milestones

Milestones are non-course requirements that are part of the curriculum and required in addition to course work (e.g. seminars, workshops and comprehensive examinations etc.) Milestones are considered formal components of a student's academic progress and if not successfully completed will normally prevent a student from graduating.

There are two types of Milestones: graded and non-graded. Both types of milestones may be viewed on student progression reporting tools but <u>normally</u> only graded milestones will appear on the student's transcript (once graded or otherwise completed).

Graded milestones may be reported as Pass/Fail, letter grades or in the case of supervisory committee reports using a five levelfive-level descriptive scale. If the student receives a failing grade (which includes Unsatisfactory or Marginal for supervisory committee reports) in a milestone they may be required to withdraw, particularly for comprehensive examinations. Normally, students receiving two or more failures in any combination of milestones and courses must withdraw from their degree program.

Please refer to individual program descriptions for further details of non-coursework requirements.

#### 2.6.3 Course Levels and Unit Values

Generally, graduate courses are numbered either at the 700- or 600-level and have a unit value, with the standard examples being 1.5 units (normally 12 to 19 hours of organized activity) for a course usually lasting for half a term, 3 units for a course usually lasting one term (normally 24 to 39 hours of organized activity), 6 units for a course usually lasting two terms (normally 48 to 78 hours of organized activity). Courses with zero-unit value are usually either core program requirements or meant for complementary learning activities. Courses are restricted in enrolment to graduate students, with the exception of undergraduate students enrolled in 500-level courses equivalent to graduate courses and those students registered for approved, accelerated Masters programs and with written permission of their department (or program) chair, director, or designate.

Graduate students may only enroll in undergraduate courses with the approval of their supervisor or graduate program. Students are responsible for meeting the deadlines and requirements of the undergraduate course as presented in class and in the undergraduate calendar. Graduate students will be graded under the graduate grading scale. Students electing or required to take undergraduate courses may only register for a maximum of 12 units of such work.

## 2.6.4 Course Requirement and Designations

Graduate students are normally required to complete their course degree requirements by taking courses from within their program. As a minimum, at least 50% of courses units taken for fulfillment of degree requirements must be listed or cross-listed in the calendar under the degree program. Those courses taken outside of the program and not listed as part of the degree requirements, require the permission of the Associate Dean of the faculty or their delegate to be counted towards the degree. No program may allow more than one-third of their course requirements to be filled at the 600 level.

Each program offers only a selection of its courses listed in the calendar in any given year. Students must select their courses for a term prior to the 'add course' sessional date and only after consulting with a program advisor or supervisor. The default for course enrolment is to assign the course towards the primary academic program of a student and as a Master's or Doctoral required course (described below). This process does not determine whether the course will exceed the requirements outlined the curriculum, and normally cannot be changed once a final grade is reported. Where a student wishes to designate a particular course towards a program other than their primary academic program (ex. Diploma Course or Certificate Course) or designate a particular course as an Extra Course, a special request is required during the normal add period outlined in the sessional dates. The Request for In-Program Course Adjustment form is available on the School of Graduate Studies website.

Courses are designated as being in one of the five categories:

Master's (Count towards the primary academic program requirements of a Master's degree)

This category identifies the courses that are to count towards the Master's degree requirements (including any additional graduate requirements or undergraduate courses specified by the supervisory committee or Department Chair).

**Doctoral** (Count towards the primary academic program requirements of a Doctoral degree)

This category identifies the courses that are to count towards the Doctoral degree requirements (including any additional graduate requirements or undergraduate courses specified by the supervisory committee or Department Chair).

#### Extra Courses (Extra Course)

This category identifies courses that do not count towards degree requirements. The student has received the approval of their supervisor or program advisor and to designate the course as extra, by submitting a course designation request during the normal add period of course enrollment in a particular term. Students may petition to change the designation of an Extra Course to a Master's or Doctoral course prior to the deadline to drop a course provided that this change is supported by the supervisor and program. Attempts to change the designation after the drop date will not be approved.

For this category only, if a failing grade is received then the courses (and grade) will not appear on the student's transcript unless because of academic dishonesty.

Courses that are required by the supervisory committee or the Department Chair as additional requirements in excess of the stated minimum for the program must be designated as Master's or Doctoral.

#### **Diploma Course**

This category identifies courses that are to count towards the requirements for a diploma.

#### Certificate Course

This category identifies courses that the student is taking as individual courses not counting towards the requirements for a diploma.

#### 2.6.5 Courses Taken at Another Institution

It is possible for a graduate student registered at McMaster University to take a graduate course at another university for credit towards a McMaster degree. In all cases, the student must make a request of the Associate Dean prior to enrolling in the course to determine if it is possible to use the course towards their degree requirements. For courses at another Ontario University, a student must complete the Ontario Visiting Graduate Student (OVGS) form (see Section 5.10). For courses not covered by the OVGS agreement, a student must submit a Request for In-Program Course Adjustments form and provide documentation on the course (eg. course syllabus), an official transcript as well as confirmation by the department that the course is suitable for degree requirements. If the course is passed per the grading scheme of McMaster University (B- or higher) then a grade of "T" will show on the student's transcript. Students may not count a course taken at another institution while on a leave of absence or work term placement (coop) or otherwise not have paid tuition at McMaster during the period that the course was schedules and/or taken.

#### 2.6.6. Audited Courses

Graduate Students may request to audit Graduate courses only; undergraduate courses may not be audited. Visiting students and post degree students may not audit a course. Audited courses have no academic credit and an audited course may not be retaken for credit. This requires a completed form, signed by the instructor and student's supervisor. Upon completion of the course, and subject to confirmation from the instructor that their expectations regarding the student's participation were met (i.e. that the student attended at least 80% of the class), a grade of "AUD" will be recorded on the transcript. No other grade will be assigned. Students in a course-charged program will be charged a fee to audit a course that is equivalent to the course charge of their program.

## 2.6.7 Required Supplementary Courses for All Graduate Students

All graduate students, including part-time students, exchange students and visiting students must complete and pass the course SGS 101 Academic Research Integrity and Ethics and SGS 201 Accessibility for Ontarians with Disabilities Act (AODA) within the first month of their first term after their admission to graduate studies at McMaster. All students are required to take and pass SGS 101 and SGS 201 in order to graduate. Students may not graduate or register in subsequent academic years without having successfully completed this course.

#### 2.6.8 Placeholder Courses

To complete registration at least one course needs to be added for each term. If the student is not taking an academic course in a term, there are two different placeholder courses.

- SGS 700 for students who are in programs that are costed on a per term basis
- SGS 711 for students who are in programs that are costed on a per course basis

If a student does not add a course in each term the student will not have completed their enrollment. This will have impacts on all aspects of student life including scholarships, fee assessment and ordering transcripts.

If a student adds a placeholder course and subsequently adds an academic course the placeholder should be dropped.—. The placeholder will not be dropped if the only courses remaining include:

- SGS 101, and/or
- SGS 201, and/or
- Courses in the Education series such as EDUCTN 750

Students who are here as a visiting or exchange student researcher will need to enroll in SGS 302, students on an exchange who are not enrolled in any academic courses will need to enroll in SGS 702, =

## 2.6.9 Course Grading and Weighted Average Calculation

Instructors have the discretion of marking individual components of a course with either a letter or numerical grading scheme but final course grades taken at McMaster can only be reported as either Pass/Fail or letter grades. When numerical grading is used in a course, the final course average with decimal place of 0.5 or greater should be rounded up before conversion to a letter grade. The minimum passing grade for a graduate student in any course taken is a B-, including undergraduate courses or courses taken off campus.

Table (a): Graduate Student Grading Scale (except for MBA and Master of Finance):

Grade	Points	Equivalent Percentages	Pass/Fai
A+	12	90-100	P+
A	11	85-89	P
A-	10	80-84	_
B+	9	77-79	_
В	8	73-76	
B-	7	70-72	
F	0	69 and under	F

Note: Grades in graduate courses are reported as letter grades. Averaging of letter grades must be done using the McMaster 12-point scale.

MBA and Master of Finance Grading Scale:

Grade	Points	<b>Equivalent Percentages</b>	Pass/Fail
A+	12	90-100	P+
A	11	85-89	P
A-	10	80-84	
B+	9	75-79	
В	8	70-74	
B-	7	60-69	
F	0	59 and under	F

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

Course Grade	Grade Points		Course Units		
A-	10	X	6	=	60
В	8	х	6	=	48
B+	9	Х	3	=	27
F	0	Х	3	=	0
		Total	18		135
	To calculate Ave	rage: 135 ÷ 18	8 =7.5		

Note: Students are graded according to the type of course they are taking, for example non-MBA students who enlist in MBA courses are graded based on the MBA grading scale.

McMaster University's Policy on Graduate Course Outlines is available at:

http://www.mcmaster.ca/policy/faculty/Conduct/GraduateCourseOutlines.pdf

## 2.6.10 Incomplete Grades

For scheduled courses where the end date is known and complies to sessional dates, a grade must be supplied by the end of the course. Under exceptional circumstances a course instructor may approve an extension for the student for the completion of work in a course but must assign an Incomplete grade (INC) at the end of the course. Normally this extension is in the range of a few weeks. A student who receives an incomplete grade must complete the work as soon as possible, and in any case early enough to allow the instructor to report the grade by the sessional deadline noted as

Final Date to Submit Results of Incomplete Grades'. If the INC grade is not cleared by the deadline, <u>normally</u> an F grade will be entered. Milestones are not generally scheduled according to sessional dates and therefore, there is no allowance for an INC grade for such learning activities.

## 2.6.11 Failing a Course or Milestone

Failure in either a course or a milestone is reviewed by the appropriate Faculty Committee on Graduate Admissions and Study or the Associate Dean. The Faculty Committee on Graduate Admissions and Study or the Associate Dean acting on its behalf requests a departmental recommendation regarding the student, and this recommendation is given considerable weight. In the absence of a departmental recommendation to allow the student to continue, the student will be required to withdraw. Those allowed to remain in the program must either repeat or replace the failed course or milestone, per the decision of the Faculty Committee on Graduate Admissions and Study. A failing grade in a Certificate, Diploma, Master's or Doctoral course remains on the transcript. Students who fail a second course or milestone will not normally be allowed to continue in the program.

## 2.6.12 Repeated Courses

Graduate students may not repeat courses for credit. The only cases when a repeated course will show on the student's transcript is when remediating a failing grade (see 'Failing a Course or Milestone') or taking reading/special topics courses. Reading or special topics courses generally have a generic name in the program's calendar, but students may only have a repeated course show on their transcript if each time the topic was distinctly different from others previously taken.

## 2.6.13 Withdrawal

A student may withdraw voluntarily from their program at any point and be considered to be in good standing. There are exceptions where a student is being investigated for a breach of university policy and may not be allowed to withdraw until concluded, such as an investigation of academic dishonesty. The withdrawal will be recorded on the student academic record and reflected on the transcript. Re-admission for a student who has withdrawn in good standing will be made in competition with all other applicants.

Students withdrawn involuntarily will normally not be permitted to seek re-admission to the same program at any future time.

## 2.6.14 Outgoing Exchange Students

Students on exchange programs may take graduate courses that with approved transfer credit may count towards completion of course curriculum. Any credit for these courses will depend on the student achieving a passing grade based on the Graduate Grading Scale outlined in Section 2.6.9. Students are required to maintain enrolment at McMaster by registering for SGS 702.

## **Regulations for Degree Progression**

## 3.1 General Regulations on Supervision

It is the responsibility of the department/program to ensure that every graduate student has been assigned, at all times, a supervisor or a faculty advisor or a properly constituted supervisory committee, as appropriate. The supervisor must be declared within the first 5 months of registration into the program and for Ph.D. candidates, the supervisory committee must be declared within the first 12 months of starting the study. Master's candidate may or may not have a supervisory committee formed depending on the program.

The supervisory committee will consist of at least three members. Two, including the supervisor, must be from within the department/program. A third member, whose scholarly interests include the area of the student's main interest, may be from outside the department/program. One member may be appointed from outside the University with the permission of the Vice-Provost & Dean of Graduate Studies. For more information please consult the policy mentioned below on Supervision of Graduate Work. The department/program should ensure that the members of a supervisory committee are sufficiently competent and experienced to serve at the required level. In identifying a supervisory committee, the department/program should consider the following, among other things: the balance of the committee by rank and experience; publications and other demonstrations of competence in scholarship or research on the part of the supervisor. Supervisory committees for Ph.D. candidates shall be reviewed annually by the department/program. Supervisory committee members must continue their participation on the student's committee, even while on sabbatical, unless otherwise replaced by the Department Chair or delegate.

From time to time it may be appropriate for non-McMaster faculty, e.g., industry experts to be considered for roles on the supervisory committee. In cases such as this, approval is required by the Vice-Provost and Dean of Graduate Studies or delegate. Please refer to the policy at the following link.

While the supervisor and student have a mutual obligation to meet on an annual basis, the department/program shall ensure there is a formal regular meeting of each Ph.D. supervisory committee at least once within the reporting year (December 1-November 30), and possibly more often, to discuss the student's progress. Each Ph.D. supervisory committee must report at least annually on the student's progress and the department/program chair must forward such reports to the School of Graduate Studies for completion of the milestone. For Ph.D. students who have entered or transferred into the Ph.D. effective January 1st or May 1st, they must have a Ph.D. Supervisory committee meeting completed no later than November 30th of that same calendar year; those entering September 1st must have at least one meeting by November 30th of the next year. The report formally documents the supervisory committee's assessment of the progress of the student's program.

The frequency of meeting is left to the discretion of the supervisory committee based on the progress of the student and provided that a minimum of one meeting occurs per year. A shorter duration between meetings is normal for students who are having difficulty in their academic progression and each meeting should involve an assessment of progress. Occasionally, an additional meeting that is not assessed may be requested by the supervisory committee, student, department, or Associate Dean when there is a major gap in supervision, for example upon returning from a leave of absence or if there is a change in supervisor. If a PhD student is returning from a Leave of Absence, it is suggested that the Supervisory Committee meet with the student upon their return and use the Non-Graded PhD Supervisory Committee form available on the SGS website as a tool to set goals for the coming term. A graded PhD Supervisory Committee meeting is required no later than 6 months upon their return to ensure that these goals are met or nearly completed."

The department/program should prepare a set of guidelines for supervisors and students. The guidelines should deal with the selection and functioning of supervisory committees and should cover the joint responsibilities of faculty members and graduate students. The guidelines may be attached to or incorporated in department/program handbooks which give regulations supplementary to those in the Calendar. Items relevant to graduate supervision should be approved by the appropriate Faculty Committee on Graduate Admissions and Study. A copy of the guidelines shall be given to each faculty member and each graduate student.

It is possible to change supervisors or the membership of a supervisory committee, although this is not the norm. If the direction of the research changes, membership can be changed by mutual consent of the parties involved. Supervisors and/or supervisory committee members may not resign without the department's/program's approval. A change in supervisor is at the discretion of the department/program, not the student or supervisor.

If a student feels that they are receiving unsatisfactory supervision, they should consult the Department/Program Chair or Graduate Advisor. If this avenue is not sufficient, the student is encouraged to speak with the appropriate Associate Dean of Graduate Studies about the problem. A student without supervision may be withdrawn due to the requirement of supervision to complete the degree.

Graduate students and supervisors are encouraged to familiarize themselves with the McMaster University Graduate Work Supervision Guidelines for Faculty and Students, which follow below and to list of policies, policies on accommodations available on the School of Graduate Studies website at https://graduate.mcmaster.ca/resources.

#### 3.2 Theses

This section pertains to the electronic thesis requirement for both research Master's and Doctoral studies. The oral examination is not described in this section and can be found in the corresponding sections for the specific degree, Master's (Section 3.3.3) and Doctoral (Section 3.4.4). Electronic theses (e-theses) are text-based PDF files and may contain non-text elements such as embedded videos and sounds. Normally, a printed paper version is no longer acceptable for degree completion.

No research for use towards the degree requirements of a Master's or Doctorate at McMaster may be treated as a secret or classified document indefinitely, but may be permitted to be embargoed for up to one year normally while the student seeks publication by a publisher or to patent their work. All e-theses will be available to readers through MacSphere.

## 3.2.1 Preparing a Thesis

A candidate must present a thesis which embodies the results of original research and mature scholarship. In some disciplines, the appropriate form of thesis is a book-length dissertation with chapters. In some disciplines, a "sandwich thesis" composed of journal length articles connected by general introductory and concluding chapters will be appropriate. In the case of sandwich theses involving papers with multiple authors, the student must make substantial and significant contributions to the composition of text in each paper, and to be judged to have an intellectual leadership role with respect to the overall body of work.

As a general rule, doctoral students are urged to limit their theses to no greater length than three hundred (300) pages of text (Master's thesis to less than 200 pages). Guidance documents on preparing acceptable theses are found on the School of Graduate Studies' website. McMaster University accepts both standard theses and 'sandwich' theses as formats for the dissertation. Doctoral students and their supervisors should keep in mind that theses of extraordinary length are to be discouraged. In cases where students and their supervisors believe that responsible scholarly treatment of the thesis topic requires substantially greater length than that specified above, a written approval from the appropriate Associate Dean of Graduate Studies must be obtained before the external examiner is contacted.

Individual Departments or graduate programs may issue special instructions concerning the expected forms of graphs, tables, maps, diagrams, and sound and video files which may be included within the e-thesis. Hypertext links should be discouraged due to the limited duration that they remain active. Accepted forms of bibliographical reference in the particular discipline and other matters of format should be discussed with the thesis supervisor.

All copyrighted materials added into the thesis (text, figures, images, tables, etc.) exceeding 'fair dealing' requires written permission from the owner prior to thesis submission. This includes any publications by the student who has transferred ownership rights to a publisher. Students should consult with campus resources for assistance. See Section 5.4 for regulations regarding ownership.

## 3.2.2. Response Time for Theses Review

Supervisory committees should respond to the draft of a Ph.D. thesis within 2 months. Providing comments on individual chapters will take proportionately less time. Very long theses or chapters may take more time. There are busy periods within the academic year when the time taken to provide comments might be a bit longer than this norm. However, in no case should the response time exceed 3 months.

For Master's theses the corresponding times are 1 month and 2 months. Master's students are entitled to defend within 2 months of providing the final draft of the thesis to the department/program.

## 3.2.3 Submitting a Thesis for Defence

A completed draft of a thesis approved by the student's supervisor and/or supervisory committee for the defence may not be altered till after the defence; see Section 3.3.3 and Section 3.4.4 for acceptable time limits on review and editing by supervisors.

Prior to submitting the thesis to the School of Graduate Studies (for Doctoral students) or the degree program's administrative office (for Master's students), the document must be reviewed by the university's plagiarism checking software subscription meant for research documents to ensure originality of content. The original report produced by the software is to be reviewed by the student and supervisor, and the supervisor or delegate of the program's chair must approve the document for submission. Students and supervisors are expected to follow the University's Research Plagiarism Checking Policy for graduate theses. The department/supervisor will review the originality report generated by the software for the thesis and either recommend changes to the document or approve the document for the defence. Under no circumstances may a thesis be seen by the thesis examining committee (including the external reviewer in the case of a doctoral thesis) until the original report has been reviewed and approved by the supervisor or program, unless authorized by the Associate Dean of Graduate Studies.

In those instances where an examiner requests a printed copy of the thesis, it is the student's responsibility to produce a print version well before the oral examination.

#### 3.2.4 Revision of a Thesis after Defence

It is generally common that a thesis will require some minor modification as a result of examiners' comments at the defence. A student has 4-weeks after their defence date to complete these revisions and seek the approval of their supervisor and/or supervisory committee prior to submitting the final version to MacSphere. Fees may be levied past this period, but the student may still submit the document at any time afterwards.

## 3.2.5 Submitting a Final and Approved Thesis

All candidates for Master's or Doctoral degrees who have successfully completed their oral examinations and who have made all required revisions to the satisfaction of their supervisor must upload an electronic version of their final ethesis to MacSphere. The e-thesis must be presented in a format acceptable to the School of Graduate Studies.

Please note that changes to an e-thesis will not be accepted after it has been uploaded to MacSphere and that the document uploaded should be the version approved by the supervisory committee after the defence. Theses may be embargoed normally for up to one year from the date of submission to MacSphere, if requested by the student and supervisor. This restriction on publication is meant to give the research team time to publish or secure the intellectual property related to their work.

Tuition fees continue to be assessed until all degree requirements are met, including the successful submission of the final approved thesis to MacSphere. If a student uploads their final thesis mid-term or -month, their tuition will be assessed to the end of that month and any future enrolment will be removed during the clear to graduate process (e.g.,

student uploads in February, they will be refunded for March and April). Note that there is no grace period at the end of December or April for final thesis submission and completion of degree requirements.

## 3.3 Regulations for Master's Degrees

Three types of Master's programs are available, although not all departments offer each type. The first is the thesis program, consisting of both course work and a research thesis. The second type entails a major research paper or project rather than a thesis, as well as course work. Finally, some programs offer a course work-only curriculum. The choice of curriculum for Masters students can either be determined at the time of application or after the student is admitted, please consult the departmental listings to see which options are available in a specific discipline.

If a department offers more than one of these types, the ability for a student to switch between them is not automatic, but is sometimes permitted. Approval of the supervisor and department chair (or graduate chair/advisor) is required. In many departments, there will be consequences for the level of financial support to the student. As well, there are likely to be consequences for the expected time to completion. Both financial support and expected time to completion should be clarified prior to approval of the change. If such a change is approved, notification should be sent to the School of Graduate Studies by the department or program, along with any change to the payroll authorization. Graduate Studies approval is not required.

Master's programs are designed for those students who can devote their full time to graduate studies. (See Section 2.5.2 for the definitions of a full-time student.) Some departments also offer part-time programs. Consult the departmental listing in this Calendar for part-time program availability.

## 3.3.1 Program Requirements

A Master's program involving a thesis will normally be somewhat more specialized and will involve fewer courses than is the case in a Master's program without a thesis. A course Master's program is constructed by departments to contain a sufficient number of courses to make possible a diversified experience, for the student.

Each graduate program has to establishes its own minimum course requirement, subject to the approval of the appropriate Graduate Curriculum and Policy Committee, and Graduate Council.

A student's Supervisory Committee, Supervisor, or Departmental Chair may also require those in thesis degree programs to take courses in addition to the minimum prescribed by the program's regulations. These additional courses must be relevant to the student's program. They may be taken in another academic unit/department and may be at either the undergraduate or the graduate level.

Students will be required to meet any additional requirements of the program, including special seminars or colloquia. All departmental assessment rules and practices are subject to consideration by the appropriate Faculty committee on Graduate Curriculum and Policy, and approval by Graduate Council.

Approved assessment procedures must be clearly communicated to graduate students at the earliest opportunity after registration, generally in the program handbook.

## 3.3.2 Program Progression

The amount of work in a regular (full-time) Master's program for a student with good preparation varies across the campus, but generally, programs involving a thesis are designed to take longer than those without a thesis. Programs with a thesis typically take sixteen to twenty months. Non-thesis programs are generally shorter in duration.

For students in a regular program, the permissible time for completion of a Master's degree program is limited to three years from their initial registration in the program. For those students admitted to a part-time Master's program, and who complete all degree requirements while registered part-time, the permissible time is limited to five years from their initial registration. Please note, students who start as full-time and move to part-time continue to pay full-time tuition and time to completion does not get extended. Students who start as part-time and move to full-time will then pay full-time tuition and the time to completion will be based on full-time status. The terms students spent as a part-time student will be adjusted for purposes of time to completion. For more information please see Section 2.5.3 Definition of Full/Part-Time Status.

Students who run past the allotted time for program completion can be considered either Overtime or Out of Time and the terms counts for each are as follows:

Students are considered Overtime when they reach more than:

6 terms for a full time Masters

9 terms for a part-time Masters

12 terms for a full time Ph.D. 18 terms for a part-time Ph.D.

Students are considered Out of Time when they reach more than:

9 terms for a full-time Masters 15 terms for a part-time Masters

18 terms for a full-time Ph.D. 24 terms for a part-time Ph.D.

Each student's progress is reviewed annually by the department and on a more frequent basis by the supervisor. A student whose work is felt to be unsatisfactory (e.g., as determined by unsatisfactory or marginal or supervisory committee reports, failed courses, unsuccessful remediation attempts, failure to successfully complete other mandatory components of their program) may at any time be required to withdraw from the University. In those cases in which a student does not manage to complete the degree before the end of the time limit specified above, the University has no further obligation to provide supervision. Upon consultation with the department and on its recommendation, the student will be shown as having been "withdrawn in good standing due to time limit".

In the case of a student who had withdrawn in good standing, if a completed thesis is submitted, and is acceptable to the department, the student can be readmitted in order toto defend the thesis. However, thesis program students who have been withdrawn in good standing should be aware that they may be required to complete additional course work before being permitted to proceed to a defence of the thesis. In all cases, the department must first declare that the submitted thesis is ready for defense before the student will be readmitted. Students can only be readmitted to defend at the beginning of the academic term. If a student needs more than one term to complete they should be readmitted to the program and pay regular fees until all the program requirements are complete.

At the time of readmission to defend, the student will be required to pay a fee (equivalent to one term's tuition at the current part-time level 5 rate - see Section 4.1) to compensate for the costs of the defence and subsequent processing of the thesis. If a student needs more than one term to complete they should be readmitted to program and pay regular fees until all the program requirements are complete. All requests for readmission should be directed to the program for approval by the supervisor and program lead. Once approval is received, students are directed to pay the readmission fee and the department should submit the request for approval by the Associate Dean. The readmission decision is not subject to appeal.

A student enrolled in a course work or project program may also be readmitted if this is deemed acceptable by the student's department. However, course work and project program students who have been withdrawn in good standing should be aware that they may be required to retake courses in which the content is judged by their department to have

changed significantly since first completion and/or may be required to take additional courses that are necessary to fulfill current program requirements.

See Section 2.5.1 for information on continuity of registration.

#### 3.3.3 Thesis Defence

A thesis may be submitted at any time but a thesis defence may not be initiated until all other degree requirements are complete. The final date for submitting a thesis to the department for Fall or Spring Convocation is found in the Sessional Dates Section. The thesis will be examined by a committee of not fewer than three members (including the supervisor and an examiner external to the supervisory committee) who will be appointed by the department/program chair; the thesis will be defended by the candidate in an oral examination before this committee. An oral defence is a mandatory requirement for degree completion. The Vice-Provost & Dean of Graduate Studies may appoint members to these committees. The time of the defence will be set by the department/program chair; normally this will be about two weeks after the completed thesis (as an electronic file; see section 2.8) has been submitted to the department for examination.

After a discussion of the examination, the student will be dismissed for the deliberation period and the Chair will ask for a vote on the success or failure of the defence. If the examiners approve the defence, the Chair will ask the examiners to complete the Examination Report by initialing appropriately. The student will be invited back into the exam for a decision. In the event that minor revisions are required to the thesis, the Chair of the examination committee is responsible for ensuring that (1) the candidate is advised of the revisions, (2) the candidate receives and understands the 'Final Thesis Submission form' to be used by the Supervisor to confirm that the revisions have been made, and (3) the supervisor is also aware of the form. The Chair will complete and sign the Examination Report and return it to the School of Graduate Studies.

However, if there are two or more negative or abstaining votes, with at least one of these votes being from a member of the supervisory committee, the candidate will be deemed to have failed the defence, and a reconvened oral defence must be held at a later date. The candidate should be told as clearly as possible by the Chair and the examining committee what he/she must do to improve the defence. The reconvened defence is the candidate's final opportunity to complete the degree. Membership on the reconvened examining committee should be the same as that for the original defense, except that one or two substitutions are permitted in order to expedite scheduling of the reconvened defence. If the defense fails a second time, that decision is final, and is not open to appeal.

Please note: when a thesis is submitted and published to MacSphere students must be aware that their name will appear as author of the document. In exceptional circumstances a pen name may be used subject to written approval of the Vice-Provost and Dean of Graduate Studies.

# 3.3.4 Project

In departments where there is the option of submitting a project, the department regulations must be observed. If the project is to be submitted to the University Library, preparation of the associated report shall follow the rules governing theses. Projects can be treated as courses or milestones rather than theses in this Calendar and their associated evaluation component is due by the end of term.

# 3.4 Regulations for the Doctor of Philosophy Degrees

The regular doctoral programs at McMaster have been designed for students who can devote full time to their studies. However, some departments at McMaster University will consider individual applicants to undertake Ph.D. studies on a part-time basis. No Department or Program is obligated to offer part-time Ph.D. work. Consult the department listings

for information as to whether a part-time program is available in any particular department, or correspond with the department directly.

## 3.4.1 Program Requirements

Each graduate program has to establish its own minimum course requirement, subject to the approval of the appropriate Graduate Curriculum and Policy Committee, and Graduate Council.

A student's supervisory committee or Departmental Chair may also require a student to take courses in addition to the minimum prescribed by the program's regulations. These additional courses must be relevant to the student's program. They may be taken in another program and may be at either the undergraduate or the graduate level.

Students will be required to meet any additional requirements of the program, including special seminars or colloquia. All departmental assessment rules and practices are subject to consideration by the appropriate Faculty committee on Graduate Curriculum and Policy, and approval by Graduate Council.

Approved assessment procedures must be clearly communicated to graduate students at the earliest opportunity after registration, generally in the program handbook.

## 3.4.2 Program Progression

The minimum time in which to complete a Ph.D. program at McMaster is 9 terms beyond the bachelor's level or 6 terms beyond the master's level. However, the minimum time may be reduced by up to one year for graduate work beyond the Master's level taken in a university or research institution approved by the Faculty Committee on Graduate Admissions and Study or Associate Dean.

Completion of the Ph.D. degree is normally limited to 18 terms from initial registration in a regular doctoral program at McMaster. The time for completion of the Ph.D. program for those admitted to a part-time program is normally limited to 24 terms from initial registration at McMaster as a Ph.D. student.

Each student's progress is reviewed annually by the department and on a more frequent basis by the supervisory committee. The committee will assess the student's progress in their program. Students must receive a grade of at least satisfactory. If the committee reports that progress is marginal one or more times the student may be required to withdraw from the University. A student who encounters difficulties arranging a meeting of this committee should consult the chair, director, or graduate coordinator of the graduate unit in advance of the relevant deadline for doing so.

In those cases in which a student does not manage to complete the degree requirements before the end of the time limit specified above, the University has no further obligation to provide supervision. Upon consultation with the department and on its recommendation, the student will be shown as having been "withdrawn in good standing due to time limit".

Please note, students who choose to move from part-time to full-time or from full-time to part-time will be governed by the time to completion and fees associated with the degree to which they were admitted. For more information please see Section 2.5.3 - Definition of Full/Part-Time Status.

If a completed thesis is submitted, and is acceptable to the department, the student can be readmitted in order to defend the thesis. Students who have been withdrawn in good standing should be aware that they may be required to complete additional course work before being permitted to proceed to a defence of the thesis. In all cases, the department must first declare that the submitted thesis is ready for defence before the student will be readmitted. Students can only be readmitted to defend at the beginning of the academic term.

At the time of readmission to defend, the student will be required to pay a fee (equivalent to one term's tuition at the current part-time level 5 rate - see Section 4.1) to compensate for the costs of the defense and subsequent processing of the thesis. If a student needs more than one term to complete they should be readmitted to program and pay regular fees

until all the program requirements are complete. All requests for readmission should be directed to the program for approval by the supervisor and program lead. Once approval is received, students are directed to pay the readmission fee and the department should submit the request for approval by the Associate Dean. The readmission decision is not subject to appeal.

# 3.4.3 Comprehensive Knowledge

All Ph.D. candidates at McMaster are expected to acquire, during the course of their studies, a comprehensive knowledge of the discipline or sub-discipline to which their field of research belongs. The School of Graduate Studies does not prescribe any particular way to assess this knowledge, whether by a Comprehensive Examination or by some other format. All doctoral programs are expected to assess and provide feedback to the Ph.D. candidates, as early as possible and as frequently as possible, on the breadth or depth of their knowledge, critical thinking and independent research skills. This assessment and feedback will normally begin between the 12th and 20th month after the student begins doctoral-level work at McMaster University, with an upper limit of 24 months. For a part-time Ph.D. student the upper limit is 36 months. The approach to assessment and its administration are the responsibility of the program in which the student is registered, not of the student's supervisory committee.

A Comprehensive Examination or alternative assessment of comprehensive knowledge must include a provision for second opportunity for assessment should the student fail the first attempt. This second assessment is given in place of any "re-read" of a comprehensive evaluation, which is explicitly excluded from the Student Appeal Procedures. The second opportunity will normally occur between one to six months after the student was notified that they had failed the original assessment. A failure at the second assessment will require the student to withdraw from the program.

Departments may hold transfer, qualifying, or entrance exams at the start of a student's doctoral program, but those exams are distinct from the assessment of comprehensive knowledge

#### 3.4.4 Thesis Defence

An oral defence conducted by an examining committee is a mandatory requirement for degree completion. Normally the thesis will be distributed to committee members and examiners in an electronic format (see Section 3.2 - Theses). The oral defence will not be arranged until a majority of the supervisory committee has approved the thesis for defence and an agreed date of defense has been received.

Please note that thesis defences may not be initiated until all other degree requirements, including Comprehensive Examinations, have been completed.

#### Selection of the Examining Committee

Normally the examining committee will consist of the following members: the student's supervisor, at least two members of the supervisory committee and an external examiner The Examining Committee must not exceed five voting members. If there are more than four members on the student's supervisory committee, the additional members are welcome to attend the defence and ask questions in the time allotted for audience members. Ahead of the oral defence the external examiner will provide a written report to the Vice-Provost & Dean of Graduate Studies judging whether the written thesis is satisfactory for defence. An Examining Committee Chair will also be present at the defence but is not considered part of the examining body. An eligible Examining Committee Chair is a tenured faculty member (or Professor Emeritus) who has supervised a doctoral student to completion, and who has also participated previously in the McMaster Ph.D. defence process.

Selection of an external examiner is the responsibility of the Vice-Provost & Dean of Graduate Studies or their delegate. To aid in that selection, the supervisory committee may be required to provide, through the student's supervisor or Chair of the Department (or equivalent), the names and contact information for potential examiner/s. In all cases the nominees must be approved by the Department Chair (or equivalent).

The nominees for external examiner must have no current primary appointments/affiliations or within the past 6 years, and must be at arm's length from all members of the supervisory committee and the student. The definition of 'arm's length' is as follows: The nominees should not have been a research supervisor or student of the supervisor or the student within the last 6 years; should not have collaborated with the supervisor or the student within the past 6 years, or have made plans to collaborate with these individuals in the immediate future. There also should be no other potential conflicts of interest (e.g., personal or financial).

#### Scheduling and Conducting the Oral Examination (Oral Defence)

There are blackout periods over the course of an academic year that affect\_defences coordinated by SGS. Please refer to the SGS sessional dates to prepare your defence appropriately.

Dates scheduled for doctoral defences assume that the external reviewer will conclude that the written thesis is acceptable and ready for oral examination. When the external reviewer concludes otherwise, the defence date may no longer be held on the planned date and the situation reviewed in accordance with the process around a negative external report as outlined below. Any travel and/or employment arrangements made by the candidate based on the original defence date are entirely at their own risk.

The external examiner must provide a report to the School of Graduate Studies with a written assessment of the thesis at least one week before the scheduled defence. If the report is not received in time, candidates will be given the option to postpone their defence. Whether the assessment is positive or negative, the School of Graduate Studies will send the report of the external examiner to the supervisory committee. The committee must provide a copy of the report to the student. Should the assessment be negative, the appropriate Associate Dean will communicate with the supervisory committee and student to discuss the outcome of the review. This is normally followed by a supervisory committee meeting to discuss the situation and proposed plan going forward if the external examiner indicates that the thesis is not acceptable for defence. The supervisory committee and candidate (in consultation with the Associate Dean) may wish to revise and resubmit the dissertation and proceed proceed to the defence with the participation of the same external examiner. A second possible outcome of the review is that the associate dean will recommend to the Vice-Provost & Dean of Graduate Studies that the thesis (in its original format or revised) be reviewed by a different external examiner. A candidate may revise and resubmit the thesis only once. In all cases, despite a negative assessment, a candidate has the right to proceed to a defence.

If the external report has not been received five business days before the defence, the candidate and the committee will be notified that the defence is at risk of being cancelled.

If the external report has not been received two business days before the scheduled examination, SGS will notify the candidate that the defence will be rescheduled.

Subsequent to the receipt of the external examiner's report, an oral defence will be convened by the Vice-Provost & Dean of Graduate Studies, chaired by themselves or their delegate and conducted by all members of the Examining Committee. Quorum for the examination will be the Chair of the examining committee and the supervisory committee plus one additional examiner. Normally, the presence of the external is mandatory at the defence, either in person or electronically. The oral defence will be open to members of the university community and the public who wish to attend as observers, unless the student requests a closed defence. The Ph.D. defence presents the culmination of a number of years of scholarly work which are publicly funded. It is important, therefore, that in all but exceptional circumstances the student presents the result of this effort to the public. The examination proper will be conducted only by the members of the examining committee. When they have completed their questions, the Chair may permit a few minutes of questioning by visitors. Normally the student will attempt to answer visitors' questions, but these are not to be considered part of the examination for the degree. Normally, examination of the candidate will not take more than two hours. In no case should it take more than three hours. The Candidate and observers will withdraw prior to the committee's deliberations on the student's performance at the defence. After a discussion of the examination, the Chair will ask for a vote on the success or failure of the defence.

If the examiners approve the defense, the Chair will ask the examiners to complete the Examination Report by initialing appropriately. The student will be invited back into the exam for a decision. In the event that minor revisions

are required to the thesis, the Chair of the examination committee is responsible for ensuring that (1) the candidate is advised of the revisions, if any, (2) the candidate receives and understands the 'Final Thesis Submission form' to be used by the Supervisor to confirm that the revisions have been made, and (3) the supervisor is also aware of the form. The Chair will complete and sign the Examination Report and return it to the School of Graduate Studies.

On the other hand, if there are two or more negative or abstaining votes, with at least one of these votes being from a member of the supervisory committee, the candidate will be deemed to have failed the defence, and a reconvened oral defence must be held at a later date. The candidate should be told as clearly as possible by the Chair and the examining committee what he/she must do to improve the defence. The reconvened defence is the candidate's final opportunity to complete the degree. Membership of the reconvened examining committee should be the same as that for the original defence, except that one or two substitutions are permitted in order to expedite scheduling of the reconvened defence. If the defence fails a second time, that decision is final, and is not open to appeal.

After a successful defense, the candidate must make the revision suggested by the examining committee to the satisfaction of the Supervisor and then submit an electronic copy to the School of Graduate Studies via MacSphere (see Section 3.2.5). Students are normally expected to submit their final thesis within four weeks of a successful defence.

Tuition fees continue to be assessed until all degree requirements are met, including the successful submission of the final approved thesis to MacSphere. If a student uploads their final thesis mid-term or -month, their tuition will be assessed to the end of that month and any future enrolment will be removed during the clear to graduate process (e.g., student uploads in February, they will be refunded for March and April).

Please note: when a thesis is submitted and published to MacSphere students must be aware that their name will appear as author of the document. In exceptional circumstances a pen name may be used subject to written approval of the Vice-Provost & Dean of Graduate Studies.

#### **Financial Matters**

#### 4.1 Fees for Graduate Students

(The Board of Governors reserves the right to amend fees after the printing of this statement.) These regulations apply to tuition and mandatory supplemental fees. They cover the various charges which would be incurred for reasons of late payment or late registration. The 20212022-2022 fees schedule is in effect for a period of September 1, 2021 2022 to August 31, 2022-2023 and applies to all graduate students whether registered in regular or part-time degree programs. Please consult the Student Affairs website for the official graduate fees.

#### **Notes:**

Students promoted to a Doctoral program from a Master's program will be considered as new admissions for the purpose of time limits for completion of the degree requirements, eligibility for financial assistance, and fee assessment.

Some international students may be eligible to pay Canadian fees depending on various immigration policies, and the Ministry Funding Manual.

Program Fees assessed on a term-by-term basis

Most students will pay regular tuition fees and these fees are assessed on a term-by-term basis. <u>Part-time fees apply only to those students originally offered admission to a part-time program</u>. If students change status from full-time to part-time, they will still be required to pay regular (full-time) fees. In most cases part-time fees will allow registration in up to 3 half courses per academic year, in programs where fees are costed on a term-by-term basis. Students

registering in more than 3 half courses will be assessed full-time fees. In situations where a student in a part-time program completes the degree or withdraws from the university, fees for the academic session will be assessed by the number of terms or number of half courses (whichever is the greater). Term count is adjusted if student changes status from part-time to full-time at a ratio of 2:1.

If a full-time student wishes to change their status from full-time to part-time, they will still continue to pay full-time tuition fees for the entire program. The most common occurrence of this situation would be when a student gains full-time employment, changes in status to part-time will be effective at the start of term. Their mandatory supplementary fees however would be reduced to the part-time rate at the start of the next academic year.

#### Program Fees assessed on a course basis

Students enrolled in programs with course costed tuition will be assessed tuition fees for each course that they take. They will pay supplemental fees based on their status at the time of program entry. Course load restrictions may be required by the program based on status, please check the program handbook for these limitations. The limit of 3 half courses per year does not affect their status.

Part-time students may not gain financial advantage over full-time students with respect to the overall cost of fees for their program as a function of their part-time status. The total cost of the part-time program cannot be less than the full-time.

Ph.D. students who have been registered as full-time for longer than the normal period of funding eligibility (as defined in 4.2.1 Financial Support for Graduate Students) will be assessed discounted tuition fees.

A fee is charged for each course (including extra courses or audited courses) taken on the basis of Section 2.1.8 by persons who are not registered in a term-charged program graduate students. The tuition fee for certain courses may be higher.

#### Leave of Absence

Students on leave of absence do not pay tuition fees for any complete months that they are on leave but do pay mandatory supplemental fees. Students who are on leave for a complete academic year do not pay mandatory supplemental fees.

#### Readmission

Students who have "withdrawn in good standing due to time limit" do not pay fees until readmission. Students must pay the readmission application fee to have their request considered for approval. Readmission will only take place at the start of a term for students being readmitted to program and tuition fees will be calculated based on the return date. Students readmitted to defend will be readmitted at the point that they are ready to defend. See Section 4.1.5 (Readmission Tuition Charges).

#### Mid-Year Admissions

Students admitted in January or May, will have a slightly different schedule of fees for tuition and mandatory supplemental fees.

Enquiries should be referred to Student Services: https://registrar.mcmaster.ca/fees/tudent Accounts and Cashiers (http://www.memaster.ca/bms/student/) 905-525-9140-ext. 24478

# 4.1.1 Payment of Fees

In order to register a student must pay their tuition balance and all additional fees by the deadline. Details for payment methods and due dates can be found on the Student Affairs website.

## 4.1.2 Non-payment of Fees or Charges

Students with outstanding accounts will:

- a. not receive academic results, including but not limited to exams, grades, transcripts, diplomas; and
- b. not be permitted to register for the next academic year until the account is settled.

#### 4.1.3 Discounted Fees - Ph.D. Students

Full-time Ph.D. students (Canadian and international), who have reached term 13 or greater of their Ph.D. studies, will be charged tuition at a discounted fee rate.

## 4.1.4 Change in Residency

Changes in residency that occur when a student becomes either a permanent resident or Canadian citizen will have an impact on fees. These changes can only be accepted at the start of term and cannot be applied retroactively.

## 4.1.5 Readmission Tuition Charges

Students who do not register and pay tuition fees for any academic session are deemed to have withdrawn. These students and those who have been withdrawn in good standing due to time limit are required to apply for readmission. Master's or Ph.D. students withdrawn in good standing who are being readmitted to defend their thesis pay fees at the "Readmission to Defend" rate and are not eligible for a refund. If students do not defend in the term in which they were readmitted, their tuition reverts to the typical charges for their term count in their program including charging supplemental fees.

Students who withdrew voluntarily or did not register for an academic session and wish to apply for readmission to their academic program are readmitted at the registration status they were at the time of withdrawal and charged the current calendar rate of tuition and supplemental fees accordingly. Readmissions in this category are not eligible for the part-time rate unless the student was registered in a part-time program at the time of withdrawal.

#### 4.1.6 Refund of Tuition Fees

A student, who completes the degree requirements, withdraws from the program, or takes a leave of absence prior to the end of the academic year will be entitled to a refund, based on the method of payment per section 4.1.1 above. If a student uploads their final thesis mid-term or -month, their tuition will be assessed to the end of that month and any future enrolment will be removed during the clear to graduate process (e.g., student uploads in February, they will be refunded for March and April). The refund is based on the schedule set out by Student Accounts and Cashiering (http://www.memaster.ea/bms/student/). (Note: a refund does not apply to students who are readmitted to defend.) Mandatory supplemental fees are not refundable.

### 4.2 Financial Assistance

## 4.2.1 Financial Support for Graduate Students

McMaster University aims to provide competitive funding offers to highly qualified candidates recommended for admission to our research-based graduate programs. Each program is responsible for determining the level of funding in their offers, although the School of Graduate Studies (SGS) sets a minimum level of funding for full-time doctoral studies for the first four years of full-time enrolment.

Financial support for Doctoral studies will normally be provided for the first four years of full-time enrolment, and will be comprised of funds from the admitting Faculty or graduate program, including departmental scholarships/awards, research scholarship support, and possibly employment (e.g. teaching assistant). The annual level of financial support will meet or exceed the minimum level of support set by SGS, provided all conditions stated in the Financial Support subsections below are satisfied.

Funding for students enrolled in most research-based Master's programs will normally be provided for the nominal duration of the program. There is no minimum level of funding stipulated by SGS for Master's programs.

Teaching Assistantships (TA) (or Research Assistantship-in-lieu under the collective agreement between Canadian Union of Public Employees, Local 3906, Unit 1 and McMaster University) and contract employment income are offered to many graduate students registered in full-time programs. TA duties vary according to department but will normally consist of performance in connection with undergraduate teaching, such as leading tutorials, demonstrating labs, and marking assignments. The award of a TA may vary but should not exceed 10 hours per week, plus three hours of training per term. TA funding is contingent on fulfillment of the employment obligations and maintaining satisfactory work performance, as stated in the letter of offer or employment contract. No exceptions of more than 505 hours in a single academic year will be approved (see section 2.5.3). Employment is paid as earned over the period in which the work is performed.

# **4.2.1.1** Minimum Academic Requirement for Financial Support

Only registered full-time students who maintain regular attendance on campus and meet program conditions for progression towards their degree shall continue to receive the funding outlined in their offer of admissions.

#### 4.2.1.2 Duration of Financial Support

Normal duration for financial support in a research-based Master's programs varies from two to six terms of full-time registration, depending on the program.

Normal duration for financial support in a Doctoral program is the first twelve terms of full-time registration.

Full-time students transferring from a Master's program to a Doctoral program are eligible for financial support at the level of their original offer or at the minimum funding level set by SGS, whichever is higher, for an additional twelve consecutive terms from the time of their transfer to PhD.

There is no obligation for continued financial support exists for full-time students transferring from a Doctoral program to a Master's program.

# **4.2.1.3 Minimum Level of Financial Support for Doctoral Students**

All full-time Doctoral students who meet the stated criteria under Section 5 shall receive financial support of a minimum of full-time tuition plus \$13,500. OSAP is excluded in the calculation of the financial support package. Examples of situations where the minimum financial support does not apply or ceases to apply are:

A student may decline all or part of the funding offer without prejudice to their admission. Where a newly enrolling student declines part of the funding package, the program must retain a copy of the written statement (either hardcopy or electronic) sent to the student acknowledging the change in financial support, which remains in effect for the length of the program. The program is not obligated to provide additional funding in compensation for the declined part(s) of the funding package.

In rare cases where a student is terminated from their employment duties (e.g. teaching assistantship), the program bears no obligation to compensate for the lost funding.

Where a successful applicant has been made an offer based on funding external to the university, the support committed to the student (by the university) for the nominal duration of their degree will be the difference between the funding minimum and the external scholarship value. In cases where an external scholarship ceases to be paid out in whole or in part, the university is not obliged to increase its financial support package.

## 4.2.2 Financial Payments to Graduate Students

International students must provide a clear demonstration of their means of financial support in order to obtain a study permit.

The University is required by law to deduct Canada Pension Plan and Employment Insurance premiums on all employment income and any appropriate union dues and deductions. Income Tax will be assessed on employment income only. Net earnings will be deposited bi-weekly, directly into a Canadian Bank account. A statement of your earnings is available online after each pay. The direct deposit method of payment is mandatory.

Enquiries about employment should be referred to Human Resource Services (http://www.workingatmcmaster.ca/) 905-525-9140 ext. 22247.

If the student withdraws or graduates from the program part way through an academic year, the student is not entitled to any further portion of the award. Note that funding monies owing to McMaster, such as award/scholarship/bursary repayments, will show as an outstanding balance on their student account.

# Additional University Regulations Affecting Graduate Students

# 5.1 Academic and Research Integrity

The following brief statements are excerpted in part from the McMaster University Academic Integrity and Research Integrity Policies. For guidance on how to proceed in the case of suspected academic dishonesty or research misconduct, please consult the Office of Academic Integrity and the complete policies at https://www.mcmaster.ca/academicintegrity/. The Associate Deans of Graduate Studies are available for confidential consultations on matters related to academic and research integrity.

#### **Academic Work**

Academic work includes any academic paper, term test, proficiency test, essay, thesis, research report, evaluation, project, assignment or examination, whether oral, in writing, in other media or otherwise and/or registration and participation in any course, program, seminar, workshop, conference or symposium offered by the University.

For graduate students, comprehensive/qualifying exams, any research work, and thesis work (a thesis proposal, or thesis draft, or draft of one or more chapters) also constitute academic work and must adhere to standards of academic integrity.

## **Academic Dishonesty**

#### **Definition**

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage.

Wherever in this policy an offence is described as depending on "knowingly," the offence is deemed to have been committed if the person ought reasonably to have known.

Students and applicants to graduate programs are responsible for being aware of and demonstrating behaviour that is honest and ethical in their academic work. Such behaviour includes:

- a. adhering to the principles of academic integrity when submitting application materials
- following the expectations articulated by instructors for referencing sources of information and for group work:
- asking for clarification of expectations as necessary;
- identifying testing situations that may allow copying;
- e. preventing their work from being used by others, e.g., protecting access to computer files; and
- f. adhering to the principles of academic integrity when conducting and reporting research.

Students are responsible for their behaviour and may face penalties under the Academic Integrity or Research Integrity policies if they commit academic dishonesty or research misconduct.

Graduate students, having been deemed admissible to higher studies, are expected to be competent in the acknowledgement of other people's work, whether that work is in print or electronic media.

Graduate students are expected to understand the demands of ethical conduct of research and reporting research results and behave ethically and responsibly in conducting and reporting research. All graduate students are responsible for familiarizing themselves with the definition of research misconduct in the University's policy, namely, "a researcher must be honest in proposing, seeking support for, conducting, and reporting research; a researcher must respect the rights of others in these activities."

#### Research Integrity

The University states unequivocally that it demands research integrity from all of its members. Research misconduct, in whatever form, is ultimately destructive to the values of the University and society; furthermore, it is unfair and discouraging to those who conduct their research with integrity. This Policy applies to all institutional personnel. The Office of Academic Integrity is the administrative office responsible for the receipt and processing of allegations of misconduct at the investigation stage. A complete list of Policy violations can be found within the Research Integrity Policy.

## 5.2 Code of Conduct

McMaster University is a community dedicated to furthering learning, intellectual inquiry, and personal and professional development. Membership in the community implies acceptance of the principle of mutual respect for the rights, responsibilities, dignity and well-being of others and a readiness to support an environment conducive to the intellectual and personal growth of all who study, work and live within it.

The Code of Conduct outlines the limits of conduct considered to be consonant with the goals and the well-being of the University community, and defines the procedures to be followed when students fail to meet the accepted standards.

Copies of the *Code of Conduct* may be obtained from the website at http://studentconduct.mcmaster.ca/student code of conduct.html.

For Health Sciences graduate students, a supplementary guideline, Professional Behaviour Code of Conduct for Learners, applies to learners in health care professions and research. This guideline outlines the professional behaviours in all academic and clinical settings that must be understood and followed.

Copies of the Professional Behaviour Code may be obtained from the website.

# **5.3 Appeal Procedures**

The University has a responsibility to provide fair and equitable procedures for the lodging and hearing of student complaints arising out of University regulations, policies and actions that affect students directly. The procedures described in the <a href="Student Appeal Procedures">Student Appeal Procedures</a> are intended to provide a mechanism to fairly address alleged injustices.

Students who wish to raise questions or who have a concern are strongly encouraged to communication informally with their instructors, the Chair of their Supervisory Committee (or the Department Graduate Advisor where no committee exists), the Department Chair and/or the Associate Dean of Graduate Studies, the University Ombuds, or the appropriate administrative officer *before* seeking a review under the formal procedures. Experience has shown that many complaints can be resolved satisfactorily through informal communication. Students are requested to speak with the University Secretary regarding a complaint before submitting an application.

Students should seek remedies for their grievances as promptly as possible and must do so within the time limitations set out in the Student Appeal Procedures.

A Master's or Ph.D. thesis, and a Ph.D. comprehensive exam are specifically excluded from the re-read procedures identified in the Student Appeal Procedures. If a student does poorly in any of these examinations, the original examining committee is required to allow the student a second opportunity at the examination after at least a week. If the student fails on that second attempt, no additional examinations are permitted.

The Student Appeal Procedures may be found at:

http://www.mcmaster.ca/policy/Students-AcademicStudies/StudentAppeal.pdf

# 5.4 Ownership of Student Work

In Canada, the author is the immediate owner of the copyright in an original work, except when the author is employed to create such material. 'Copyright' is an exclusive property right to publish, produce, reproduce, translate, broadcast, adapt or perform a work, as defined in the Copyright Act (R.S.C. 1985, c. C-42, as amended). For work done by a graduate student, McMaster has the following policies related to the interpretation of copyright and other aspects of intellectual property rights. These policies distinguish in general between items done solely by the student and those undertaken as part of a joint research effort.

In the former case, the intellectual property is primarily the student's, but the University reserves certain rights as detailed in the remainder of this section. In the latter case, the intellectual property rights involve the student, the research supervisor, (and possibly other individuals as well), the University, and on occasion the financial sponsor of the research. If the work is anticipated to have commercial possibilities, it is recommended that the parties involved agree in writing beforehand on the sharing of any financial returns. The Associate Deans of Graduate Studies are available for confidential consultations on matters of ownership of student work involving faculty and/or other individuals.

# **5.4.1** Examinations, Reports and Papers Done as Part of Course Requirements

When work that is eligible for copyright is submitted to meet a requirement of a course, the University acknowledges the student's ownership of the copyright, but places the following conditions on the submission of the work to meet course requirements.

- a. The original physical document becomes the property of the University. This applies particularly to examination answer scripts, and may also be applied to term papers and other course work.
- b. Except for examination scripts, the University receives a royalty-free, non-exclusive licence to make copies of the work for academic purposes within the University, and to circulate the work as part of the University library collection.

## 5.4.2 Theses and Master's Project Reports

As with other papers, the University recognizes that the student holds copyright to the finished thesis. Copies of the thesis shall have on them in a prominent place on the title page the international copyright notice.

The student is required to sign a licence to the University library (and for Ph.D. students an additional licence to the National Library). (See Section 2.8.3) These licences grant the two libraries permission to reproduce the thesis and to circulate it, but do not affect ownership of the copyright.)

However, the University also recognizes that the ideas in the thesis will often arise from interaction with others. In some cases, this interaction will have been solely with the thesis supervisor; in other cases, a larger research team will have been involved. For this reason, it is understood that the copyright refers only to the written document of the thesis. The ideas, or commercial exploitation of the work may or may not be the exclusive property of the student. For the student who has worked closely with a supervisor, or as part of a research group, the rights to publish, the ownership of original and secondary research records, patent, or commercially exploit the results of the research are shared with the supervisor and/or the research group, and with the University. In those cases in which the work has been supported in part by research grants or contracts, there may be other conditions affecting any patent or commercial exploitation. (The student should be made aware of any such conditions before work begins.)

# 5.4.3 Computer Programs

Computer programs written as part of employment duties, as for example by a teaching assistant, are the property of the employer, as specified in the Copyright Act. Computer programs written as part of course work, a project or a thesis may also have value as a potentially marketable intellectual property. The University recognizes that such software may arise in two different ways, and accordingly has two policies. In setting forth these policies, it is understood that in those cases in which software development draws upon other software owned or licensed by the University, the terms and conditions of the licence or purchase must be followed.

- a. Where a student develops such software at the direct request of a supervisor, and under supervision, it is assumed that there is joint ownership of the intellectual property rights. In such cases, it is recommended that the individuals involved co-author a working paper documenting the software, rather than including it as an appendix to a thesis or report. Prior agreement between the student and supervisor that this is to be the case would be helpful, but is not mandatory.
- b. Where a student develops such software on their own, as for example for an independent project in a course, copyright remains with the student. As a condition of using University computing facilities, the student is required to grant the University a royalty-free licence to use the software. This includes the right of the University to distribute copies of the software to McMaster faculty, staff, and students for the University's administration education and research activities. This licence does not include the right to use the software for commercial purposes or to distribute the software to non-McMaster people.

#### 5.4.4 Research Data

As with computer software, the University recognizes that research is conducted and data are acquired in two different fashions. When the data are acquired as part of a joint or collaborative effort, such as one relying on the equipment within a laboratory, they are not solely the property of the student, although some of the data may ultimately appear in tables or appendices in a completed thesis. As a general rule, such data are the joint property of the student and the research supervisor, either of whom has the right to make them available to other individuals as well. Both student and supervisor are responsible for insuring that proper acknowledgement of the contributions of the student, supervisor, and other members of the research team is made when the data are released in any form. Students are responsible for ensuring that there is adequate documentation of their research work and findings and that their records meet granting agency, program and supervisor expectations. While original research records are normally the property of the faculty supervisor overseeing the work, students are expected to generate and properly secure adequate, original documentation, in addition to keeping personal copies, in order to ensure the integrity of their records.

When the data are acquired through the student's individual effort, and without the use of University laboratories or funding, then they are usually the property of the student making that effort. However, exceptions may occur when the student collects data using research instruments, including interview schedules and questionnaires, developed wholly or in part by the research supervisor or by some other person or agency. In such instances the right to ownership and/or use of the data may be shared among the parties involved. Given the range of possible alternatives it is not possible to set absolute guidelines in advance covering all such situations. Consequently, it is recommended that students and supervisors make clear agreements in advance concerning the ownership and use of data collected in this fashion. Ownership of data may also be affected by the terms of a research contract that has supported the work.

# 5.4.5 Equipment

If University resources have been applied to the construction or design of equipment, it is not the property of the student, but of the University. Equipment constructed or designed as part of course or thesis work is the property of the student if the work, materials, and workroom space have been provided by the student or other non-University source. Ownership of newly constructed equipment may also be specified in a research contract that has supported the work.

# 5.5 McMaster University Policy for Academic Accommodation of Students with Disabilities

Below are excerpts from the Academic Accommodation of Student with Disabilities policy.

McMaster University is committed to excellence in teaching and learning. The University strives to ensure every student is afforded an academic environment that is dedicated to the advancement of learning and is based on the

principles of equitable access and individual dignity. At McMaster we nurture and support a culture of acceptance, inclusion and the celebration of diversity. Creating a learning environment that is accessible to all students is a value embedded within the University's fabric as well as our policies, services and practices.

Students must meet University and program/degree requirements, including participation in classes, labs, clinical or practicum placements, tutorials, etc. Students seeking an Academic Accommodation are required to participate fully in the Academic Accommodations process. This participation includes: a) when the student is aware of their disability and the need for Academic Accommodation, contacting Student Accessibility Services before classes or academic work begins; b) providing the information required so that Student Accessibility Services can assess the duty to accommodate and develop Accommodation Plans; c) after the approval of the Accommodation Plan, should the student have any questions they may choose to speak with their instructor, SAS advisor or Faculty Office to review steps for the implementation of the Accommodation Plan; d) notifying Student Accessibility Services of any changes that may impact already established Accommodation Plans in a timely fashion.

Student Accessibility Services requires adequate time to review requests and coordinate needed arrangements. Some accommodations take longer to arrange than others (e.g. sign language interpreters and transcriptions), and students with these types of requests should be particularly cognizant of the timing of their requests. Failure to make a request or supply the required documentation in a timely manner may delay the approval and/or implementation of the requested accommodation.

New students and transfer students are encouraged to contact Student Accessibility Services and submit their accommodation request as soon as possible after they receive their offers of admission, or by August 1st of the academic year, whichever comes first.

The complete Academic Accommodation of Student with Disabilities Policy, which includes Roles & Responsibilities, Guidelines and Procedures, Appeals and related legislation can be found here.

Workplace Accommodations for graduate students who have Teaching Assistantships and other campus employment are processed through Human Resources. For the related policy, requests, and procedures, refer to Human Resources.

# 5.6 Student/Faculty Non-Disclosure Agreements

The School of Graduate Studies encourages the cooperation of faculty with the private sector. Often cooperation will permit the involvement of graduate students. When this happens, it is not unusual for a company to protect its interests by asking the faculty member and the student to sign a confidential Non-disclosure Agreement. Such agreements are signed by the McMaster Industrial Liasion Office (MILO) and apply to all members of the university including students involved in the work. These agreements can restrict conditions for a number of matters important to students, such as their wish to publish research results, the thesis defence, and the deposit of the thesis with libraries. In all cases, the restrictions are reasonable and do not clash with academic principles that require the presentation of research findings for peer assessment.

Students should be advised to discuss any non-disclosure waivers or comparable agreements with the department chair, graduate advisor, or the School of Graduate Studies, if they are concerned with the conditions.

It has been common practice, in cases where a corporation wishes to protect its interests in a discovery, to delay placing copies of a thesis in libraries for up to twelve months after the oral defence, but not for longer periods.

It has not been common practice in these same cases to limit attendance at oral defences to only examination committee members; nor has it been common practice to have examination committee members agree to non-disclosure agreements. The pertinent guiding principle is that oral defences are public events.

Students in doubt about how these norms of academic activity apply to their circumstances should approach the Vice-Provost & Dean of Graduate Studies.

# 5.7 Conflict of Interest Guidelines, School of Graduate Studies

#### 5.7.1 General

There shall be no prohibition on the grounds of family relationship against the admission of persons as full- or part-time graduate students or against the eligibility for financial awards of such persons. Faculty members normally shall not take part in any proceedings at any level which affect the graduate standing of a spouse or other relative (including admission, financial assistance, promotion, courses of instruction, supervisory, thesis and examining committees). It is understood that the merits of each individual shall be the overriding consideration in all such cases.

# **5.7.2** Conflict of Interest in the Evaluation of Graduate Students

All faculty members responsible for the evaluation of graduate students have a general responsibility to the University to ensure that they are not in a position of conflict of interest (or the appearance of a conflict of interest) in their obligations to the University with regard to the nature of their relationships with graduate students. Specifically, a faculty member may not be involved in the evaluation of a graduate student if the faculty member has a close family relationship with the student (including spouse, parent, child, sibling, niece/nephew or spouses of the foregoing), if the faculty member is, or has been engaged to be married to the student, or if the faculty member has (or has had) an intimate personal relationship with the student. Evaluation includes grading course work or examinations (including the defence of a thesis) and supervision, whether as the principal supervisor or as a member of a supervisory committee.

A faculty member should question the propriety of evaluating a graduate student if there exists a distant family relationship with the student, or if the faculty member and the student maintain or have had a business relationship or any other relationship which should reasonably give cause for concern.

Questionable cases should be referred to the Vice-Provost & Dean of Graduate Studies for a decision.

### **5.8 Student Academic Records**

Student academic records are the property of the University. The University has developed procedures designed to protect the confidentiality of student records. A student may have access to <a href="her or histheir">her or histheir</a> file, but documents received from a third party in confidence will not be disclosed.

Transcripts are issued only with the consent of the student.

# 5.9 McMaster University Workplace and Environmental Health and Safety Policy

McMaster University is committed to provide and maintain healthy and safe working and learning environments for all employees, students, volunteers and visitors. This is achieved by observing best practices which meet or exceed the standards to comply with legislative requirements as contained in the Ontario Occupational Health and Safety Act, Environmental Protection Act, Nuclear Safety and Control Act and other statutes, their regulations, and the policy and

procedures established by the University. To support this commitment both McMaster University and its employees are responsible jointly to implement and maintain an Internal Responsibility System directed at promoting health and safety, preventing incidents involving occupational injuries and illnesses or adverse effects upon the natural environment

The University is responsible for the provision of information, training, equipment and resources to support the Internal Responsibility System and ensure compliance with all relevant statutes, this policy and internal health and safety programs. Managers and Supervisors are accountable for the safety of workers within their area, for compliance with statutory and University requirements, and are required to support Joint Health and Safety Committees. Employees are required to work in compliance with statutory and University requirements, and to report unsafe conditions to their supervisors.

Contractors and subcontractors undertaking to perform work for McMaster University must, as part of their contract, comply with all relevant workplace and environmental health and safety statutes and to meet or exceed the University's Workplace and Environmental Health and Safety Program requirements.

In addition to the above stated managerial responsibilities, Deans, Directors, Chairs, Research Supervisors and other Managers are also accountable for the safety of students, volunteers and visitors who work and/or study within their area of jurisdiction. Students are required by University policy to comply with all University health, safety and environmental programs.

#### **Implementation:**

The authority and responsibility for the administration of procedures and programs to provide for the implementation of this policy is assigned to the Office of the Vice President, Administration.

The Risk Management Support Group is responsible for facilitating the development, implementation and auditing of the Health and Safety Programs effective under this policy. This is achieved through the implementation of a risk management system that is directed at supporting the Internal Responsibility System through the application of best practices for the management of occupational, environmental, public health and safety related risks.

The Office of the Vice President, Administration will provide reports to the University Board of Governors concerning the status and effectiveness of the Workplace and Environmental Health and Safety System and any notices of violation issued to the University regarding breaches of workplace health and safety or environmental protection statutes.

# **5.10 Inter-University Cooperation - Ontario Visiting Graduate Student**

It is possible for a graduate student registered at McMaster University to take a graduate course at another Ontario university for credit toward the McMaster degree. To do so, the student must review the Information Booklet, complete the form for an Ontario Visiting Graduate Student (both available on the Council of Ontario Universities website http://cou.on.ca/key-issues/education/graduate-education/ontario-visiting-grad-students) and describe the course to be taken, the term in which it will be taken, and the reasons for taking the course. Approval of the student's Department Chair and Supervisor are required before the form is submitted for approval to the School of Graduate Studies, which will send it to the host university. The course selected must be required for the student's program, must be a graduate level course, and must not be available at McMaster University. Auditing of courses or registration for "extra" courses is not permitted. The student is subject to any regulations of their Home University with respect to the maximum ower the duration of the student's program. Once complete, an official transcript must be sent to SGS for the student's record to be undated.

# **5.11 Graduate Expectations Arising from the McMaster Vaccination Policy**

The ongoing COVID-19 pandemic has resulted in unique infection risks and serious health consequences. This academic regulation has been developed to comply with public health regulations and McMaster's Vaccination Policy.

All graduate students attending University property are considered "On-Site Community Members". To be/remain enrolled in McMaster courses with in-person components, they must provide proof that they are fully vaccinated or obtain an exemption from the University on the basis of substantiated human rights grounds. Students are encouraged to complete this process as soon as possible. Before attending University property each day, all On-Site graduate students must also complete the MacCheck screening questionnaire.

Graduate students who do not want or need to attend University property but who regularly work or study at sanctioned off-campus sites and interact with other employees or students are considered "Off-Site Community Members". This includes students enrolled in clinical placements, cooperative work experiences or other external experiential course requirements. Off-Site students must also provide proof that they are fully vaccinated or obtain an exemption from the University to be/remain enrolled in their programs. Depending on the situation, McMaster may also require Off-Site students to complete MacCheck, but will communicate these requirements directly to the affected students. Finally, Off-Site students must comply with any additional external protocols at their worksite or study site.

Students in the Faculty of Health Sciences who are involved in learning in the clinical environment must also meet requirements under the FHS Policy Regarding Submission, Verification, and Sharing of COVID-19 Vaccination Status for Learners in Clinical and Workplace-Based Placements.

#### FOR FALL TERM 2021 AND SUBSEQUENT TERMS DURING ACADEMIC YEAR 2021/22

- All students are required to visit the MacCheck digital tool to register their vaccination information as soon as possible. The deadline for submitting a request for exemption is September 19, 2021 at 11:59 p.m. ET.
- 2. On-Site graduate students who have uploaded proof of their vaccinations, or have received an exemption from the University, will be able to continue their enrolment in Fall Term 2021 and future terms during academic year 2021/22. Off-Site graduate students will also be able to complete their off-campus work or student program after they have uploaded proof of their vaccinations, or have received an exemption, as long as they also comply with any additional protocols in place at their site or through the Faculty of Health Sciences.
- Students must also complete the daily MacCheck screening within the hour before accessing University
  property for any reason. A successful screening result on MacCheck is required for any visit to campus.
- Enrolment in the Fall Term 2021 will be cross-checked between September 7th and October 18th to identify those students who have not met the requirements of the McMaster Vaccination Policy.

Beginning October 18th, On-Site graduate students enrolled for Fall Term 2021 who have not completed their vaccinations or who have not received an exemption from the University will be "withdrawn in good standing". (International graduate students enrolled in programs but not yet able to arrive in Canada due to study permit delays will not be subject to the Oct 18th deadline.)

- a) Students who are withdrawn will receive tuition reimbursement (net of scholarship and stipend arrangements at October 31st) for Fall 2021 and registration in degree components for the term will be removed from their transcript.
- b) Students enrolled in programs whose degree offerings are designated by the program to be entirely virtual or non-clinical Off-Site placements in Fall 2021, will be allowed to remain enrolled until Dec 31st.

- c) Students with OSAP are also encouraged to contact the Registrar's Office to understand any OSAP implications.
- d) Students who are in the final term of their degree (i.e. expecting to complete all remaining degree requirements in Fall 2021) and have no reason to be on campus will be allowed to remain enrolled and complete their degree. Graduate program offices will be consulted by the School of Graduate Studies to verify completion expectations. In the event of unanticipated delays in completion, a student should be directed to the Associate Dean of the Faculty hosting the graduate program for guidance.
- e) Questions regarding the prospects for future readmission should be directed to the Associate Dean of the Faculty hosting the graduate program.

5. Any student found to be in violation of the Vaccination Policy is prohibited from accessing University Property and may be subject to outcomes and/or sanctions under the Code of Student Rights and Responsibilities.

#### **General Information**

#### Counselling Services

Student Wellness Cetnre - https://wellness.mcmaster.ca/

Equity and Inclusion Office - https://equity.mcmaster.ca/ International Student Services - Tel. 905-525-9140 ext.24700; iss@mcmaster.ca ext. Ombuds Office - http://www.mcmaster.ca/ombuds

Office of Academic Integrity - http://mcmaster.ca/academicintegrity/index.html
Student Accessibility Services - http://sas.mcmaster.ca/
Office of the Registrar - Student Services - https://registrar.mcmaster.ca/aid-awards/
Student Success Centre - http://studentsuccess.mcmaster.ca/

#### Health Services

Environmental and Occupational Health Support Services - Tel . 905-525-9140 Ext. 24352
Ontario Health Insurance Card - Tel . 905-521-7825 (Service Ontario)
Student Wellness Centre - http://wellness.mcmaster.ca
University Health Insurance Plan - Tel . 905-525-9140 Ext. 24748; iss@mcmaster.ca
Workplace Safety and Insurance Board Coverage for Graduate Students - Working at McMaster

#### Housing and Conference Services and Hospital Services

Conference and Event Services - https://housing.mcmaster.ca/conference-event-services/
Hospitality Services - http://hospitality.mcmaster.ca
McMaster Community Homes Corporation - Tel . 905-578-3833; E-mail: receptionist@communityhomes.ca
Off-Campus Housing - http://macoffcampus.mcmaster.ca (Off-Campus Resource Centre)
On-Campus Housing - http://housing.mcmaster.ca (Housing and Conference Services)

#### Student Associations

Graduate Students Association (GSA) - https://gsamcmaster.org McMaster University Alumni Association - http://alumni.mcmaster.ca/

#### Other University Services/Facilities

Athletics and Recreation - http://www.marauders.ca Bookstore and Post Office - https://campusstore.mcmaster.ca// (Titles Bookstore) Day Care Facilities at McMaster

 $\bullet \qquad \text{McMaster Children's Centre Incorporated - https://mcmasterchildrenscentre.wordpress.com} \\$ 

McMaster Students' Union Child Care Centre - https://www.msumcmaster.ca/services-directory/30-child-care-centre

Parking Services - http://parking.mcmaster.ca Security Services - http://security.mcmaster.ca

University Chaplain Centre - https://mcmasterchaplaincy.org/

Special Resource Services/Facilities

Centre for Continuing Education - http://www.mcmastercce.ca
MacPherson Institute - http://mi.mcmaster.ca
McMaster Media Production Services - http://media.mcmaster.ca
McMaster Museum of Art - https://museum.mcmaster.ca
Office of International Affairs - http://oia.mcmaster.ca
University Library - http://library.mcmaster.ca
University Technology Services (UTS) - http://www.mcmaster.ca/uts

# **Graduate Scholarships, Bursaries and Other Awards**

(https://gs.mcmaster.ca/current-students/scholarships/)

#### **6.1 Overview**

The University and the School of Graduate Studies supports the financial wellbeing of students in the delivery of aid and award programs, ensuring equity, consistency and transparency in administration.

The following information is intended to provide details about the various forms of scholarship support available at McMaster. Students with questions regarding financial support should contact their department or graduate program (hereafter referred to as the department) directly for assistance.

All efforts have been made to ensure the accuracy of information of awards on the School of Graduate Studies website. However, it is ultimately the responsibility of fellowship and award applicants themselves to verify program deadlines and/or requirements with external agencies. The School of Graduate Studies cannot be held responsible for any error or omissions, but would appreciate being informed of these, for correction or addition in the next edition.

# **6.1.1 General Regulations**

Graduate students at McMaster University are expected to apply annually for external funding opportunities that may be available to them and as directed by the department.

Scholarships (including fellowships, prizes, medals and awards), academic grants and bursaries may be cancelled without notice if the conditions under which they are granted are not upheld. To hold an award at McMaster University, students must:

- Have been unconditionally admitted into the eligible graduate degree program for which funding was granted:
- Be registered full-time and progressing satisfactorily in the eligible graduate degree program; part-time students are normally not eligible to receive scholarship support;

- A student who withdraws, is on approved leave, changes academic load from full to part-time, reduces course load or units, has approved to graduate status, or otherwise alters their program of study may be required to forfeit all or part of their funding.
- Accept the terms and conditions of the award;
- Comply with all academic regulations of McMaster University and the requirements of the scholarship and/or award:
- Not hold or accept full-time employment while holding the award; and
- Agree to have McMaster University administer the award in accordance with its policies and procedures.

In accordance with the Freedom of Information and Protection of Privacy Act and McMaster University's Statement on the collection of Personal Information and the Protection of Privacy, where notice is given, the University is permitted to publish an individual's name, Faculty, program and award information. McMaster University reserves the right to publish the names of recipients of most scholarships and awards. Note: If a student chooses to revise their consent, they must contact the School of Graduate Studies at graduatescholarships@mcmaster.ca. It is the School of Graduate Studies responsibility to update Mosaic and AwardSpring.

For the purpose of Aid and Award criteria and eligibility, references to "Woman" or "Female" include all students who identify as Woman/Female and references to "Man" or "Male" include all students who identify as a Man or Male.

#### 6.1.2 Value and Duration of Award

The value and duration of scholarships and awards are detailed in the terms of letter of offer or award letter. Should a successful applicant receive an internal scholarship or external award subsequent to the letter of offer, McMaster's normal practice is to adjust the contributions to the applicant's offer in such a way that the applicant benefits from the additional award, but not to the extent that it simply adds the value of the award to the original offer. The fractional financial benefit of an internal scholarship or external award varies by program but is consistent within a given program.

Any approved change in degree, program, registration, supervisor, or research area must be reported to the School of Graduate Studies and may result in a change to the value and/or duration of the award. The value of some external awards must be refunded if conditions of the awards are not met.

# 6.2 Graduate Scholarships

Upon admission to McMaster, graduate students are automatically considered for funding by the various departments. Offers that include funding will state the amount and duration of funding, conditions for renewal (if any), terms of continued funding, and other relevant details. AllContinued funding for graduate students from the University or from individual programs will be based on satisfactory progress of the student in their his/her program as determined by academic criteria or as specified in an offer of funding. If the student has been awarded a Graduate or Departmental Scholarship, they he/she should be aware that the funds for this scholarship might come from funds awarded by the School of Graduate Studies and/or from the department. The student may also receive a Research Scholarship provided by funds from the supervisor. If the student has been awarded an Entrance Scholarship, they he/she should realize that it is for the first term of study only and is not renewable. All funding is contingent on enrolment of the student.

#### **6.2.1 Internal Awards**

The University Senate, acting on behalf of generous benefactors and donors to the University, bestows academic awards, bursaries, academic grants, and travel awards on graduate students. In recognizing financial need and/or academic and/or research merit, the University requires all recipients of awards to fulfill a set of general conditions, in addition to meeting the particular terms attached to individual academic awards. The general conditions and terms have been established to ensure equity in competition and a high academic standing. Any interpretation of the conditions

attaching to academic awards is solely the prerogative of the Graduate Council. The University reserves the right not to grant an award in the absence of a suitable candidate, or to limit the number of awards where too few suitable candidates exist. The University also reserves the right to withdraw, or amend the terms of, any award, and/or to suspend granting of an award or to adjust the stated value of an award in years in which insufficient investment income is available due to fluctuations in investment markets. Where the terms of such award become impossible to fulfill through obsolescence, then the University may amend the terms of same to carry out the nearest possible intent of the donor while still ensuring that the benefit of such award continues.

#### Bursaries

Bursaries are granted on the basis of demonstrated financial need according to the principles of the Province of Ontario's Student Access Guarantee. They are intended to supplement a student's own financial contribution, parental assistance, government aid and personal loans/lines of credit to help the student to complete the academic year.

In order for students to be considered for any donor bursary, they must apply to the Graduate General Bursary through AwardSpring.

#### Academic Grants

Academic Grants are granted on the basis of academic excellence and demonstrated financial need as stated above.

In order for students to be considered for an academic grant, they must have applied for OSAP and have received an entitlement of at least \$1.

#### Internal Scholarships (including travel awards)

Internal scholarships support students registered in a specific program or Faculty through the generous contributions of our benefactors and donors, and initiatives from the School of Graduate Studies. Selection is based on academic merit and/or research excellence. Students can apply to most of the internal scholarships through aid by application in AwardSpring. A small number of scholarships don't have applications as they are awarded by departmental nomination as per the terms of the award. It is critical that students consult with their departments regarding eligibility, application procedures and deadlines as each department will have its own process for internal review. Departments forward their recommendation to the School of Graduate Studies for final approval.

# 6.2.2 External Awards Tenable at the University

External awards tenable at the University are given by federal and provincial government agencies and other private organizations that rely on McMaster University to recommend candidates, facilitate payments, and ensure compliance of terms and conditions of the award. Examples of these agencies include the Canadian Institute of Health Research (CIHR), the Natural Sciences and Engineering Research Council (NSERC), the Social Sciences and Humanities Research Council (SSHRC), and the Ontario Graduate Scholarships (OGS).

The application process for the majority of these awards is usually held one year in advance of receipt of the award (for example, competitions are held in October for awards starting in May, September or January of the subsequent academic year). Applications and eligibility requirements are usually indicated on respective government agency web sites by late August. Deadlines vary by agency but normally occur in the Fall of each academic year.

As the recipient of a CIHR, NSERC, SSHRC, OGS or similar award, the student may be required to complete additional acceptance/refusal forms, and provide copies to their department and the School of Graduate Studies. If the student changes their status, or is granted a leave of absence, the student may be required to notify the external agency as outlined in the guidelines (or terms and conditions) of the award. It may also be the case that the external award is subject to restrictions that require altered terms of the original letter of offer, or forfeit the award.

# **6.3 Funding Application Deadlines**

Students interested in applying for scholarships and awards should contact their home departments for specific details on the application process and department internal deadlines. Dates and information from external agencies may be updated periodically and without notice. Changes to internal due dates within departments or programs, and the School of Graduate Studies, will be updated accordingly.

# 6.4 Financial Planning

A financial plan is an essential part of a university career. It can be helpful to consult with family members, a banking representative or financial aid counsellor to research financial options. Graduate students who are eligible are encouraged to apply for OSAP. For more information about OSAP, please visit the following sites:Office of the Registrar, Aid & Award and Government of Ontario - OSAP.

# **Governing Bodies**

#### 7.1 Senate

The University Senate consists of approximately 65 members, including the Chancellor, the President (Chair), the Vice-Presidents and Vice-Provosts, the Vice-Provost & Dean of Graduate Studies, the Faculty Deans, three members from the Board of Governors, four members from the Alumni Association, and 32 faculty members. In addition, there are 12 student members, one graduate and one undergraduate from each of the six Faculties. The students are elected by and from the students in their respective Faculties.

The Senate has ultimate responsibility for determining academic policy, which includes new academic programs, changes in curriculum, standards for admission to the University, matters arising in connection with the award of scholarships and prizes, examination policy, academic regulations, procedures for student appeals, criteria and procedures for granting tenure and promotion to faculty members, the codes of conduct for students and so on. Website: http://www.mcmaster.ca/univsec

#### 7.2 Graduate Council

The Graduate Council is a deliberative, administrative, and executive body responsible directly to Senate but otherwise autonomous. Its membership consists of the Chancellor, the President and Vice-Chancellor, the Provost and Vice-President (Academic), the Vice-Provost & Dean of Graduate Studies (Chair), the Associate Deans of Graduate Studies, the Faculty Deans, the University Librarian, the University Registrar, the Secretary of Senate, the Vice-President (Research and International Affairs), the Assistant Dean (Graduate Studiet Life and Research Training, the Manager Director of Finance and Administration of the School of Graduate Studies, the Associate Graduate Registrar and Secretary of the School of Graduate Studies, eighteen faculty members (three from each faculty), and twelve graduate students (two from each faculty).

The responsibilities of the Graduate Council have been specified in some detail by Senate and are outlined in the Bylaws of the Senate of McMaster University and the Senate Resolutions. The more significant ones may be summarized by noting that it regulates matters concerning graduate work of common concern to the entire University, acts upon recommendations concerning graduate work from each Faculty upon matters of particular concern to that Faculty, reports to Senate on graduate matters, recommends candidates for graduate degrees, stipulates conditions for the awarding of graduate scholarships, and stipulates the departments eligible to offer graduate work.

#### 7.2.1 Executive Committee of Graduate Council

The Executive Committee of Graduate Council is composed of the Vice-Provost & Dean of Graduate Studies (who acts as Chair), the Associate Deans of Graduate Studies as Deputy Chairs, the President and Vice-Chancellor, the Provost and Vice-President (Academic), one faculty member from each Faculty, and the Associate Graduate Registrar and Secretary of Graduate Studies.

The Executive acts as nominating committee, academic policy committee, and on any other matters put before it by Graduate Council or the Vice-Provost & Dean. This body acts on behalf of Council in instances where there is some urgency (e.g., during the summer months when there are no regularly scheduled meetings).

## 7.2.2 Scholarships Committee of Graduate Council

The Scholarships Committee of Graduate Council is composed of the Associate Deans of Graduate Studies (who act as co-chairs) and faculty members (representing all six faculties). This committee is responsible for acting upon all recommendations and applications for internal endowed fellowships and scholarships, and external scholarships.

# 7.3 Standing Committees

# 7.3.1 Faculty Graduate Curriculum and Policy Committees

Each of the six Faculties has a Committee on Graduate Curriculum and Policy which is responsible for dealing with matters of policy and curriculum affecting the Faculty, including new developments, course changes, changes in degree requirements, and new programs and fields of study arising from departmental proposals. The Faculty then acts upon the recommendations of this committee.

# 7.3.2 Faculty Graduate Admissions and Study Committees

For each Faculty, there is also a Committee on Graduate Admissions and Study responsible for determining admissibility of any applicant on the recommendation of the department, approving each student's course program, reviewing annually the progress of each student, making necessary decisions thereon, recommending awarding of degrees, deciding upon applications from students for special consideration, and acts on the final decisions from a hearings committee for student appeals and cases of alleged academic dishonesty and research misconduct. Normally, the Associate Dean of Graduate Studies for the Faculty handles the matters on behalf of the committee. The Secretary of all Committees, to whom business items may be addressed, is the Associate Graduate Registrar and Secretary of Graduate Studies.



School of Graduate Studies 1280 Main Street West Phone 905.525.9140 Hamilton, Ontario, Canada Ext. 23679 L8S 4L8 http://graduate.mcmaster.ca

To **Graduate Council** 

From: Christina Bryce

**Assistant Graduate Secretary** 

At its meeting on February 14<sup>th</sup> and March 21<sup>st</sup> the Faculty of Business Graduate Curriculum and Policy Committee approved the following graduate curriculum recommendations.

Please note that these recommendations were approved by the Faculty of Business.

#### For Approval of Graduate Council:

- BLPT
  - Changes to Calendar Copy
  - Change to Admission Requirements
- eHealth\*
  - Change to Course Requirements
- **Master of Finance** 
  - Change to Calendar Copy and Electives
- M.B.A.
  - Change to Admission Requirements
  - Change to Missed Term Work Policy

#### For Information of Graduate Council:

- M.B.A.
  - Course Cancellations
    - V701 Financial Statement Analysis
    - V702 Behavioural Finance
    - V703 Financial Modelling and Valuation
    - V705 Venture Capital and Private Equity

<sup>\*</sup>Also approved by the Faculties of Engineering and Health Sciences



# RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

<b>IMPORTA</b>	IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:						
1. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.							
2. An electronic v Secretary, School					shou	ld be emailed to the Assistant	
				<b>quired to attend</b> the Fac change in graduate curric		Curriculum and Policy Committee n will be discussed.	
DEPARTMENT	DeGroot	te School	of Bu	siness			
NAME OF PROGRAM and PLAN	Blended Learning Part-Time MBA Program						
DEGREE			N	Master of Business Adm	inist	tration	
NAT	URE OF RE	СОММЕ	ND/	ATION (PLEASE CHE	CK A	APPROPRIATE BOX)	
Is this change a	Is this change a result of an IQAP review? ☐ Yes ☒ No						
CREATION OF NEW MILESTONE							
CHANGE IN ADMI REQUIREMENTS	COMPREHENSIVE						
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR  EXPLAIN:  Proposal to change verbiage for admissions requirements for the BLPT MBA program.							
OTHER CHANGES							

#### DESCRIBE THE **EXISTING** REQUIREMENT/PROCEDURE:

Current admissions criteria for BLPT MBA Program:

Applicants to the BLPT MBA are expected to meet the following requirements:

- Undergraduate degree in any discipline from a recognized post-secondary institution. A 4- year degree is recommended.
- Recommended B average (equivalent to a McMaster 8.0 GPA out of 12) in the two most recent years of undergraduate study, or the equivalent of 60 academic credits. Applicants with a GPA below a B may be encouraged to provide supplemental academic materials (e.g., competitive GMAT results). Courses used in GPA calculations for applicants holding master's or doctoral degrees are determined on a case-by-case basis.
- Résumé to assess work experience, with a minimum of 4 years of professional work experience expected.
- Two letters of recommendation, including at least one from a current or former supervisor.
- Admissions interview, if necessary, to better understand a prospective student's capabilities, learning objectives and potential for success in the Program.
- Proof of English proficiency, demonstrated through: competitive TOEFL, IELTS, or PTE scores OR residence in an English-speaking country for at least four years OR completion of at least three years of full-time post-secondary education with English as the primary language of instruction, excluding ESL courses.
- Prospective applicants who do not meet the normal admission requirements, should consult the Program Director to discuss how their work experience might be assessed to make up for insufficient standing in their undergraduate degree. Please refer to Section 2.1.1 of the Graduate Calendar on this matter.

PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

Applicants to the BLPT MBA are expected to meet the following requirements/provide the following required documentation:

- Degree: Completion of an Honours Bachelor's degree from a recognized university
- GPA: Recommended B average (equivalent to a McMaster 8.0 GPA out of 12) or higher. GPA will be calculated using the two most recent years of undergraduate or graduate study, 20 courses, or the equivalent of 60 academic credits. A combination may be used and is determined on a case-by-case basis.

- **GMAT:** Not required. Candidates who fail to meet the above GPA criteria or who wish to strengthen their application may wish to submit a GMAT.
  - o GMAT is required for non-degree applicants. See Admission Requirements.
- **Proof of English Language Proficiency:** Required for applicants:
  - Whose previous degree was not completed with the language of instruction of English.
  - o Who have been resident in an English-speaking country for less than four years.
  - Who have completed less than three years of full-time post-secondary education with English as the primary language of instruction, excluding ESL courses.
- Acceptable English Language Proficiency Tests:
  - Academic IELTS
  - o TOEFL
- Work Experience: Recommended minimum of 4 years post-graduate work experience.
- References: Applicants are encouraged to seek two professional (current or former direct supervisor or manger) references. Academic reference can be submitted if two professional are not available.
- **Interview:** Applicants are required to complete an online interview prior to submission of their application.
- Prospective applicants who do not meet the normal admission requirements, should consult the Program Director to discuss how their work experience might be assessed to make up for insufficient standing in their undergraduate degree, you may be considered a non-degree applicant. Please refer to Section 2.1.1 of the Graduate Calendar on this matter.

Please note: meeting minimum admission requirements does not guarantee acceptance into the program.

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

The revised wording provides alignment across admissions criteria for all MBA programs (excluding EMBA).

It also provides further clarification on the B average requirement and strengthens the language concerning proof of English proficiency. It also provides clarity regarding when a candidate might be required to complete the GMAT (i.e. if they do not have the recommended B average).

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

September, 2022

_	ER DETAILS OF THE RECOMMENI HOULD BE AWARE OF? IF YES,		E CURRICULUM AND
CONTACT INFORMATION	ON FOR THE RECOMMENDED CH	ANGE:	
Name: John Medcof January 4 <sup>th</sup> , 2022	Email: medcofj@mcmaster.ca	Extension: 20599	Date submitted:

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca



# RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

IMPO	IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:							
1. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.								
	2. An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).							
					<b>quired to attend</b> the fi change in graduate cu		Curriculum and Policy Committee m will be discussed.	
DEPARTME	NT	В	ended	l Learnin	g Part-Time MBA Prog	ıram, D	e Groote School of Business	
NAME OF PROGRAM & PLAN	and	Blended Learning Part-Time MBA Program, De Groote School of Business						
DEGREE	DEGREE MBA							
NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)  Is this change a result of an IQAP review? □ Yes ☒ No								
CREATION OF NEW MILESTONE								
CHANGE IN ADMISSION REQUIREMENTS  CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE  CHANGE IN COURSE REQUIREMENTS								
CHANGE IN THE DESCRIPTION OF A  SECTION IN THE GRADUATE CALENDAR  EXPLAIN:								
OTHER CHANGES								

#### DESCRIBE THE **EXISTING** REQUIREMENT/PROCEDURE:

BL610 Management Fundamentals is a required course in Term 1 (fall) of the BLPT Program. It is taught in parallel with another management-oriented course taught in Term 1, BL600 Leadership Fundamentals.

BL602 Economics and Business Statistics is a required course in Term 2 (winter) of the BLPT Program. It is taught in parallel with BL604 Creating Customer Value, a marketing course.

# PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

This is a proposal to move BL610 from Term 1 in the fall to Term 2 in the winter and move BL602 from Term 2 in the winter to Term 1 in the fall. This would be a straight sequencing switch with no proposed change in the goals and contents of the courses.

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

Quantitative courses such as BL602 are challenging for many BLPT students whose backgrounds have not prepared them well. To help them with this challenge we provide guidance to preparatory websites in the summer preceding their program entry and a workshop on quantitative skills in the September of their entry. However, in the current program sequencing, the first course requiring quantitative skills is not offered until the following winter term. The quantitative skills they have just acquired are not used when they are freshest in students' minds. Moving BL602 to the fall Term will increase the value of the summer and September preparations for their progress in the program. A secondary consideration for this change comes from the perspective of students who highly value quantitative work and are anticipating engagement with it in the program. We have received strong expressions of concern from such students that Term 1 is full of managerial/leadership courses which do not play to their strengths and leave them frustrated with such a heavy dose of it. Moving BL602 to Term 1 will give these students a more positive entry to the program. This change would provide a more balanced Term 1 experience for all students. Since the four courses in the the first two terms of the Program are on independent subjects, this change will not require any change in the goals and content of any of the courses in those two terms.

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

Fall 2022

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

# ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN. To preserve the cohort nature of the required courses in the BLPT Program, the prerequisites for the courses in Terms 1 and 2 would have to be changed to reflect this new positioning. PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable): There would be no descriptive change. The two courses would be shown in their switched positions in the listing of the course sequence. PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable): CONTACT INFORMATION FOR THE RECOMMENDED CHANGE: Name: Email: Extension: Date submitted:

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013

# **BLPT Course Sequence 2022 01 01**

Year 1	Year 2	Year 3						
<u>FALL</u>								
Term 1	Term 4	Term 7						
BL600 Leadership Fundamentals	BL605 Managing Organizations	Elective: From approved list						
BL610 Management Fundamentals	BL651 Intermediate Accounting (1.5 units)	Elective: From approved list						
	BL652 Intermediate Finance (1.5 units)	BL723 Strategic Integration Project (Part A, 0 units)						
	WINTER							
Term 2	Term 5	Term 8						
BL602 Economics and Business Statistics	BL700 Business, Government and the Global	Elective: From approved list						
DECOL ECONOMICS and Dasiness Statistics	Environment	Licente: 110m approved not						
BL604 Creating Customer Value	Environment	BL723 Strategic Integration Project						
Debot creating customer value	BL653 Intermediate Marketing (1.5 units)	(Part B, 3 units)						
	BL654 Intermediate Operations (1.5 units)							
	<u>SUMMER</u>							
Term 3	Term 6	Term 9						
BL601 Managing Financial Resources	BL720 Strategic Management	Elective: From approved list						
BL603 Competing Through Digital Transformation	BL751 Innovation & Design Thinking	BL723 Strategic Integration Project						
& Analytics	(1.5 units)	(Part C, 3 units)						
	BL752 Co-Creating Strategic Foresight							
	(1.5 units)	BL753 Program Synthesis & Future						
		Planning (1.5 units)						



## RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

<u>IMPOR</u>	<u> TANT:</u>	PLEASE	READ	THE F	<u>OLLOWING NOTES BEF</u>	-ORE	E COMPLETING THIS FORM:	
This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.								
	2. An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).							
					equired to attend the Fac change in graduate curri		Curriculum and Policy Committee n will be discussed.	
DEPARTMENT	Γ	Bl	ended	Learnin	g Part-Time MBA Progra	m, De	e Groote School of Business	
NAME OF PROGRAM an PLAN	ıd	Blended Learning Part-Time MBA Program, De Groote School of Business						
DEGREE					МВА			
N	NATUR	E OF RE	COM	MENDA	ATION (PLEASE CHE	CK A	APPROPRIATE BOX)	
Is this change a result of an IQAP review? ☐ Yes ⊠ No								
CREATION OF NEW MILESTONE								
	CHANGE IN ADMISSION COMPREHENSIVE EXAMINATION PROCEDURE  CHANGE IN CHANGE IN COURSE REQUIREMENTS							
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR								
OTHER CHANGES  Changing the sequencing of two courses in the program, BL720 Strategic Management and an elective course.						an		

#### DESCRIBE THE **EXISTING** REQUIREMENT/PROCEDURE:

BL720 is a required course in Term 6 taken during the summer

There are two openings for electives in Term 7 in the following fall

# PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

The proposed change is to move BL720 Strategic Management from Term 6 (summer) to Term 7 (fall). And move one of the elective courses in Term 7 (fall) to Term 6 (summer). This would be a straight sequencing switch with no proposed change in the goals and contents of the courses.

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

Moving an elective from Term 7 to 6 would give BLPT students more flexibility in choosing BLPT electives. Currently in Term 7, as a result of the limited number of BLPT electives, and program scheduling constraints, students do not get as full a set of BLPT elective options as is desirable. Moving one elective to Term 6 would ease the scheduling constraints and give students more freedom to choose. Also, the most senior cohort in the program always has an elective scheduled in the fall. Moving this elective for the immediately following cohort into the fall would have the two cohorts taking electives in the same semester. With two cohorts involved, the viability of the student numbers in the electives would be improved. Having more electives available in the blended format would improve the learning opportunities of the students, consistent with the goals of the program, and it is a change which students have been requesting.

It would also have the two cohorts sharing some of the same classes, increasing the networking opportunities for students. Such cross-cohort networking is consistent with the goals of the Program and students have requested more cross cohort networking.

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

Fall 2022.

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

To preserve the cohort nature of the required courses in the BLPT Program, the prerequisites for BL720 would have to have BL750 Design Thinking and Strategic Foresight added to the list.

PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):						
There would be no descriptive change. The two courses would be shown in their switched positions in the list of the course sequence.						
list of the course s	squerioe.					
CONTACT INFOR	MATION FOR THE	RECOMMENDED CHANGE:				
Name: John Medo	of Email:	medcofj@mcmaster.ca	Date submitted:	2022 01 19		

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013

# **BLPT Course Sequence 2022 01 01**

Year 1	Year 2	Year 3						
<u>FALL</u>								
Term 1	Term 4	Term 7						
BL600 Leadership Fundamentals	BL605 Managing Organizations	Elective: From approved list						
BL610 Management Fundamentals	BL651 Intermediate Accounting (1.5 units)	Elective: From approved list						
	BL652 Intermediate Finance (1.5 units)	BL723 Strategic Integration Project (Part A, 0 units)						
	WINTER							
Term 2	Term 5	Term 8						
BL602 Economics and Business Statistics	BL700 Business, Government and the Global	Elective: From approved list						
DECOZ ECONOMICS and Dasiness Statistics	Environment	Licetive. From approved list						
BL604 Creating Customer Value	Liviloninent	BL723 Strategic Integration Project						
beoof creating customer value	BL653 Intermediate Marketing (1.5 units)	(Part B, 3 units)						
	BL654 Intermediate Operations (1.5 units)							
	<u>SUMMER</u>							
Term 3	Term 6	Term 9						
BL601 Managing Financial Resources	BL720 Strategic Management	Elective: From approved list						
BL603 Competing Through Digital Transformation	BL751 Innovation & Design Thinking	BL723 Strategic Integration Project						
& Analytics	(1.5 units)	(Part C, 3 units)						
	BL752 Co-Creating Strategic Foresight							
	(1.5 units)	BL753 Program Synthesis & Future						
		Planning (1.5 units)						



IMPC	IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:								
	<ol> <li>This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.</li> </ol>								
				•		in MS WORD <u>not</u> PDF) : @mcmaster.ca).	shou	ld be emailed to the Assistant	
	3. A representative from the department is <u>required to attend</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.								
DEPARTME	NT	eHealth	Gradı	uate	Progr	ram			
NAME OF PROGRAM & PLAN									
DEGREE	MS	Sc eHealth	ealth						
	NA	TURE OF RE	ECON	ИΜЕ	NDA	TION (PLEASE CHE	CK A	APPROPRIATE BOX)	
Is this char	nge	a result of a	n IQA	AP r	eviev	v? □ Yes ⊠ No			
CREATION (	OF N	IEW MILESTO	NE □	]					
CHANGE IN REQUIREME				СО		E IN EHENSIVE ATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS	
						EXPLAIN:			
	CHANGE IN THE DESCRIPTION OF A  SECTION IN THE GRADUATE  CALENDAR  This is a housekeeping change to bring the eHealth program electives list in the calendar into alignment with the list of MBA courses that eHealth students are permitted to take (where registration in eHealth is listed as a prerequisite).								
OTHER CHANGES		EXPLAIN:							

DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:
PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space
is not sufficient.)
This is a housekeeping change to bring the eHealth program electives list in the calendar into alignment with the
list of MBA courses that eHealth students are permitted to take (where registration in eHealth is listed as a
prerequisite). This will reduce the need for the program to submit service requests to SGS for the courses appear
correctly in students' records.
RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's
program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):
The benefits of this change are purely administrative, reducing the need for permission forms to be signed.
PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic
year)
year)
The Program asks that these changes be made for the 22/23 SGS calendar.
ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND
POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.
PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR
(please include a tracked changes version of the calendar section affected if applicable):
Please see attached.
CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:
CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:
Name: Nicole Wagner Email: wagnernm@mcmaster.ca Extension: 24919 Date submitted:
January 21, 2022
Valually 21, 2022

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013

# eHealth Courses

All required and elective courses are half courses. Required courses must be taken in the first and second semester of study by full-time students, and early in the program for part-time students.

# Required Courses

- EHEALTH 705 / Statistics for eHealth
- EHEALTH 724 / Fundamentals of eHealth and the Canadian Health Care System
- EHEALTH 736 / Management Issues in eHealth
- EHEALTH 757 / Modern Software Technology for eHealth

## **Elective Courses**

For course details, see MBA Calendar (School of Business courses); and the School of Graduate Studies Calendar: Computing and Software and Health Research Methodology. Other graduate level courses not listed below may be approved through special permission, if the student can justify why an elective is important to his/her understanding of eHealth.

- BUSINESS C710 / Interdisciplinary Perspectives on Health Economics and Evaluation
- BUSINESS C711 / Health Economics and Evaluation for Managers
- BUSINESS C720 / Interdisciplinary Perspectives on Health Policy Analysis
- BUSINESS C721 / Health Policy Analysis for Managers
- BUSINESS C722 / Management of Population Health
- BUSINESS C725 / Managing Communications in Health Care
- BUSINESS C727 / Pharma/Biotech Business Issues
- BUSINESS C735 / Proposal Development for Health Care Leaders
- BUSINESS C736 / Quality Management in Health Services
- BUSINESS C740 / Interdisciplinary Perspectives on Health Care Marketing
- BUSINESS C750 / Ethical and Legal Issues in Health Care
- BUSINESS C755 / Analytics and Decision Making in Healthcare
- BUSINESS K723 / Data Mining and Business Intelligence
- BUSINESS K724 / eBusiness Strategies
- BUSINESS K725 / Business Process Management
- BUSINESS K731 / Project Management
- BUSINESS K737 / Cases in eBusiness, Innovation and Entrepreneurship
- BUSINESS K792 / Security, Privacy and Trust in eBusiness
- BUSINESS 0734 / Supply Chain Management
- BUSINESS P720 / Strategic Management
- CAS 703 / Software Design

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- CAS 704 / Embedded, Real-Time Software Systems
- <u>CAS 750 / Model-Based Image Reconstruction</u>
- COMP SCI 6F03 / Distributed Computer Systems
- COMP SCI 6WW3 / Web Systems and Web Computing
- EHEALTH 701 / Research and Evaluation Methods in eHealth
- EHEALTH 702 / Independent Research Project
- EHEALTH 703 / Virtual Care & Telemedicine for eHealth
- EHEALTH 745 / eHealth Innovations and Trends
- EHEALTH 746 / Healthcare Analytics
- EHEALTH 767 / Information Privacy and Security
- HTH RS M 736 / Design Innovation for Health System Challenges
- SFWR ENG 6HC3 / The Human Computer Interface



<u>IMPO</u>	IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:								
	<ol> <li>This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.</li> </ol>								
				e in MS WORD <u>not</u> PDF) e@mcmaster.ca).	shoul	d be emailed to the Assistant			
3. A representative from the department is <u>required to attend</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.									
DEPARTMEN	NT	DeGroo	te School of I	Business					
NAME OF PROGRAM a PLAN									
DEGREE	Master of Finance								
NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)									
Is this char	ige a	result of an	IQAP revi	ew? □ Yes ⊠ No					
CREATION (	OF NI	EW MILESTOR	NE 🗆						
	CHANGE IN COMPREHENSIVE CHANGE IN COURSE EXAMINATION PROCEDURE  CHANGE IN CHANGE IN COURSE REQUIREMENTS								
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR									
OTHER CHANGES	x	EXPLAIN: Updated word	XPLAIN: pdated wording in Additional Information section in the Academic Calendar						

## DESCRIBE THE **EXISTING** REQUIREMENT/PROCEDURE:

Currently, the Additional Information section of the Academic Calendar reads as follows:

#### **Additional Information**

All instances of failures in individual courses are reviewed by the Faculty Committee on Graduate Admissions and Study or the Associate Dean of Graduate Studies and Research acting on its behalf. A letter will be sent to the Program Director asking for a recommendation regarding the student. In the absence of a recommendation to allow the student to continue, the student will be required to withdraw. Those allowed to remain in the program must either repeat or replace the failed course. A failing grade in a course remains on the transcript. Students who fail a second course will not normally be allowed to continue in the program.

Graduate students not registered in the Master of Finance program may only enroll in the Master of Finance courses with the approval of the Program Director. Enquiries should be directed to the Master of Finance Program Administrator at mfin@mcmaster.ca.

# PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

Updated language to reflect the internal process for non-Master of Finance students requesting permissions to take Master of Finance courses.

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

Better understanding / instructions for non-Master of Finance students on steps required to receive permissions to take Master of Finance classes.

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

September 2022

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

N/A

PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):

With the updated language, the Additional Information section should read:

#### **Additional Information**

All instances of failures in individual courses are reviewed by the Faculty Committee on Graduate Admissions and Study or the Associate Dean of Graduate Studies and Research acting on its behalf. A letter will be sent to the Program Director asking for a recommendation regarding the student. In the absence of a recommendation to allow the student to continue, the student will be required to withdraw. Those allowed to remain in the program must either repeat or replace the failed course. A failing grade in a course remains on the transcript. Students who fail a second course will not normally be allowed to continue in the program.

Graduate students not registered in the Master of Finance program may only enroll in the Master of Finance courses with the approval of the Program Director. In addition, the students must first receive written permissions from their home faculty, and forward such permissions to the Master of Finance program office.

### CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Narat Charupat Email: charupat@mcmaster.ca Extension: 23987

Date submitted: March 8, 2022

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013



IMPO	KIA	MI: PLEASE	KEA	DIHEF	OLLOWING NOTES BEI	FURE	E COMPLETING THIS FORM:		
1. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.									
					in MS WORD <u>not</u> PDF) @mcmaster.ca).	shou	ıld be emailed to the Assistant		
	3. A representative from the department is <u>required to attend</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.								
DEPARTME	NT	DeGroot	DeGroote School of Business						
NAME OF PROGRAM & PLAN									
DEGREE	Master of Finance								
	NA	TURE OF RE	CON	IMEND/	ATION (PLEASE CHE	CK A	APPROPRIATE BOX)		
Is this char	nge	a result of a	n IQA	P revie	w? □ Yes ⊠ No				
CREATION (	OF N	IEW MILESTO	NE 🗵						
CHANGE IN REQUIREME	NTS	3		EXAMII	GE IN REHENSIVE NATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS		
	CHANGE IN THE DESCRIPTION OF A  SECTION IN THE GRADUATE CALENDAR  EXPLAIN:								
OTHER CHANGES	x	EXPLAIN: This change i to take.	This change is to update the list of elective courses that Master of Finance students are eligible						

### DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:

As outlined in the current McMaster University's 2021-22 Graduate Calendar:

Electives courses will be from a selected list of finance electives presently offered in the MBA program and/or Master of Finance program, or, with the approval of the Program Director and consent of the department involved, electives in business, mathematics, statistics or economics. The Finance electives from which Master of Finance students can choose are as follows (note that not all the courses on the list may be offered in a given academic term):

- BUSINESS F700 / Valuation for Finance Professionals
- BUSINESS F711 / Financial Institutions
- BUSINESS F712 / Applied Corporate Finance
- BUSINESS F715 / Portfolio Theory and Management
- BUSINESS F716 / International Financial Management
- BUSINESS F717 / Financial Statement Analysis
- BUSINESS F719 / Independent Research Project in Finance
- BUSINESS F722 / Market Trading and Risk Management
- BUSINESS F724 / Venture Capital and Private Equity
- BUSINESS F725 / Personal Financial Management
- BUSINESS F726 / Behavioural Finance
- BUSINESS F736 / Ethics and Professional Practice in Finance
- BUSINESS F741 / Introduction to FinTech
- BUSINESS F743 / Big Data in Finance
- FINANCE 711 / Mergers, Acquisitions, and Corporate Restructuring
- FINANCE 712 / Risk Management Principles and Practices

# PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

The proposed changes to the eligible list of elective courses are as follows:

- Removal of BUSINESS F725 (Personal Financial Management) from the list of eligible electives
- Removal of BUSINESS F743 (Big Data in Finance) from the list of eligible electives
- Addition of FINANCE 718 (Advanced Topics in Finance) to the list of eligible electives

After the above changes, the Electives section in the calendar should read as follows:

Electives courses will be from a selected list of finance courses presently offered in the MBA program and/or Master of Finance program, or, with the approval of the Program Director and consent of the department involved, courses in business, mathematics, statistics or economics. The Finance courses from which Master of Finance students can choose as their elective courses are as follows (Note that not all the courses on the list may be offered in a given academic term):

- BUSINESS F700 / Valuation for Finance Professionals
- BUSINESS F711 / Financial Institutions
- BUSINESS F712 / Applied Corporate Finance
- BUSINESS F715 / Portfolio Theory and Management
- BUSINESS F716 / International Financial Management
- BUSINESS F717 / Financial Statement Analysis
- BUSINESS F719 / Independent Research Project in Finance
- BUSINESS F722 / Market Trading and Risk Management

- BUSINESS F724 / Venture Capital and Private Equity
- BUSINESS F726 / Behavioural Finance
- BUSINESS F736 / Ethics and Professional Practice in Finance
- BUSINESS F741 / Introduction to FinTech
- FINANCE 711 / Mergers, Acquisitions, and Corporate Restructuring
- FINANCE 712 / Risk Management Principles and Practices
- FINANCE 718 / Advanced Topics in Finance

# RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

- 1. Removal of BUSINESS F725 (Personal Financial Management): This course discusses financial management at the personal (household) level. The materials are much less challenging than other courses in the list.
- 2. Removal of BUSINESS F743 (Big Data in Finance): This course is offered in the MBA program. The Master of Finance program will introduce its own course on the same topics.
- 3. Adding FINANCE 718 (Advanced Topics in Finance): The current academic calendar does not list this course in the elective list. The course currently appears in the list of courses offered by the Master of Finance program, but does not yet appear on the list of eligible elective courses.

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

September 2022

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

N/A

## CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Narat Charupat Email: charupat@mcmaster.ca Extension: 23987

Date submitted: March 9, 2022

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013



<b>IMPORTAN</b>	IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:						
<ol> <li>This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.</li> </ol>							
2. An electronic v Secretary, School of		•			shou	ld be emailed to the Assistant	
•	•			<b>quired to attend</b> the Fac change in graduate curric	•	Curriculum and Policy Committee n will be discussed.	
DEPARTMENT	DeGroote	School of	f Bus	siness			
NAME OF PROGRAM and PLAN	MBA						
DEGREE	Master of Business Administration						
Is this change a	NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)  Is this change a result of an IQAP review? □ Yes ☒ No  CREATION OF NEW MILESTONE □						
CHANGE IN ADMI REQUIREMENTS	SSION		/IPR	E IN EHENSIVE ATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS	
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR  EXPLAIN:  Proposal to change MBA Admission Requirements and Program Information in Calendar to reflect the admission changes recommended for each MBA program							
OTHER CHANGES	EXPLAIN:	•					

## DESCRIBE THE **EXISTING** REQUIREMENT/PROCEDURE:

## Current General MBA Admission Requirements/Required Documentation

General MBA Admission requirements/Required Documentation

- 1. Completed on-line application accompanied by the application fee (\$150 Cdn). Further details can be found at <a href="mailto:mbarecruit.degroote.mcmaster.ca">mbarecruit.degroote.mcmaster.ca</a>.
- 2. Official transcripts are to be sent by the school's registrar (or equivalent officer) from each postsecondary institution attended. In the final 2 years of study, a B average is recommended.
- 3. For MBA Programs requiring completion of the GMAT a score of 600 is normally competitive. Each application is processed on its own merits with higher scores on some criteria compensating for lower scores in other areas.
- 4. Two letters of recommendation are to be completed by individuals who can supply information relating to the applicant's abilities. Applicants are encouraged to seek one academic and one professional (direct supervisor) reference.
- 5. A full résumé must be supplied. Candidates applying to the Accelerated and MBA (non-Coop) Programs must have at least one year of full-time, continuous work experience at the professional, technical, or managerial level. All international candidates must have one year of full-time work experience that has been completed after graduation.
- 6. Applicants who did not complete their undergraduate degree in English must write the TOEFL or IELTS tests. TOEFL results (if applicable) are to be sent directly by the Educational Testing Service (<a href="www.toefl.org">www.toefl.org</a>). Minimum required scores are 250 on the computer-based test or 100 on the internet-based test. IELTS (<a href="www.ielts.org">www.ielts.org</a>) is also accepted with a minimum score of 7.0.

As of September 2016, a new transfer credit and waiver policy is in place for the DeGroote MBA and the DeGroote MBA with Co-op programs. The intention of this new policy shifts the focus from student flexibility to one of delivering an experience both inside and outside of the classroom requiring all MBA students to follow the same programming throughout their degree. Thus, no transfer credits or waivers will be granted for MBA and MBA with Co-op and students.

Accelerated students who have earned their degree within the last 10 years from a recognized Canadian or American University and have obtained a minimum B grade (B- for McMaster graduates) in the equivalent course will have their courses reviewed automatically for credit. Students entering the Accelerated Program after September 2019 will be admitted directly into 700 level courses.

#### Specializations:

As of September 2018, areas of specialization that are available are as follows:

- Accounting and Financial Management Services
- Business Analytics
- Finance
- Health Services Management (certain restrictions may apply)
- Strategic Business Valuation
- Strategic Marketing
- General

Students registered prior to September 2018 in any full-time, part-time and co-op programs will be grandfathered based on the specialization they registered for.

Please note that starting September 2016 program minors will no longer be available in the MBA program.

### Non-Degree Applicants

Each year, the DeGroote School of Business is prepared to admit to the MBA program a small number of highly qualified students who do not hold a bachelor's degree. The Admissions Advisory Committee will consider applicants with a minimum of seven years of successful business experience along with the typical GMAT score that ranges upward from 600.

# PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

### **General MBA Admission Requirements/Required Documentation**

- 1. Completed on-line application accompanied by the application fee (\$150 CDN). Further details can be found at <a href="https://mbarecruit.degroote.mcmaster.ca/admissions/">https://mbarecruit.degroote.mcmaster.ca/admissions/</a>.
- 2. Official transcripts are to be sent by the school's registrar (or equivalent officer) from each post-secondary institution attended. In the final 2 years of study, a B average is recommended.
- 3. For MBA Programs requiring completion of the GMAT a score of 600 is normally competitive. Each application is processed on its own merits with higher scores on some criteria compensating for lower scores in other areas.
- 4. Two letters of recommendation are to be completed by individuals who can supply information relating to the applicant's abilities. For more detail on requirements please see specific admissions requirements for each MBA program.
- 5. A full résumé must be supplied. For work experience requirements please see specific admissions requirements for each MBA program.
- 6. Applicants who did not complete their undergraduate degree in English must write the TOEFL or IELTS tests. TOEFL results (if applicable) are to be sent directly by the Educational Testing Service (<a href="www.toefl.org">www.toefl.org</a>). Minimum required scores are 250 on the computer-based test or 100 on the internet-based test. IELTS (<a href="www.ielts.org">www.ielts.org</a>) is also accepted with a minimum score of 7.0.

For students who have entered the program as of September, 2016 a new transfer credit and waiver policy is in place. The intention of this policy is to enhance DeGroote's cohort-based, experiential curriculum model, which requires all MBA students to follow the same programming throughout their degree. To support this model, no transfer credits or waivers will be granted for MBA, MBA with Coop or Blended Learning Part-time MBA students.

Applicants to the Accelerated program who have earned their degree within the last 10 years from a recognized Canadian or American University and have obtained a minimum B grade (B- for McMaster

graduates) in the equivalent course will have their courses reviewed automatically for credit and will be admitted into Level 700 MBA courses (second year courses).

### Specializations:

Currently, the fields of specialization available in the MBA program are:

- Accounting and Financial Management Services
- Business Analytics
- Finance
- Health Services Management (certain restrictions may apply)
- Strategic Business Valuation
- Marketing
- General

Students registered prior to September 2018 in any full-time, part-time and co-op programs will be grandfathered based on the specialization they registered for.

Due to the nature of the academic curriculum, specializations are not available to students enrolled in the BLPT MBA program.

Please note that starting September 2016 program minors will no longer be available in the MBA program.

#### **Non-Degree Applicants**

Each year, the DeGroote School of Business is prepared to admit to the MBA program a small number of highly qualified students who do not hold a bachelor's degree. The Admissions Advisory Committee will consider applicants with a minimum of seven years of successful business experience along with a -GMAT score that ranges upward from 600.

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

The updated language is aligned with the proposed changes to the MBA admissions requirements.

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

September, 2022

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

CONTACT INFORMATION	ON FOR THE RECOMMENDED CH	ANGE:	
Name: John Medcof January 4 <sup>th</sup> , 2022	Email: medcofj@mcmaster.ca	Extension: 20599	Date submitted:

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca



IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:								
	<ol> <li>This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.</li> </ol>							
					in MS WORD <u><b>not</b></u> PDF) s @mcmaster.ca).	shou	ld be emailed to the Assistant	
					<b>quired to attend</b> the Fac change in graduate curric		Curriculum and Policy Committee n will be discussed.	
DEPARTME	NT	DeGroo	te School	of Bu	siness			
NAME OF PROGRAM & PLAN	and	Business Administration, Full-Time, MBA						
DEGREE	Master of Business Administration							
	NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)							
Is this char	nge a	result of a	n IQAP r	evie	w? □ Yes ⊠ No			
CREATION (	OF NE	EW MILESTO	NE 🗆					
CHANGE IN ADMISSION REQUIREMENTS			CC		REHENSIVE NATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS	
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR				x	Proposal to change verbiage for admissions requirements for the Full-Time MBA Program.			
OTHER CHANGES		EXPLAIN:						

## DESCRIBE THE **EXISTING** REQUIREMENT/PROCEDURE:

Current admissions criteria for Full-Time MBA Program:

- Work Experience: One year of full-time continuous professional, managerial or technical work experience.
- GPA: Completion of an undergraduate degree, a B average or higher is recommended
- GMAT: Required. Applicants may submit a GRE or MCAT in lieu of GMAT. Please contact the MBA Program office for further details.
- Proof of English Language Proficiency: required if previous degree was not completed in English
- 2 Letters of Reference. Applicants are encouraged to seek one academic and one professional (direct supervisor) reference.
- Applicants who meet the admission requirements will be required to take part in an online interview

# PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

Applicants to the Full-Time MBA Program are expected to meet the following requirements/provide the following required documentation:

- Degree: Completion of an Honours Bachelor's degree from a recognized university
- **GPA:** Recommended B average (equivalent to a McMaster 8.0 GPA out of 12) or higher. GPA will be calculated using the two most recent years of undergraduate or graduate study, 20 courses, or the equivalent of 60 academic credits. A combination may be used and is determined on a case-by-case basis.
- **GMAT:** Required. Applicants may submit the following in lieu of a GMAT (please contact the MBA Recruitment and Admissions Office for further details):
  - o GRE
  - o MCAT
  - o CFA Level 2
- **Proof of English Language Proficiency:** Required for applicants:
  - Whose previous degree was not completed with the language of instruction of English.
  - o Who have been resident in an English-speaking country for less than four years.
  - Who have completed less than three years of full-time post-secondary education with English as the primary language of instruction, excluding ESL courses.
- Acceptable English Language Proficiency Tests:
  - Academic IELTS
  - o TOEFL
- Work Experience: 1 year of post- graduate work experience is required.

- \* Although we recommend one year of work experience, exceptional applicants will be considered with less than one year of experience.
- **References:** Provide two (2) references. Applicants are encouraged to seek one academic and one professional (current or former direct supervisor or manager) reference.
- **Interview:** Applicants are required to complete an online interview prior to submission of their application.

Please note: meeting minimum admission requirements does not guarantee acceptance into the program.

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

The revised wording provides alignment across admissions criteria for all MBA programs (excluding EMBA).

It also provides further clarification on the B average requirement and strengthens the language concerning proof of English proficiency. It also provides clarity regarding different alternatives that can be provided in lieu of the GMAT.

Recommendation to add: "Although we recommend one year of work experience, exceptional applicants will be considered with less than one year of experience." This criteria provides further latitude to the Recruitment and Admissions team to consider applicants that have exceptional experiences (i.e. extra-curricular, volunteer) but do not meet the one year work experience requirement. It is also aligned with the admissions verbiage of some of our competitor B-Schools (i.e. Smith School of Business).

Language regarding the type of work experience was also streamlined to allow for a greater breadth of candidates to apply to the program and to remove any potential systemic barriers.

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

September, 2022

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:								
Name: John Medcof January 4 <sup>th</sup> , 2022	Email: medcofj@mcmaster.ca	Extension: 20599	Date submitted:					

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca



IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:								
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					in MS WORD <u><b>not</b></u> PDF) s @mcmaster.ca).	shou	ld be emailed to the Assistant	
	3. A representative from the department is <u>required to attend</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.							
DEPARTME	NT	DeGroo	te School	of Bu	siness			
NAME OF PROGRAM & PLAN	and	Business Administration, Co-op, MBA						
DEGREE	Master of Business Administration							
	NAT	URE OF RE	COMME	ND/	ATION (PLEASE CHE	CK A	APPROPRIATE BOX)	
Is this char	nge a	result of a	n IQAP r	evie	w? □ Yes ⊠ No			
CREATION (	OF NE	W MILESTO	NE 🗆					
CHANGE IN REQUIREME		SSION	CC		REHENSIVE NATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS	
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR				x	Proposal to change verbiage for admissions requirements for the MBA Co-op Program.			
OTHER CHANGES		EXPLAIN:						

## DESCRIBE THE **EXISTING** REQUIREMENT/PROCEDURE:

Current admissions criteria for MBA Co-op Program:

- Work Experience: Although work experience is an asset, it is not a requirement for domestic applicants. International applicants must have one year of full-time continuous professional, managerial or technical work experience.
- GPA: Completion of an undergraduate degree, a B average or higher is recommended
- GMAT: Required. Applicants may submit a GRE or MCAT in lieu of GMAT. Please contact the MBA Program office for further details.
- Proof of English Language Proficiency: required if previous degree was not completed in English
- 2 Letters of Reference. Applicants are encouraged to seek one academic and one professional (direct supervisor) reference.
- Applicants who meet the admission requirements will be required to take part in an online and a behaviour based interview.

# PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

Applicants to the MBA Co-op Program are expected to meet the following requirements/provide the following required documentation:

- Degree: Completion of an Honours Bachelor's degree from a recognized university.
- GPA: Recommended B average (equivalent to a McMaster 8.0 GPA out of 12) or higher. GPA will be calculated using the two most recent years of undergraduate or graduate study, 20 courses, or the equivalent of 60 academic credits. A combination may be used and is determined on a case-by-case basis.
- **GMAT:** Required. Applicants may submit the following in lieu of a GMAT (please contact the MBA Recruitment and Admissions Office for further details):
  - o GRE
  - MCAT
  - o CFA Level 2
- **Proof of English Language Proficiency:** Required for applicants:
  - Whose previous degree was not completed with the language of instruction of English.
  - o Who have been resident in an English-speaking country for less than four years.
  - Who have completed less than three years of full-time post-secondary education with English as the primary language of instruction, excluding ESL courses.
- Acceptable English Language Proficiency Tests:

- Academic IELTS
- o TOEFL
- **Work Experience:** Although work experience is an asset no post-graduate work experience is required.
- **References:** Provide two (2) references. Applicants are encouraged to seek one academic and one professional (current or former direct supervisor or manager) reference.
- Interview
  - Applicants are required to complete an online interview prior to submission of their application.
  - Applicants may be invited to an additional one- on- one interview with a member of our Career and Professional Development team after the submission of their application.

Please note: meeting minimum admission requirements does not guarantee acceptance into the program.

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

The revised wording provides alignment across admissions criteria for all MBA programs (excluding EMBA).

It also provides further clarification on the B average requirement and strengthens the language concerning proof of English proficiency. It also provides clarity regarding different alternatives that can be provided in lieu of the GMAT.

Recommendation to remove one year work experience requirement for international applicants. This was identified as a potential systemic barrier by McMaster's EIO office as no work experience is required for domestic applicants.

Language regarding the type of work experience was also streamlined to allow for a greater breadth of candidates to apply to the program and to remove any potential systemic barriers.

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

September, 2022

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

CONTACT INFORMATION	ON FOR THE RECOMMENDED CH	ANGE:	
Name: John Medcof January 4 <sup>th</sup> , 2022	Email: medcofj@mcmaster.ca	Extension: 20599	Date submitted:

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca



<u>IMPO</u>	IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:							
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DEPARTME	NT	DeGroo	te School	of Bu	siness			
NAME OF PROGRAM & PLAN	and	Business Administration, Accelerated, MBA						
DEGREE	Master of Business Administration							
NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)								
Is this char	nge a	result of a	n IQAP r	evie	w? □ Yes ⊠ No			
CREATION (	OF NE	W MILESTO	NE 🗆					
CHANGE IN REQUIREME		SSION	CC		EHENSIVE NATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS	
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR  EXPLAIN: Proposal to change verbiage for admissions requirements for the Accelerated MBA Program.				•				
OTHER CHANGES		EXPLAIN:						

## DESCRIBE THE **EXISTING** REQUIREMENT/PROCEDURE:

Current admissions criteria for Accelerated MBA Program:

- Completion of an undergraduate degree in business, or McMaster's Engineering and Management program, with a B average in the final two years of study.
   Applicants who completed their BCom at McMaster may be considered with a Baverage
- Graduated within the last 10 years from a recognized Canadian or American university.
- Minimum of one year of full-time continuous managerial, professional, or technical work experience.
- Undergraduate co-op or internship placements (adding up to 12 months of work or more) from a post-secondary institution will also be considered if they are noted on your official transcripts or are confirmed in a letter from your school.
- GMAT: Not required. Candidates who fail to meet the above criteria or who wish to strengthen their application may wish to write the GMAT.
- 2 Letters of Reference. Applicants are encouraged to seek one academic and one professional (direct supervisor) reference.

# PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

Applicants to the Accelerated MBA are expected to meet the following requirements/provide the following required documentation:

- **Degree:** Completion within the last 10 years of a Bachelor of Commerce or Bachelor of Business Administration from a recognized Canadian or American University. Candidates that have completed the following degrees may also apply:
  - McMaster University:
    - Bachelor of Engineering Management
    - Bachelor of Commerce, Integrated Business and Humanities (IBH)
  - Western University
    - Bachelor of Management and Organizational Studies
- **GPA**: Recommended B average (equivalent to a McMaster 8.0 GPA out of 12) or higher. GPA will be calculated using the two most recent years of undergraduate or graduate study, 20 courses, or the equivalent of 60 academic credits. A combination may be used and is determined on a case-by-case basis.
- **GMAT:** Not required. Candidates who fail to meet the above GPA criteria or who wish to strengthen their academic application may wish to submit a GMAT.
- Proof of English Language Proficiency: Required for applicants:

- Whose previous degree was not completed with the language of instruction of English.
- Who have been resident in an English-speaking country for less than four years.
- Who have completed less than three years of full-time post-secondary education with English as the primary language of instruction, excluding ESL courses.

## Acceptable English Language Proficiency Tests:

- Academic IELTS
- o TOEFL

### • Work Experience:

- Recommended minimum of 1 year work experience for McMaster Bachelor of Commerce, Bachelor of Engineering and Management, Bachelor of Commerce, IBH Graduates (undergraduate co-op or internship placements adding up to 12 months of work or more from these degrees will be considered if they are noted on official transcripts).
- o 2 years post-graduate work experience for all other programs.
- **References:** Applicants are encouraged to seek two professional (current or former direct supervisor or manger) references. Academic reference can be submitted if two professional are not available.
- **Interview:** Applicants are required to complete an online interview prior to submission of their application.

Please note: meeting minimum admission requirements does not guarantee acceptance into the program.

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

The revised wording provides alignment across admissions criteria for all MBA programs (excluding EMBA).

It also provides further clarification on the B average requirement and strengthens the language concerning proof of English proficiency. It also provides clarity regarding when a candidate might be required to complete the GMAT (i.e. if they do not have the recommended B average).

It also provides a differentiation regarding work experience requirements for candidates that completed McMaster-eligible degrees vs. degrees completed from alternative schools and provides candidates from McMaster with an option to complete their MBA using an accelerated entry point (this is a lucrative recruitment tactic when recruiting undergraduate students into these programs). However, for candidates applying from non-McMaster programs, the work experience requirement is increased to 2 years and we will no longer consider undergraduate co-op work experiences. By requiring candidates to have additional work experience it will help to strengthen the profile of

Accelerated MBA o outcomes (and ultin	andidates which may help nately rankings).	to improve post-gr	aduate employment
PROVIDE IMPLEMENTA year)	TION DATE: (Implementation date	e should be at the beginn	ning of the academic
September, 2022			
	R DETAILS OF THE RECOMMEND OULD BE AWARE OF? IF YES, I		CURRICULUM AND
CONTACT INFORMATIO	N FOR THE RECOMMENDED CHA	ANGE:	
Name: John Medcof January 4 <sup>th</sup> , 2022	Email: medcofj@mcmaster.ca	Extension: 20599	Date submitted:

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

### MBA (Acc, FT, Co-op)

Missed Term Work

Summary of the changes to Petition for Missed Work:

Change to MBA missed work default phrasing

i. Introduce ability to accept alternative assessment

The substantive proposal is to state that when the reason for a student's missed term work has been approved by the Student Experience – Academic Office (SEAO), it is at the instructor's discretion to determine what alternative work may be required of the student. This alternative could be to re-weight the marks of the missed item to other course component marks. This is proposed to replace the current statement which says that approved missed work would be handled by reweighting the mark. This change is stated in the first paragraph of the revised statement. While working on this revision it was determined that this section of the handbook could be shortened and clarified so the revised version is a reworking of the whole missed work section of the handbook. The current version of that section is attached for comparison.

- Term work includes such requirements as assignments, tests, class participation, and mid-term exams. When students miss regularly scheduled term work which contributes 10% or more to the final grade, for legitimate reasons as determined by the Student Experience Academic Office (SEAO), the activity necessary to compensate for the missed work will be determined by the course instructor. The compensatory activities assigned will vary with the nature of the course and the missed requirement. They include, but are not restricted to, an alternative assignment, a rescheduled exam, or re-weighting the marks for the missed component to other mark components. Documentation explaining such missed work must be provided to the SEAO within five (5) working days of the scheduled date for completion of the work.
- Approved reasons for missed work are generally related to one of the following categories:
   personal medical issue, death or extenuating circumstances connected to an immediate family
   member\*, university representation at an academic or varsity event, or religious observance\*\*.
   Approved absences tied to employment related obligations will only be considered for students
   in a part time program.
  - \* Immediate family member as defined by the Government of Canada (see section #7: https://www.canada.ca/en/employment-social-development/services/labour-standards/reports/bereavement-leave.html#s07).
  - \*\*Please refer to McMaster's Academic Accommodation Policy for Religious, Indigenous and Spiritual Observances https://secretariat.mcmaster.ca/app/uploads/2019/02/Academic-Accommodation-for-Religious-Indigenous-and-Spiritual-Observances-Policy-on.pdf
- To document missed work for health related reasons, please provide the <u>Petition for Missed</u>
  <u>Term Work</u> and the <u>MBA Student McMaster University Student Health Certificate</u>, which can be

- found on the DeGroote MBA Student website. The <u>MBA Student McMaster University Student Health Certificate</u> must be completed by a licensed health practitioner.
- University policy states that a student may submit a maximum of three (3) <u>Petition for Missed</u>
   <u>Term Work</u> per academic year, after which the student must meet with the Director of the
   program.
- Petitions from students who write examinations while ill and apply for special consideration after the fact will not be considered.
- Where missed work is tied to a planned event (such as a planned university athletic or academic representation, or calendared religious observance), it is expected that the <u>Petition for Missed</u> <u>Term</u> work will be submitted early in the term and prior to the known event.
- To document missed term work for reasons other than health, please provide the <u>Petition for Missed Term Work</u> and documentation supporting the reason for the missing work. Please direct any questions about acceptable documentation to the MBA Academic Advisors.
- Please do not use the online <u>McMaster Student Absence Form (MSAF)</u> as this is for Undergraduate students only. The MBA program will not accept an MSAF.
- If term work is missed without an approved reason, students will receive a grade of zero (0) for that component.

#### **Missed Final Examinations**

- Students must be available for the duration of the posted exam period regardless of their personal exam schedule. This is to ensure student availability throughout the entire exam period in the event that an exam must be rescheduled due to unforeseen circumstances (university closure, power outage, storm policy, etc.). A student who misses a final examination without valid reason will receive a mark of 0 on the examination.
- Students who have missed a final exam for a valid reason can apply to the SEAO to write a
  deferred examination by submitting an <u>Application for Deferring a Final Exam</u> with supporting
  documentation.
- If the final exam was missed for medical reasons the supporting documentation must include an <u>MBA Student McMaster University Student Health Certificate</u>. The <u>MBA Student McMaster</u> <u>University Student Health Certificate</u> must be completed by a licensed health practitioner.
- The application must be made within five days of the scheduled exam date or the application may be denied.
- The <u>Application for Deferring a Final Exam</u> and the <u>MBA Student McMaster University Student Health Certificate</u> can be found on the DeGroote MBA Current Student website (mbastudent.degroote.mcmaster.ca)
- Deferred examination privileges, if granted, are normally satisfied during the examination period at the end of the following semester. In select cases, the deferred examination may be written at a time facilitated by the SEAO and agreed to by the course instructor.

- Requests for a second deferral or rescheduling of a deferred examination will not be considered.
- Failure to write an approved deferred examination at the pre-scheduled time will result in a zero (0) mark for that examination, except in the case of exceptional circumstances where documentation has been provided and approved. Upon approval, no credit will be given for the course, and the notation N.C. (no credit) will be placed on the student's transcript.
- Students receiving no credit for a required course must repeat the course. Optional or elective
  courses for which no credit is given may be repeated or replaced with another course of equal
  credit value.
- In cases where the student's standing is in doubt, the Graduate Admissions and Study Committee may require that the student with one or more deferred examination privileges refrain from re-registering until the examination(s) have been cleared.

# **Evaluation**

# Midterm and Final Examinations

- Students must be available for the duration of the posted exam period regardless of their personal exam schedule. In the event that an exam must be rescheduled due to unforeseen circumstances (university closure, power outage, storm etc.), the exam must be rescheduled during the remainder of the exam period.
- Punctuality is essential. No extra time will be given to those arriving late. No student will be admitted to an examination room more than 30 minutes after the start of any exam. No student may leave the room to withdraw from an examination during the first 45 minutes of any exam. Students must leave the room immediately after handing in their examination materials.
- Final exam schedules will be posted within three weeks after the term's Add / Drop date

# **Evaluation (cont'd)**

# Missed Midterm Examinations / Tests / Class Participation

- Where students miss a regularly scheduled mid-term or class participation for legitimate
  reasons as determined by the Student Experience Academic office, the weight for that
  test/participation will be distributed across other evaluative components of the course at
  the discretion of the instructor. Documentation explaining such an absence must be
  provided to the Student Experience Academic office within five (5) working days upon
  returning to school.
- Approved absences generally are related to one of the following categories: personal medical issue, death of a family member or religious observance.
- To document absences for health -elated reasons, please provide the <u>Petition for Missed</u>
   <u>Term Work</u> and the McMaster University Student Health Certificate, which can be found on
   the DeGroote website at Students who write examinations while ill will not be given special
   consideration after the fact.
- A request for a deferred examination privilege must be made in writing to the <u>Student Experience</u> <u>MBA Programs office</u> within five business days of the missed examination.
- To document absences for reasons other than health related, please provide the Petition for Missed Term Work and documentation supporting the reason for the absence.
- Please do not use the online McMaster Student Absence Form as this is for Undergraduate students only. University policy states that a student may submit a maximum of three (3)

- medical certificates per academic year after which the student must meet with the Director of the program.
- Students unable to write a mid-term at the posted exam time due to the following reasons: religious; representing university at an academic or varsity athletic event; conflicts between two overlapping scheduled mid-term exams; or other extenuating circumstances, have the option of applying for special exam arrangements.
  - Such requests must be made to the <u>Student Experience MBA Programs office</u> at least ten (10) business days before the scheduled exam along with acceptable documentation. Instructors cannot themselves allow students to unofficially write make-up exams/tests. The <u>Student Experience MBA Programs office</u>, must handle adjudication of the request.
- Deferred examination privileges, if granted, must be satisfied during the examination
  period at the end of the following term. There will be one common sitting for all deferred
  exams. Deferred examination privileges, if granted, must be satisfied during the
  examination period at the end of the following term. There will be one common sitting for
  all deferred exams. Requests for a second deferral or rescheduling of a deferred
  examination will not be considered.

# **Evaluation (cont'd)**

# Missed Midterm Examinations / Tests / Class Participation

- In cases where the student's standing is in doubt, the Graduate Admissions and Study Committee may require that the student with one or more deferred examination privileges refrain from re-registering until the examination(s) have been cleared.
- If an assignment, mid-term or exam is missed without an approved absence, students will receive a grade of zero (0) for that component.

## **Missed Final Examinations**

- Final course examinations of a term are given immediately following the close of that term. Students must be available for the duration of the posted exam period regardless of their personal exam schedule. This is to ensure student availability throughout the entire final exam period in the event that an exam must be rescheduled due to unforeseen circumstances (university closure, power outage, storm policy, etc.). A student who misses a final examination without good reason will receive a mark of 0 on the examination.
- All applications for deferred and special examination arrangements must be made to the Student Experience – Academic office. Failure to meet the stated deadlines may

result in the denial of these arrangements. For more information, please visit the DeGroote Exam Page.

- Deferred examination privileges, if granted, must be satisfied during the examination period at the end of the following term. There will be one common sitting for all deferred exams.
- Failure to write an approved deferred examination at the pre-scheduled time will result in a failure for that examination, except in the case of exceptional circumstances where documentation has been provided and approved. Upon approval, no credit will be given for the course, and the notation N.C. (no credit) will be placed on the student's transcript.
- Students receiving no credit for a required course must repeat the course. Optional or
  elective courses
  for which no credit is given may be repeated or replaced with another course of equal credit
  value.
- Requests for a second deferral or rescheduling of a deferred examination will not be considered.
- Any student who is unable to write a final examination because of illness is required to submit the Application for Deferred MBA Final Examination and a statement from a doctor certifying illness on the date of the examination. The Application for Deferred MBA Final Examination and the McMaster University Student Health Certificate can be found on the <u>DeGroote Exam Page</u>.

# **Evaluation (cont'd)**

# Missed Final Examinations (cont'd)

- Please do not use the online McMaster Student Absence Form as this is for Undergraduate students only. Students who write examinations while ill will not be given special consideration after the fact.
- In such cases, the request for a deferred examination privilege must be made in writing to the Student Experience Academic office within five business days of the missed examination.
- Special examination arrangements may be made for students unable to write at the
  posted exam time due to compelling reasons (for example religious reasons). Students
  who have religious obligations, which make it impossible to write examinations at the
  times posted, are required to produce a letter from their religious leader stating that they
  are unable to be present due to a religious obligation.
- If a student is representing the University at an academic or athletic event and is available at an overlapping scheduled time of the test/examination, the student may write the

- test/examination at an approved location with an approved invigilator, as determined by the Student Experience Academic office.
- In such cases, the request for a deferred examination privilege must be made in writing to the Student Experience Academic office within ten business days of the end of the examination period.
- In cases where the student's standing is in doubt, the Graduate Admissions and Study Committee may require that the student with one or more deferred examination privileges refrain from re-registering until the examination(s) have been cleared.
- The University wishes to assist students with legitimate difficulties. It also has the responsibility to ensure that degree, program and course requirements are met in a manner that is equitable to all students. Please note that academic accommodation requests related to a disability are processed under the Academic Accommodation of Students with Disabilities policy. This includes accommodation requests for Permanent Disability, Temporary Disability, and Retroactive Accommodation.
- In those instances where a student acknowledges that the rules and regulations of the University have been applied fairly, but is requesting that an exception be made because of special circumstances (compelling medical, personal, or family reasons) the student may submit, in a prompt and timely manner, a Petition for Special Consideration. The appropriate form is available on the School of Graduate Studies website. The student's supervisor and Associate Chair are normally required to provide their independent assessments of the student's statement in the petition. Supporting documentation will be required but will not ensure approval of the petition. The authority to grant petitions lies with the School of Graduate Studies and is discretionary. It is imperative that students make every effort to meet the originally scheduled course requirements and it is a student's responsibility to write examinations as scheduled.

- The minimum grade point average for the Dean's Honour List (DHL) is 10.5 (between A- and A). Year 1 students who maintain a 10.5 average on ten 600-level courses, including any courses that are waiver replacements, or Year 2 students who maintain a 10.5 average on all 700-level courses completed in second year, will be named to the Dean's Honour List. A minimum of eight (8) courses must be taken in Year 2 in order to be eligible.
- Excluded are courses defined as "extra" (see Course Load Section of this calendar).
   Students who participate in exchange programs are not eligible for the Dean's Honour List in their second year of studies.

# **Evaluation (cont'd)**

# Missed Final Examinations (cont'd)

 In accordance with the Student Appeal Procedures, decisions made on Petitions for Special Consideration cannot be appealed to the Senate Board for Student appeals. Where any student feels there may have been discrimination on grounds in a protected social area as outlined in the Ontario Human Rights Code, they may contact the Equity and Inclusion Office to discuss initiating a complaint (Room 212 of the McMaster University Student Centre). In Health Sciences, Graduate Students should also consult the Advisor on Professionalism in Clinically Based Education.



School of Graduate Studies 1280 Main Street West Phone 905.525.9140 Hamilton, Ontario, Canada Ext. 23679 L8S 4L8 http://graduate.mcmaster.ca

To **Graduate Council** 

From: Christina Bryce

**Assistant Graduate Secretary** 

At its meetings on February 1st and March 17th the Faculty of Engineering Graduate Curriculum and Policy Committee approved the following graduate curriculum recommendations.

Please note that these recommendations were approved by the Faculty of Engineering.

## For Approval of Graduate Council:

- **Computing and Software** 
  - **Change to Calendar Copy**
- **Electrical and Computer Engineering** 
  - **Change to Calendar Copy**
- **Engineering Physics** 
  - Change to Calendar Copy
- **Materials Science and Engineering** 
  - Change to Comprehensive Exam Procedure
- **School of Engineering Practice and Technology** 
  - **Change to Course Requirements** 
    - MEEI/MTEI
    - MED 0
    - MEST
    - MEME 0
    - MEPP

# **For Information of Graduate Council:**

- **Biomedical Engineering\*** 
  - **New Course** 
    - 744 Machine Learning for Biomedical Engineering
- **Chemical Engineering** 
  - **New Cross-listed Course** 
    - o 712 Deep Learning

#### Civil Engineering

## New Courses

- 713 Finite Element Analysis in Geomechanics and Transient Flow: Theory and Application
- 715 Prestressed Concrete Bridges
- o 716 Seismic Behavior and Design of Reinforced Concrete Systems
- o 717 Travel Demand Analysis
- 718 Social Hydrology

#### Computing and Software

#### New Course

- o 720 Foundations of Future Resilient Databases
- o 721 Human-Robot Interaction
- 726 Robot Learning
- 735 (Micro)service-oriented architectures
- o 737 Computer Animation
- o 739 Evolutionary Computation
- o 747 Machine Learning on Graphs
- 751 Information-Theoretic Methods in Trustworthy Machine Learning

# Change to Course Description

o 780 Independent Study in Computing and Software

# Electrical and Computer Engineering

#### Course Cancellations

- o 6BE4 Medical Robotics
- o 6PL4 Energy Systems and Management
- o 772 Neural Networks and Learning Machines
- 775 Cognitive Dynamic Systems

# • Change in Course Title, Description and Unit Count

 790 Graduate Poster Seminars in Electrical and Computer Engineering

# Engineering Physics

## New Courses

- o 6B03 Biosensors Fundamentals and Applications
- 6QM3 Quantum Optics and Metrology

#### New Cross-listed Courses

- o 725 Transmission Electron Microscopy
- 740 Semiconductor Device Theory and Modeling

#### Materials Science and Engineering

## • New Cross-listed Course

782 Solid State Electronics

## Mechanical Engineering

Change to Course Description

- 758 Graduate Seminars in Mechanical Engineering
- School of Engineering Practice and Technology
  - New Courses
    - o 775 Circular Economy Engineering Perspectives and Application
    - 776 Manufacturing Systems 2 System Engineering, Process Integration and Simulation
    - o 777 Cyber-Physical Systems and Industry 4.0
    - o 794 Engineering Innovation Project
    - o 795 Entrepreneurship Project
  - New Cross-listed Courses
    - o 745 Biomedical Engineering
    - o 766 Membrane-Based Bioseparation
  - Change to Course Description
    - o MANUF 701 Part I and II
  - Change to Course Title, Description and Unit Count
    - o 790 Proof of Concept Studio
  - Change in Course Level and Description
    - 6E03 Opportunity Identification
  - Change to Mode of Delivery
    - o 771 Practitioner's Forum Part I and II
- UNENE
  - New Course
    - o 504 Small Modular Reactors

<sup>\*</sup>Also approved by the Faculty of Health Sciences



# RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

IMPO	ORT.	ANT: PLEASE	REAL	THE F	FOLLOWING NOTES B	EFORE	E COMPLETING THIS FORM:	
		st be complete rm <u>must</u> be co	· ·		nges involving degree p	rogram	requirements/procedures. <u>All</u>	
					in MS WORD <u>not</u> PDF @mcmaster.ca).	) should	d be emailed to the Assistant	
					<b>equired to attend</b> the F change in graduate cur		Curriculum and Policy Committee will be discussed.	
DEPARTME	ΝT	Computi	ng and	l Softwai	re			
NAME OF PROGRAM & PLAN	ınd	all						
DEGREE		,						
Is this char					ATION <i>(PLEASE CH</i> w? □ Yes ⊠ No	IECK A	APPROPRIATE BOX)	
CREATION (	OF N	EW MILESTO	NE 🗆					
CHANGE IN ADMISSION REQUIREMENTS					GE IN REHENSIVE NATION PROCEDURE	•	CHANGE IN COURSE REQUIREMENTS	
		DESCRIPTIO GRADUATE	N OF A	•	EXPLAIN:	•		
OTHER CHANGES	x	• .	approp	riately. \	We know this is admini	•	ermission is required, so that this car ly a no-op, but hopefully this will lead	

programs of study are subject to the approval of the Department Chair.
PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)
Change "Department Chair" to "Department" wherever a permission is required, so students send the request to the grad people instead of the chair.
RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):
These duties should all be done by the associate chair, who should be contacted directly by the students.
PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)
July 1, 2022
ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.
PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):
CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Students must successfully complete four half courses (or equivalent) including i) one course in Software, ii) two Theory courses and one Systems course; or two Systems courses and one Theory course. One course can be taken from outside the department. Additional courses may be required for

students with gaps in their background. Students are required to successfully defend a thesis. All

DESCRIBE THE **EXISTING** REQUIREMENT/PROCEDURE:

Example (from Computer Science, M.Sc. requirements)

Name: Jacques Carette	Email: carette@mcmaster.ca Extension:	Date submitted: Jan 14, 2022			

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013



# RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

<u>IMPC</u>	RTA	NT: PLEA	SE REA	D THE F	<u>OLLOWING NOTES BEF</u>	ORE	E COMPLETING THIS FORM:		
1. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.									
	2. An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).								
-			-		equired to attend the Fac change in graduate curric	-	Curriculum and Policy Committee m will be discussed.		
DEPARTME	NT	ECE							
NAME OF PROGRAM and E PLAN			ical and	Compute	er Engineering				
DEGREE			M.A.Sc. and Ph.D.						
	NA	TURE OF	RECON	MENDA	ATION (PLEASE CHE	CK A	APPROPRIATE BOX)		
Is this char	nge a	a result of	an IQA	AP revie	w? □ Yes ⊠ No				
CREATION (	OF N	EW MILES	ΓONE □	]					
CHANGE IN ADMISSION PEOLIPEMENTS					GE IN REHENSIVE NATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS		
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR				X	•		uired in the <b>Electrical and Compu</b> t on of the calendar to correctly reflec		
OTHER CHANGES		EXPLAIN:							

## DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:

The calendar text states that only M.Eng. students in ECE can take 600-level courses for credit. M.A.Sc. and Ph.D. students can only obtain extra credit for these courses.

The calendar text lists 600-level courses outside of the department.

# PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

M.A.Sc. students in ECE are now allowed to take one 600-level course. Additionally, the ECE department is no longer allowing its grad students to enrol in 600-level courses outside ECE. This reference needs to be removed from the Additional Courses section in the ECE Courses section of the calendar.

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

These changes to the calendar text reflect approved policies. We overlooked making the relevant changes to this section of the calendar when the changes were approved.

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

September 2022

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

# PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):

The following 600-level courses will be offered for graduate credit to ECE students in the M.Eng. program (to a maximum of two courses) or in the M.A.Sc. program (to a maximum of one course) for extra graduate credits to ECE students in the M.A.Sc. and Ph.D. programs. However, these will not be available for graduate credit within the minimum course requirements of ECE students in the M.A.Sc. or Ph.D. programs.

. . .

In addition, 600 and 700-level graduate courses in other departments may well be suited to the needs of Electrical Engineering graduate students. Among them are: Computer Science 6GB3; ENG PHYS 6D03, 6E03, ENG PHYS 6S04, ENG PHYS 721, 722, ENG PHYS 723, 724, 725, ENG PHYS 782. Mathematics 745; MECH ENG 724; and STATS 6D03, 6U03, 741, 742, 743, 744, 754, 761. Prior approval from the ECE department is needed to enrol in these courses.

#### CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Dr. I. Bruce Email: brucei@mcmaster.ca Extension: 24826 Date submitted: 2022/03/10

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013



# RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

IMPO	<u> RTANT:</u>	PLEASE	READ	THE F	<u>OLLOWING NO</u>	TES BEFOR	RE COMPLETING THIS FORM:			
This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.										
	2. An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).									
3. A representative from the department is <u>required to attend</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.										
DEPARTME	NT	ECE								
NAME OF PROGRAM & PLAN										
DEGREE		M.Eng.								
NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)  Is this change a result of an IQAP review? □ Yes ☒ No										
CREATION (	OF NEW	MILESTO	NE 🗆							
CHANGE IN REQUIREME			CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE			CHANGE IN COURSE REQUIREMENTS	×			
	CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE X CALENDAR X									
OTHER CHANGES	EXF	PLAIN:								

## DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:

A candidate is required to complete successfully a program of seven graduate half courses (or equivalent), of which at least five must be 700-level and up to two 600-level courses approved by the department; these courses may be taken on a part-time basis. Two of these 600-level courses can be taken in the final undergraduate year at McMaster for graduate credit.

# PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

We propose a change to the graduate calendar text so that it describes our current departmental policies. The goal is to make the description of the course requirements clearer in the calendar in regards to 600-level courses and courses outside of the program.

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

Some students have been confused about course requirements when the policies around courses outside the ECE program are in the general regulations section of the calendar but not in our program-specific section of the calendar. To goal of these changes is to consolidate our departmental policies into the calendar text for the MEng program in ECE.

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

September 2022

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):

A candidate is required to complete successfully successfully complete a program of seven graduate half courses (or equivalent), of which at least five-four must be 700-level courses within ECE. The three remaining courses may be taken as 700-level courses outside of ECE and/or up to two 600-level courses within ECE, with prior approved approval by the department; these courses may be taken on a part-time basis. Up to Two-two of these 600-level ECE courses can be taken in the final undergraduate year at McMaster for graduate credit. All courses toward the M.Eng. degree in ECE may be taken on a part-time basis.

# CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Dr. Ian C. Bruce Email: brucei@mcmaster.ca Extension: 26984 Date submitted: 2022/03/10

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013



# RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

IMPC	KIA	MI: PLEASE	READ	IHEF	OLLOWING NOTES BEI	FORE	COMPLETING THIS FORM:		
	1. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.								
	2. An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).								
					<b>quired to attend</b> the Far change in graduate curri		Curriculum and Policy Committee n will be discussed.		
DEPARTME	NT	Enginee	ring Phy	/sics					
NAME OF PROGRAM & PLAN	and	Graduat	e Progra	am					
DEGREE			PhD, MASc, MEng						
	NA	TURE OF RE	COMM	1END/	ATION (PLEASE CHE	CK A	APPROPRIATE BOX)		
Is this char	nge	a result of a	n IQAP	revie	w? □ Yes ⊠ No				
CREATION	OF N	IEW MILESTO	NE 🗆						
CHANGE IN ADMISSION PEOLIPEMENTS					E IN REHENSIVE NATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS		
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR				Y	EXPLAIN:  For each degree, a sentence has been added to clarify the degree requirements that 50% of the courses must be taken within the department.				
OTHER CHANGES	х	EXPLAIN: Changes in c	ourse lis	stings to	o reflect current situation				

DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:
No changes were made to requirements.
PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)
The course listing at the end of the grad calendar was updated to reflect current status;
Added EP 6B03, EP 6QM3, EP 725 EP 740 and MECHENG 756
Remove ECE 740 (cross listed with EP 740)
RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's
program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):
No changes were made to requirements.
PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic
year)
September 2022
ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND
POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.
No.
PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR
(please include a tracked changes version of the calendar section affected if applicable):
Included.
CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:
Name: A.Buijs Email: buijsa@mcmaster.ca Extension: 24925 Date submitted: Jan 17, 2022

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013

The Department of Engineering Physics offers programs of study leading to the M.A.Sc., M.Eng. and Ph.D. degrees in Engineering Physics. Areas of specialization include Photonics Engineering, Nano- and Microdevice Engineering, Nuclear Engineering, Smart Systems Engineering, and Biomedical Engineering.

Enquiries: 905 525-9140 Ext. 27925 E-mail: <a href="mailto:engphys@mcmaster.ca">engphys@mcmaster.ca</a>

Website: https://www.eng.mcmaster.ca/engphys/resources#graduate-students

# Research in Engineering Physics

Research in the Department of Engineering Physics emphasizes new engineering disciplines that have emerged in recent years. In these high-technology areas, the link between engineering applications and basic science is particularly important. The research activities stress the fundamental physics that relates to the new technologies, as well as its application to practical engineering problems.

The Department conducts research in five designated fields:

Photonics Engineering
Nano- and Micro-Device Engineering
Nuclear Engineering
Smart Systems Engineering
Biomedical Engineering

**Photonics Engineering** research activities comprise a broad range of topics in optoelectronic devices, materials processing, laser physics and their applications. Specific topics include, for example, semiconductor lasers, photodetectors, photovoltaics, biosensor development, ultrafast phenomena and processes, display devices, planar light wave structures, nonlinear photonic devices, and optical fiber technologies. Traditionally the Department has been strongly focused on III-V semiconductors, but it has broadened the scope to research in silicon photonics. Overall, the efforts in photonics relate closely to the work in nano- and micro- devices, and in addition link with new directions in energy systems.

Nano- and Micro-Device Engineering is based on several materials fabrication technologies, including molecular beam epitaxy (MBE), metalorganic chemical vapor deposition (MOCVD), thin film deposition, plasma processing, and laser machining. The research is aimed at the development of devices for deployment in several industrial and medical sectors. The study of fundamental materials systems is often conducted in parallel with the engineering of targeted devices. Examples of research topics in this area include MEMS (Micro-Electro-Mechanical Systems), high-temperature superconductors, microfluidics, defect spectroscopy, low-dimensional quantum structures, and biological systems.

**Nuclear Engineering** covers a wide range of areas related to long-term development of nuclear applications, such as power reactors, medical radio-isotope production, materials research, nuclear imaging, and nuclear waste management. For its experimental research, the Department has access to on-campus facilities, such as the McMaster Nuclear Reactor (MNR), the Centre for Advanced Nuclear Systems (CANS), hot cells, thermalhydraulic test loops, a nuclear chemistry lab, and several accelerators and sources, including a D-D fusion neutron source. The theoretical research areas include nuclear reactor physics, plant thermalhydraulics, actinide transport, safety system performance, CANDU reactors,

generation-IV Small Modular Reactor (SMR) designs, and fusion technology. In addition to the facilities within Engineering Physics, there are several collaborations with other McMaster Engineering Departments as well as with other Canadian and international institutions in Nuclear Engineering. The NSERC/UNENE Chair and Associate Chair in Nuclear Safety Analysis are also located at McMaster University.

**Smart Systems Engineering** integrates various sensors and actuators to analyze and control a process. Smart systems cover a wide range of technologies, ranging from nano- and micro-device engineering to nuclear power systems to health care devices. Nuclear power reactors, such as McMaster's nuclear reactor, employ smart systems that measure and provide feedback for proper control of the reactor. In Engineering Physics, we are developing a "Smart Home" that seeks to integrate various home sensors to provide safer living for elderly persons. Researchers are seeking to integrate various electronic devices, making them faster and cheaper, while also giving them new functionalities.

Biophotonics includes the development of photonics technologies, particularly imaging, for applications in life sciences and medicine. For example, advanced optical microscopy technologies can be developed for drug discovery, precision medicine, and in-situ diagnosis applications; miniaturized optical spectroscopy and imaging sensors can be integrated into wearable devices monitoring pulse rate and blood oxygenation. In addition to photonics, we use electronics to detect the presence and quantity of specific analytes present at biofunctional surfaces. Integrating electronic circuits with biorecognition layers enables biologically-relevant analytes to be measured for the purpose of managing diseases and monitoring health. Furthermore, researchers in our department are actively involved in using methods based on electromagnetics to process biologically-relevant samples, for example extracting and enriching nucleic acids and proteins present in biological fluidics.

# **Research Facilities**

The Department benefits strongly from various McMaster Institutes, Centres, Schools, and facilities including the Centre for Emerging Device Technologies (CEDT), the Brockhouse Institute for Materials Research (BIMR), McMaster School of Biomedical Engineering, the McMaster Institute for Applied Radiation Sciences, and the McMaster Institute for Energy Studies. The technical capabilities available to our graduate students include, for example, clean rooms with industry standard capabilities, molecular beam epitaxy, chemical vapour deposition, nuclear radiation detectors, positron lifetime and Doppler-broadening systems, compact and high-power lasers, and a wide host of analytical capabilities and data acquisition equipment. The McMaster Nuclear Reactor (5 MW) is located on campus and is the largest research reactor in Canada. This provides access to neutron and gamma beam ports, neutron irradiation and neutron activation analysis facilities, and neutron radiography for research in Nuclear Engineering (see above), but also for research in materials, life and health sciences, and archeology. The Center for Advanced Nuclear System (CANS) provides a suite of hot cells and specimen analysis capability which is unique in Canada.

The McMaster Smart Home for Aging-in-Place (SHAPE) is a recently established facility based on a 100-year-old house in a residential neighborhood to support sensor and sensing system development for in home health and living environment monitoring.

A variety of computing clusters is available for numerical simulations and design.

For a full description of research facilities, please see individual web sites.

# University Network of Excellence in Nuclear Engineering (UNENE)

The University Network of Excellence in Nuclear Engineering (UNENE), created through the partnership of four leading Ontario universities, namely, McMaster University, Queen's University, University of Waterloo, and University of Western Ontario, presents a unique, innovative learning experience through a Master's Degree Program in Nuclear Engineering with emphasis on nuclear power reactor technology. UNENE is currently an alliance of 13 universities (of which nine are in Ontario), six nuclear industry partners (AMEC Foster Wheeler, Bruce Power, CNL, CANDU Energy Inc., COG, and OPG), and three government agencies (NWMO, CNSC and NRCAN) for the support and development of nuclear education, and R&D capability in Canadian universities.

The UNENE program is designed to provide practicing engineers the enhanced knowledge, tools, technology as well as business and management skills necessary to keep them at the forefront of their profession. The UNENE Master's Degree program has the enthusiastic endorsement of its industrial partners and the government agencies.

McMaster University faculty members within the Faculty of Engineering and the School of Business contribute to the extensive selection of UNENE course offerings.

UNENE requires an Honours or four-year degree in engineering, science or mathematics and a B- average or better. UNENE also considers any relevant work or research history. Meeting the minimum requirements does not guarantee acceptance.

Individuals who choose to apply for admission to McMaster University will, once their application is approved, be registered within the Department of Engineering Physics on a part-time basis. The Master's Degree awarded by McMaster will be an M.Eng. with a Nuclear Engineering designation.

Enquiries: 905 525-9140 ext. 20168

Fax: 905 527-8409

Email: unene@mcmaster.ca Websites: <a href="http://www.unene.ca">http://www.unene.ca</a>

https://www.eng.mcmaster.ca/engphys/programs/degree-options/meng/unene-nuclear-engineering

# **Programs**

# Master

- Engineering Physics, M.Eng.
- Engineering Physics, M.A.Sc.
- Nuclear Engineering UNENE

#### Doctoral

Engineering Physics, Ph.D

# **Course Offerings**

- Engineering Physics Courses
- University Network of Excellence in Nuclear Engineering (UNENE) Courses

# Engineering Physics, M. Eng.

A strong baccalaureate degree with an average of at least B (equivalent to a McMaster GPA of 8.0) in engineering, mathematics, or the physical sciences is normally required for admission to the M.Eng. program.

# M.Eng. Degree

# Course Requirements

A candidate for the M.Eng. degree is required to complete a minimum of eight half courses (the equivalent of five half courses must be at the 700-level). The candidate must attain a grade of at least B– in each of the selected courses. As a minimum, at least 50% of courses taken for fulfillment of degree requirements must be listed or cross-listed in the calendar under the degree program. To fulfil this requirement, at least three of these half courses must be from Engineering Physics; The remaining half courses must be technical courses for which the candidate must obtain permission from the Department Associate Chair (Graduate). In addition, the candidate must complete the course ENG PHYS 733 (six units), an on-campus research project of four months duration to be pursued under the supervision of a faculty member in the Department. The subject area is to be chosen in consultation with the Department Associate Chair (Graduate) and the supervising faculty member. The project requires full-time attention and as such the student is expected not to take any other courses while undertaking the project. The project will normally take place during the summer term. The total unit count required for completion of the program is 30.

Students currently enrolled in the M.Eng. program may request advance credit for one course based on courses taken in their undergraduate degree at McMaster. The **Advanced Credit Option** is open to students who were undergraduates in the Engineering Physics program at McMaster University who graduated with an overall average (CGPA) of at least B. The Advanced Credit Option allows graduate credit for one 600-level course taken in the final undergraduate year.

# Transfer to the Ph.D.

After a minimum of one year in the M.Eng. program, a student may transfer to the Ph.D. program without completion of the Master's, upon successful completion of a transfer examination. The transfer examination will be completed with the intended Ph.D.

Supervisory Committee. The transfer exam will count towards the requirement of the Ph.D. thesis proposal.

A written report must be submitted prior to the transfer exam, which itself is oral and includes a presentation.

# **Engineering Physics, M.A.Sc. Master's Degree**

A strong baccalaureate degree with an average of at least B (equivalent to a McMaster GPA of 8.0) in engineering, mathematics, or the physical sciences is normally required for admission to the M.A.Sc. program.

# M.A.Sc. Degree

# Course Requirements

A candidate for the M.A.Sc. degree is required to complete a minimum of three half courses and a thesis; one of the three half courses may be at the 600-level; another one may be a non-technical course with written approval from the Supervisor. As a minimum, at least 50% of courses taken for fulfillment of degree requirements must be listed or cross-listed in the calendar under the degree program. In addition to the minimum of three half courses, M.A.Sc. candidates are required to complete the seminar half course ENG PHYS 702. A minimum grade of B— must be obtained for all courses. The thesis topic is chosen in consultation with the Supervisor and must result in a written thesis.

Students currently enrolled in the M.A.Sc. program may request advance credit for one course based on courses taken in their undergraduate degree at McMaster. The **Advanced Credit Option** is open to students who were undergraduates in the Engineering Physics program at McMaster University who graduated with an overall average (CGPA) of at least B. The Advanced Credit Option allows graduate credit for one 600-level course taken in the final undergraduate year.

An **Accelerated Option** is also available to students currently enrolled at McMaster as undergraduate students in the Department of Engineering Physics. The accelerated credit and thesis-related research work completed under the Accelerated Option are expected to reduce time to completion of the M.A.Sc. program. In exceptional circumstances, students from other Engineering departments in McMaster applying for entry into the M.A.Sc. program in Engineering Physics may apply for the Accelerated Option with the permission of the Department Associate Chair (Graduate). Application for entry into the Accelerated Option occurs in the penultimate year of undergraduate studies. Applicants must have an overall average (CGPA) of at least B at the time they are applying for the option. The Accelerated Option requires students to complete the equivalent of at least one term of their thesis-related project with a Supervisor from the Department prior to completion of

their undergraduate degree. For students enrolled in the Accelerated Option, research conducted in ENGPHYS 3H04, 4H04 or the equivalent may count towards the Accelerated Option and therefore towards partial fulfillment of the graduate M.A.Sc. thesis work. A 600-level course offered by the Department is required under the Accelerated Option in the final undergraduate year for graduate credit. Students must enter into the M.A.Sc. program under the Accelerated Option less than one year after they complete their undergraduate degree and they must meet the same requirements for admission as other candidates. The Advanced Credit Option may not be used in conjunction with the Accelerated Option.

# Transfer to the Ph.D.

After a minimum of one year in the M.A.Sc. program, a student may transfer to the Ph.D. program without completion of the Master's, upon successful completion of a transfer examination. The transfer examination will be completed with the intended Ph.D. Supervisory Committee. The transfer exam will count towards the requirement of the Ph.D. thesis proposal.

A written report must be submitted prior to the transfer exam, which itself is oral and includes a presentation.

# Engineering Physics, Ph.D. Ph.D. Degree

# Course Requirements

The general regulations for the degree Doctor of Philosophy appear earlier in the Calendar. Students with a Master's degree (from McMaster or elsewhere) are required to take two half courses, both at the 700 level. As a minimum, at least 50% of courses taken for fulfillment of degree requirements must be listed or cross-listed in the calendar under the degree program. Students transferring from the M.A.Sc. program at McMaster to the Ph.D. program without completing the Master's degree or students entering the Ph.D. program directly from a Bachelor's degree without beginning an M.A.Sc. must complete a minimum of one additional half course at the 700 level beyond the M.A.Sc. requirement. In addition to the aforementioned courses, all Ph.D. candidates are required to complete the mandatory seminar half course ENG PHYS 702 once in either the M.A.Sc. or PhD program. A minimum grade of B— must be obtained for all courses.

# Comprehensive Examination

Doctoral candidates are required to pass a Departmental Comprehensive Examination whose purpose is to ensure that the candidate possesses sufficient knowledge and maturity of approach. The examination format is oral and will test the student's knowledge and understanding of mathematics, physics, and the engineering sciences. The candidate will normally take the examination within eight months and no later than 20 months following admission to the doctoral program. The Comprehensive Examination includes a provision for second opportunity for assessment should the student fail the first attempt. This second assessment is given in place of any "re-read" of a comprehensive evaluation, which is explicitly excluded from the Student Appeal Procedures. Reporting of examination results will be done in accordance with the Regulations of the School of Graduate Studies.

# Thesis Proposal

Ph.D. students must present a thesis proposal to their Supervisory Committee, normally at the first Supervisory meeting after completion of one term in their program.

# Industrial Ph.D. Option

The general Regulations for the degree Doctor of Philosophy appear earlier in the Calendar. This program option offers the candidate the potential to conduct all or a portion of their research at their company or research institute of employment. To be enrolled under the option, the candidate must be a full-time student in the degree program, have previously completed a Masters of Applied Science or its equivalence, and be employed by a company or research institute outside of McMaster continuously until degree completion. A candidate is required to complete the normal course requirements of their enrolled department as well as any milestones, but is exempt from seminar requirements. As a doctoral candidate, they must take the Ph.D. Comprehensive Examination that is designed to test the breadth of knowledge and the ability to synthesize and integrate ideas from within and peripheral to the candidate's research area. The Comprehensive Examination will normally take place between six and 18 months after the candidate initially registers in the Ph.D. program. A Supervisory Committee monitors the progress of a Ph.D. candidate and determines when the candidate is ready to write the thesis. The student is required to defend the thesis at a Final Oral Examination.

# **Engineering Physics Courses**

The following courses are offered by the Department. Not all courses are available each year.

# Courses

The following 600-level courses are offered for graduate credit and are also available to senior undergraduate students:

ENG PHYS 6B03 / Biosensors - Fundamentals and Applications

ENG PHYS 6D03 / Nuclear Reactor Physics

ENG PHYS 6103 / Introduction to Biophotonics

ENG PHYS 6MD3 / Nanoscale Semiconductor Devices

ENG PHYS 6NE3 / Advanced Nuclear Engineering

ENG PHYS 6P03 / Nuclear Power Plant Systems and Operation

ENG PHYS 6PP3 / Plasma Physics Applications

ENG PHYS 6QC3 / Introduction to Quantum Computing

ENG PHYS 6QM3 / Quantum Optics and Metrology

ENG PHYS 6S03 / Introduction to Lasers and Electro-Optics

ENG PHYS 6X03 / Introduction to Photovoltaics

ENG PHYS 6Z03 / Semiconductor Manufacturing Technology

The following 700-level courses are offered for graduate credit only:

ENG PHYS 702 / Graduate Seminars

ENG PHYS 704 / Selected Topics in Engineering Physics

ENG PHYS 705 / III-V Materials and Devices

ENG PHYS 706 / Toward a New Era of Nuclear Energy: Messages from Fukushima

ENG PHYS 707 / Nuclear Fuel Cycle and Radioactive Waste Management

ENG PHYS 708 / Quantum Materials, Devices, and Systems

ENG PHYS 709 / Advanced Topics in Biophotonics

ENG PHYS 710 / Nuclear Reactor Dynamics and Control

ENG PHYS 713 / Nuclear Safety Analysis and Reactor Accidents

ENG PHYS 714 / Nuclear Reactor Safety Design

ENG PHYS 715 / Advanced Nuclear Reactor Thermalhydraulics

ENG PHYS 716 / Nuclear Reactor Heat Transport System Design

ENG PHYS 718 / Rea	actor Heat Transport S	System Simulation and Analy	/sis
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ENG PHYS 721 / Optical Amplifiers and Lasers

ENG PHYS 723 / Semiconductor Diode Laser Physics

ENG PHYS 724 / Materials Characterization by Electron/Ion Microscope

ENG PHYS 725 / Transmission Electron Microscopy

ENG PHYS 726 / Optoelectronic Device Physics

ENG PHYS 727 / Advanced Reactor Physics and Analysis

ENG PHYS 729 / Thin Film Growth and Deposition

ENG PHYS 730 / Thin Film Characterization

ENG PHYS 733 / Research Project in Engineering Physics

ENG PHYS 734 / Nonlinear Optics

ENG PHYS 740 / Semiconductor Device Theory and Modeling

ENG PHYS 743 / Functional Materials

ENG PHYS 752 / Advanced MEMS Fabrication and Microfluidics

ENG PHYS 777 / Advanced Photovoltaics

ENG PHYS 782 / Solid-State Electronics

ENG PHYS 783 / Nuclear Fuel Engineering

ENG PHYS 784 / Nuclear Fuel Management

# Additional Nuclear Engineering Courses

A selection of Nuclear Engineering related courses offered by other departments is given below.

# Materials Science and Engineering

MATLS 6D03 / Corrosion

# Mechanical Engineering

MECH ENG 706 / Advanced Heat Transfer

MECH ENG 707 / Analytical Solutions in Transport Phenomena

MECH ENG 708 / Two-Phase Flow and Heat Transfer

MECH ENG 723 / Flow Induced Vibrations

MECHENG 756 Introduction to Computational Fluid Dynamics

# Medical Physics and Applied Radiation Sciences

MED PHYS 6R03 / Radiation and Radioisotope Methodology

MED PHYS 771 / Isotopes In-Vivo

MED PHYS 772 / Medical Health Physics

MED PHYS 775 / Advanced Radiation Physics

MED PHYS 776 / Introduction to Operational Health Physics

# Additional Photonics Engineering and Nano- and Micro-device Engineering Courses

Courses related to Photonics Engineering and Nano- and Micro-device Engineering offered by other departments include the following:

# **Electrical and Computer Engineering**

ECE 740 / Semiconductor Device Theory and Modeling

ECE 741 / Analog Integrated Circuits

ECE 750 / Advanced Engineering Electromagnetics

ECE 754 / Modeling and Simulation of Photonic Devices

# Physics and Astronomy

PHYSICS 729 / Condensed Matter Physics I

PHYSICS 730 / Condensed Matter Physics II

PHYSICS 731 / Condensed Matter Theory

PHYSICS 734 / Special Topics in Condensed Matter Physics

PHYSICS 739 / Advanced Quantum Mechanics I

PHYSICS 740 / Advanced Quantum Mechanics II

# Additional Smart Systems Engineering Courses

A selection of courses related to Smart Systems Engineering offered by other departments is given below.

# School of Engineering Practice and Technology

SEP 786 / Artificial Intelligence and Machine Learning Fundamentals

SEP 787 / Machine Learning: Classification Models

SEP 789 / Deep Learning and Its Applications

# Mechanical Engineering

MECH ENG 735 / Additive Manufacturing

# Additional Biomedical Engineering Courses

A selection of courses related to Biomedical Engineering offered by other departments is given below.

# Biomedical Engineering

BIOMED 706 / Biomedical Engineering II (Core)

# Mechanical Engineering

MECHENG 712 / Bio-Inspired Engineering

MECHENG 717 / Current Topics in Orthopaedic Biomechanics

# **Electrical and Computer Engineering**

ECE 6BD4 / Biomedical Instrumentation

ECE 6BC3 / Modeling of Biological Systems

ECE 779 / Medical Imaging Systems I

ECE 780 / Medical Imaging Systems II

ECE 798 / Biomedical Signal Modeling and Processing



# RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

IMPO	ORT/	NT: PLEASI	E REA	D TH	IE F	OLLOWING NOTES BEI	FORE	E COMPLETING THIS FORM:		
	1. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.									
	2. An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).									
3. A representative from the department is <u>required to attend</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.										
DEPARTME	NT	Material	s Scie	nce a	and I	Engineering				
NAME OF PROGRAM and PLAN  Materials Science				nce a	e and Engineering					
DEGREE			PhD							
	NA	TURE OF R	ECON	ИΜЕ	ND	ATION (PLEASE CHE	CK A	APPROPRIATE BOX)		
Is this char	Is this change a result of an IQAP review? ☐ Yes ⊠ No									
CREATION (	CREATION OF NEW MILESTONE ⊠									
CHANGE IN ADMISSION REQUIREMENTS			СО	MPF	SE IN REHENSIVE NATION PROCEDURE	х	CHANGE IN COURSE REQUIREMENTS			
		DESCRIPTIO	N OF	Α		EXPLAIN:				
SECTION IN THE GRADUATE CALENDAR			X	A change to the exam committee number						
OTHER CHANGES		EXPLAIN:								

## DESCRIBE THE **EXISTING** REQUIREMENT/PROCEDURE:

We currently have two exams where we assess the PhD student's comprehensive knowledge: (i) research proposal exam and 9ii) comprehensive exam. The existing requirements for each, as listed in the 2021-2022 Graduate Calendar are as follows:

#### Research Proposal Examination

Students entering the Ph.D. program in Materials Science and Engineering must submit a written Research Proposal for their research program and complete (pass) the associated oral exam within three-five terms (12-20 months) in the program, but no more than six terms (24 months). Their Supervisory Committee, augmented by two other members, will give a critical review and examine the student on the content contained in or related to the Research Proposal during the oral exam. For students transferring into the Ph.D. program from the M.A.Sc. program, this requirement is replaced by the Transfer Report.

#### Comprehensive Examination

Students enrolled in the Ph.D. program in Materials Science and Engineering are required to successfully complete (pass) the Comprehensive Examination. The oral exam, tests the student's knowledge of three topics related to the research at an advanced level. Students are expected to show the greatest depth of knowledge in their field of research, but also be expected to demonstrate knowledge of fields related to their areas of specialization. The exam committee will consist of the Supervisory Committee, augmented by two other members. The comprehensive exam must be completed within the first 6 terms (24 months) of entry into the Ph.D. program.

Committee membership for both exams consist of five members including the Chair.

# PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

Moving forward, we want to decrease the committee membership from five to four members (including the Chair) for both exams. Thus, the language in the graduate calendar would read as follows:

#### Research Proposal Examination

Students entering the Ph.D. program in Materials Science and Engineering must submit a written Research Proposal for their research program and complete (pass) the associated oral exam within three-five terms (12-20 months) in the program, but no more than six terms (24 months). Their Supervisory Committee, augmented by **two** one other **members member, assigned by the Associate Chair, Graduate**, will give a critical review and examine the student on the content contained in or related to the Research Proposal during the oral exam. For students transferring into the Ph.D. program from the M.A.Sc. program, this requirement is replaced by the Transfer Report.

#### Comprehensive Examination

Students enrolled in the Ph.D. program in Materials Science and Engineering are required to successfully complete (pass) the Comprehensive Examination. The oral exam, tests the student's knowledge of three topics related to the research at an advanced level. Students are expected to show the greatest depth of knowledge in their field of research, but also be expected to demonstrate knowledge of fields related to their areas of specialization. The exam committee will consist of the Supervisory Committee, augmented by **two** one other **members member**, **assigned by the Associate Chair, Graduate**. The comprehensive exam must be completed within the first 6 terms (24 months) of entry into the Ph.D. program.

#### RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's

program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?): Historically we had a 5-member committee for the proposal exam and a 4-member committee for our Part II comprehensive exam. When we revised our program requirements to drop the part 1 exam requirement, and go with just a single comprehensive exam In addition to our proposal exam), we stated that committee membership for both exams consist of 5 members each. Given the typical two-hour time period allotted to these exams, we find that having five members on the committee dilutes the question-and-answer session, by restricting the depth a certain member can probe. So, we want to reduce the committee membership from five to four (including the Chair) for both exams. PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year) September 1, 2022 ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN. No PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable): CONTACT INFORMATION FOR THE RECOMMENDED CHANGE: Name: Joey Kish Email: kishjr@mcmaster.ca Extension: 21492 Date submitted: March 3, 2022

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013



# RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

#### IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM: 1. This form must be completed for ALL changes involving degree program requirements/procedures. All sections of this form **must** be completed. 2. An electronic version of this form (must be in MS WORD not PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca). 3. A representative from the department is required to attend the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed. DEPARTMENT SEPT NAME OF PROGRAM and Master of Engineering in Entrepreneurship and Innovation PLAN DEGREE MEEI NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX) Is this change a result of an IQAP review? ☐ Yes ☐ No **CREATION OF NEW MILESTONE** □ **CHANGE IN CHANGE IN COURSE** CHANGE IN ADMISSION COMPREHENSIVE Х REQUIREMENTS REQUIREMENTS **EXAMINATION PROCEDURE** CHANGE IN THE DESCRIPTION OF A EXPLAIN: **SECTION IN THE GRADUATE** Program-level curriculum changes CALENDAR EXPLAIN: OTHER **CHANGES**

#### DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:

The current program requires students to take six core, 3-unit courses plus 6 units of electives, plus 2, 0-unit studio courses. Included in this group of 6 is SEP 772 – Innovation Studio which is currently a key part of the proposed revision to the program.

Students in MEEI and MTEI are required to take SEP 772 – Innovation Studio as a core course. This course was intended to introduce students to cross-disciplinary perspectives to broaden their suite of tools and concepts for dealing with complex issues in modern engineering and entrepreneurship.

In addition, students are required to execute, in groups, a major Enterprise Entrepreneurship Project, often referred to as the Tollgate Project referring 3 major assessment gates where they present ongoing milestone results to a supervisory and mentoring committee. The topics are typically chosen in the first term of the program and the finale gate typically occurs in the fourth or fifth term. This project is not embodied in a course and carries no unit credit but the passing of all three gates are absolute requirements for graduation.

# PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

We propose to modify the MEEI/MTEI program structure to a 30 unit program with a nominal duration time of 16 months. Within the 30 unit structure will be all required units for core courses, elective courses, and a reformed version of the major project that will be embodied in two 3-unit project courses delivered in appropriate terms during the program

We proposed to replace the SEP 772 requirement with a "cross-disciplinary" elective to be chosen from one of the other graduate degree programs at the Booth School. Specifically, students will be choosing one of the following approved cross-disciplinary courses:

- SEP 701 (MEPP) Theory and Practice of Policy Analysis: Frameworks and Models
- SEP 709 (MEPP) Emerging Issues, Technology, and Public Policy
- SEP 7xx (MEST) Cyber Physical Systems and Industry 4.0
- SEP 729 (MEME) Manufacturing Systems
- SEP 731 (MEME) Lean Six Sigma for Engineers
- SEP 760 (MED) Design Thinking 1

This change to 772 is a change that is also shared by the other Booth graduate programs and is treated here separately. However, for MEEI/MTEI specifically the 772 change is part of a larger series of specific course changes intended to strengthen the MEEI/MTEI program's ability to deliver relevant and contemporary programs and improve our ability to manage and ensure quality, fully consistent with our IQAP commitments. Details of those changes are provided in respective course change forms.

# RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

The proposed program changes address a current state of the program that has exhibited signs of age due to a combination of faculty turnover as well as shifting trends and priorities within industry and the broader engineering innovation community. The tangible manifestations are program delivery inefficiencies, drifting alignment from program objectives, and emerging inconsistencies in student projects and course work outcomes. Accordingly, the specific goals of the program change are:

- Introduce intrapreneurship focus to courses and projects to accommodate a greater range of student career goals as well as industry demands.
- Re-align to have a stronger engineering focus with a strengthened emphasis on advanced technology commercialization.
- Re-structure the major project to improve relevance, accountability, and downstream efficacy.

- Provide explicit links to other programs and key sources of innovations within the McMaster community including MILO and engineering research groups.
- Tune the course unit structure to achieve consistency with other programs allowing greater opportunities for interdisciplinary learning and program individualization.

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

Fall 2022

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

N/A

PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):

The Master of Engineering Entrepreneurship and Innovation program is a fast paced program aimed at highly motivated students that will provide new and seasoned engineering professionals with the modern skills and insights needed to confidently bring technology innovation to market. Successful graduates receive the MEng degree.

# Admission

Applications for admission will be made directly through the W Booth School of Engineering Practice and Technology. In addition to the general requirements for entry into a graduate program in Engineering, candidates applying to the Master of Engineering Entrepreneurship and Innovation program must hold an Honours Bachelor's degree in engineering or closely related discipline (i.e. science, technology, math), with at least a B- average (equivalent to a McMaster 7.0 GPA out of 12) in the final year in all courses.

The program is intended for full time students and the nominal program duration is 16 months.

Strong letters of recommendation are also required. The delivery of the program relies heavily on the synergy created between members of student teams, and successful operation of the program requires that each cohort have an appropriate blend of skills and experience. Applicants will be required to complete an online interview.

The program will accept full-time students. The full program is expected to take 20 months full-time study. Candidates are admitted for September only. No part-time option is available.

Prospective applicants who did not attain the required standing in their undergraduate degree, but who have at least four (4) years of relevant work experience, should discuss their situation with the appropriate Program Lead. If the experience is deemed sufficient, the Program Lead

may then recommend a live interview. Evidence of ability to do graduate work will still be required. See the Admission Requirements section and Admission of Students with Related Work Experience or Course Work Beyond the Bachelor's Degree section of the Graduate Calendar.

A candidate is required to complete successfully two one-term advanced courses and the seven compulsory Engineering Entrepreneurship and Innovation module courses. Additionally, full-time students must successfully complete <u>SEP 771</u> Part I and II and <u>SEP 772</u>. A faculty advisor will assist the student in selecting relevant engineering courses. Students will normally be required to complete two graduate level engineering courses. The objective is to acquire leading edge engineering skills and apply them to the enterprise project.

McMaster students may receive advanced standing for only one additional courses with the approval of the Associate Dean of Graduate Studies (note that a maximum of two 600 level courses, including mandatory 600 level courses can count towards a SEPT graduate program).

# **Innovation and Entrepreneurial Skills Development Courses**

Six compulsory enterprise modules will focus on providing the Master's degree candidate basic skills to select an idea with good potential, manage the innovation process, then create and manage the business outcome. The skills will broadly cover all the business life cycle from start, growth and sustainability. The modules will develop an understanding of both the innovation and the entrepreneurial processes through lectures, workshops and hands on work as well as embed sustainability into their enterprise project as a source of competitive advantage.

Each module is considered the equivalent of a half course as defined by the School of Graduate Studies, but will contain elements of lecture, group work, presentation and other activities as defined in the course outline. The module courses will be delivered in an intensive format. The module courses are:

Students in the MEEI program must complete 10 courses (30 units).

- 7 core courses (21 units)
- 2 technical electives (6 units)
- 1 cross-disciplinary elective (3 units)

#### **Core Courses**

#### The core program consists of seven mandatory 3-unit courses:

- SEP 6E03-7XX / Entrepreneurial Opportunity Identification
- SEP 773 / Leadership for Innovation
- SEP 753 / Enterprise Opportunity Development
- SEP 755 / Business Launch and Development
- SEP 770 / Total Sustainability Management
- SEP 7XX / Engineering Innovation Project
- SEP 790 / Technology Platforms for Engineering Innovation Proof of Concept Studio
- SEP 772 / Innovation Studio

Those students who have exceptional technical backgrounds may consult the Program Lead to request an exemption for SEP 790. If approved, the student will choose an additional technical or approved cross-disciplinary elective to replace SEP 790.

Additionally, aAll full-time candidates are required to successfully complete:

- SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part I
- SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part II.

#### **Technical** Electives

All students in the Master of Engineering Entrepreneurship and Innovation program must complete 6 units of elective courses. Students may choose any course in the Faculty of Engineering as an elective.

Students with an exceptional entrepreneurship project may obtain permission from the Associate Director Program Lead to complete the following course towards 3 units of their elective requirements.

SEP 7XX / Entrepreneurship Project (3 units)

#### **Cross-Disciplinary Elective Course**

All students in the Master of Engineering Entrepreneurship and Innovation program are required to complete one half course (3 units) which should be selected from the following approved cross-disciplinary elective list.

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(Calibri), 11 pt

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- SEP 701 / Theory and Practice of Policy Analysis: Frameworks and Models
- SEP 709 / Emerging Issues, Technology and Public Policy
- SEP 7XX / Cyber Physical Systems and Industry 4.0
- SEP 729 / Manufacturing Systems
- SEP 731 / Lean Six Sigma for Engineers
- SEP 760 / Design Thinking I

# **Engineering Enterprise Project Innovation and Entrepreneurship Projects**

An essential element in the MEEI/MTEI program is an Innovation project (SEP 7xx). Building on key concepts and outcomes of the core course progression, students will work in groups to develop marketaligned and technologically innovative new venture concepts. The project can be derived from several important sources:

- Inventions and intellectual property developed by McMaster researchers
- Innovation initiatives from sponsoring organizations from the community
- Original concepts or inventions from students.

The project will allow students to experience the full cycle modern engineering and technology innovation including:

- Assessing and characterizing markets and technology spaces
- Developing high and unique value propositions for promising technologies
- Thorough market research, competitive research, and IP management
- Proof of Concept and Minimum viable product definitions
- Framing a promising new business with either entrepreneurial or intrapreneurial intent
- Essential financial and operational models for new ventures

Through the program, student groups who exhibit exceptional potential, through either the SEP 7xx Engineering Innovation Project course or other course activities, may be approved to take the elective SEP 7yy Engineering Entrepreneurial Project course elective. This intensive course provides an immersive opportunity for the project team to convert their project concepts into viable ventures that will be ready for either incubation via McMaster's Forge organization or to enter global pitch competitions. Key activities of this process include:

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- Rigorous proof of concept in business concept and critical technical elements.
- Detailed, credible operational, financial, and marketing plans suitable for a new venture launch.
- Intensive pitch preparations for competitions and even investment discussions with external parties.

The Engineering Enterprise Project will run throughout the entire study period and will result in both a business and a viable Proof of Concept defined as the combination of (i) a technical plan for an engineering prototype product (ideally with an actual prototype device or software produced) plus (ii) an identified customer base and a plan outlining the way to commercialization. The project will bring together the two complementary streams of activities, one technical and the other commercial, to bring an idea to the proof of concept phase. The Entrepreneurial course stream, which will run coincidentally with the advanced engineering studies, will guide the technological work performed in the research laboratory so that the concept becomes, by the end of the degree, the nucleus of a business proposition. The Engineering Enterprise Project will have three phases, which will end with project gate assessments to determine the project's readiness to proceed to the next phase:

#### **Phase 1 - Project Preparation**

Market research to arrive at a proposed product or service with clear value proposition; define the market for the intended product or service revealing competitive threat, opportunities, and margins and volumes projections; draw up development plans for the product or service indicating the required resources and estimated investment cost; seek the resources within the university and without; build a team of support that might include a partner.

# Phase 2 - Technical Research and the Development of the Engineering Prototype

Develop an engineering research plan, identifying key issues and opportunities (with the assistance of academic technical and business supervisors); conduct technical research and development; implement the engineering research plan within the research group in the host-engineering department; build a development network within the engineering research community; ready the technology for transfer to market; conduct initial market engagement to get eustomer feedback and reactions.

## **Phase 3 - Technology Transfer to Market:**

Apply for IP protection if applicable; develop a path-to-market strategy; develop a business case; seek out financing and explore business arrangements; plan for business start-up. Each phase has two equally important components, one technical and the other business:

The Phase 3 evaluation will be a defense of your project in an oral examination to your board (technical mentor, enterprise advisor, business advisor and your business mentor). Candidates are required to complete and pass through each phase in order to graduate.

# **Leadership Skill Development and the Enterprise Project**

The ability to effectively work in a team environment is an important learning outcome of team-based project work on the Enterprise project. The MEEI and MTEI programs use a confidential service to provide each individual with personalized performance feedback from their peers on a period basis. Approaches to improving ones own performance include mentoring and guidance by their Enterprise Advisor.

# CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Tom Lee Email: leet77@mcmaster.ca Extension: N/A Date submitted: March 3, 2022

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013



# RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

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This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.								
<ol> <li>An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).</li> </ol>								
3. A representative from the department is <u>required to attend</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.								
DEPARTMENT	TMENT SEPT							
NAME OF PROGRAM an PLAN	ıd	Master of Technology in Entrepreneurship and Innovation						
DEGREE	MTEI							
NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)  Is this change a result of an IQAP review? □ Yes □ No								
CREATION OF NEW MILESTONE □								
CHANGE IN ADMISSION REQUIREMENTS				CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS X		
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR  EXPLAIN: Y Program-level curriculum changes								
OTHER CHANGES								

#### DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:

The current program requires students to take six core, 3-unit courses plus 6 units of electives, plus 2, 0-unit studio courses. Included in this group of 6 is SEP 772 – Innovation Studio which is currently a key part of the proposed revision to the program.

Students in MEEI and MTEI are required to take SEP 772 – Innovation Studio as a core course. This course was intended to introduce students to cross-disciplinary perspectives to broaden their suite of tools and concepts for dealing with complex issues in modern engineering and entrepreneurship.

In addition, students are required to execute, in groups, a major Enterprise Entrepreneurship Project, often referred to as the Tollgate Project referring 3 major assessment gates where they present ongoing milestone results to a supervisory and mentoring committee. The topics are typically chosen in the first term of the program and the finale gate typically occurs in the fourth or fifth term. This project is not embodied in a course and carries no unit credit but the passing of all three gates are absolute requirements for graduation.

# PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

We propose to modify the MEEI/MTEI program structure to a 30 unit program with a nominal duration time of 16 months. Within the 30 unit structure will be all required units for core courses, elective courses, and a reformed version of the major project that will be embodied in two 3-unit project courses delivered in appropriate terms during the program.

Additionally, we propose to replace the SEP 772 requirement with a "cross-disciplinary" elective to be chosen from one of the other graduate degree programs at the Booth School. Specifically, students will be choosing one of the following approved cross-disciplinary courses:

- SEP 701 (MEPP) Theory and Practice of Policy Analysis: Frameworks and Models
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- SEP 729 (MEME) Manufacturing Systems
- SEP 731 (MEME) Lean Six Sigma for Engineers
- SEP 760 (MED) Design Thinking 1

This change to 772 is a change that is also shared by the other Booth graduate programs and is treated here separately. However, for MEEI/MTEI specifically the 772 change is part of a larger series of specific course changes intended to strengthen the MEEI/MTEI program's ability to deliver relevant and contemporary programs and improve our ability to manage and ensure quality, fully consistent with our IQAP commitments. Details of those changes are provided in respective course change forms.

# RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

The proposed program changes address a current state of the program that has exhibited signs of age due to a combination of faculty turnover as well as shifting trends and priorities within industry and the broader engineering innovation community. The tangible manifestations are program delivery inefficiencies, drifting alignment from program objectives, and emerging inconsistencies in student projects and course work outcomes. Accordingly, the specific goals of the program change are:

- Introduce intrapreneurship focus to courses and projects to accommodate a greater range of student career goals as well as industry demands.
- Re-align to have a stronger engineering focus with a strengthened emphasis on advanced technology commercialization.

- 3. Re-structure the major project to improve relevance, accountability, and downstream efficacy.
- 4. Provide explicit links to other programs and key sources of innovations within the McMaster community including MILO and engineering research groups.
- Tune the course unit structure to achieve consistency with other programs allowing greater opportunities for interdisciplinary learning and program individualization.

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

Fall 2022

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

N/A

PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):

The Master of Technology Entrepreneurship and Innovation is a fast-paced program that will provide new and seasoned engineering professionals with the modern skills and insights needed to confidently bring technology innovation to market. Successful graduates receive the MTech degree.

# Admission

While students in the Technology Entrepreneurship and Innovation program are not expected to have any engineering or scientific background, they are expected to embrace creativity and innovation. Some basic familiarity with technology is expected, but the required technological depth will depend on the project itself and will be evaluated on a case-by-case basis. Considerable emphasis will be placed on team-based experiential learning in which all member of the team will learn from each other as they complete the project.

Applications for admission will be made directly through the W Booth School of Engineering Practice and Technology. In addition to the general requirements for entry into a graduate program in Engineering, candidates applying to the Master of Technology Entrepreneurship an Innovation program must hold an Honours Bachelor's degree from any discipline, with at least B- average (equivalent to a McMaster 7.0 GPA out of 12) students in the final year in all cours in the discipline, or relating to the discipline, in which the applicant proposes to do graduate work.

The program is intended for full time students and the nominal program duration is 16 months.

Strong letters of recommendation are also required. The delivery of the program relies heavily on the synergy created between members of student teams, and successful operation of the program requires that each cohort have an appropriate blend of skills and experience. Applicant will be required to complete an online interview.

The program will accept full time students. The full program is expected to take 20 months full time study. Candidates are admitted for September only. No part time option is available

Prospective applicants who did not attain the required standing in their undergraduate degree, but who have at least four (4) years of relevant work experience, should discuss their situation with the Program Lead. If the experience is deemed sufficient, the Program Lead may then recommend a live interview. Evidence of ability to do graduate work will still be required (see sections 2.1.1 Admission Requirements for Master's Degree and 2.1.5 Admission of Students with Related Work Experience or Course Work Beyond the Bachelor's Degree in the Graduate Calendar.)

A candidate is required to complete successfully two one term advanced graduate courses and the six compulsory Entrepreneurship and Innovation module courses. Additionally, full-time students must successfully complete <u>SEP 771</u> part I and II and SEP 772. A faculty advisor will assist the student in selecting relevant graduate courses. Students will normally be required to complete two graduate level courses. The objective is to acquire leading-edge skills and apply them to the enterprise project.

McMaster students may receive advanced standing for only one additional course (note that a maximum of two 600 level courses can count towards a SEPT graduate program including mandatory 600 level courses) with approval of the Associate Dean of Graduate Studies.

Innovation and Entrepreneurial Skills Development Courses

Six compulsory enterprise modules will focus on providing the Master's degree candidate basic skills to select an idea with good potential, manage the innovation process, then create and manage the business outcome. The skills will broadly cover all the business life cycle from star growth and sustainability. The modules will develop an understanding of both the innovation and the entrepreneurial processes through lectures, workshops and hands on work as well as embed sustainability into their enterprise project as a source of competitive advantage.

Each module is considered the equivalent of a half-course as defined by the School of Graduate Studies, but will contain elements of lecture, group work, presentation and other activities as

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defined in the course outline. The module courses will be delivered in an intensive format. The module courses are:

Students in the MTEI program must complete 10 courses (30 units).

- o 7 core courses (21 units)
- o 2 technical electives (6 units)
- o 1 cross-disciplinary elective (3 units)

The core program consists of seven mandatory 3-unit courses:

- SEP 6E03-7XX / Entrepreneurial-Opportunity Identification
- SEP 773 / Leadership for Innovation
- SEP 753 / Enterprise Opportunity Development
- SEP 755 / Business Launch and Development
- SEP 770 / Total Sustainability Management
- SEP 7XX / Engineering Innovation Project
- SEP 790 / Technology Platforms for Engineering Innovation Proof of Concept Studio
- SEP 772 / Innovation Studio

Those students who have exceptional technical backgrounds may consult the Program Lead to request an exemption for SEP 790. If approved, the student will choose an additional technical or approved cross-disciplinary elective to replace SEP 790.

Additionally, aAll full-time candidates are required to successfully complete:

- SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part I
- SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part II

**Technical Electives** 

All students in the Master of Technology Entrepreneurship and Innovation must complete 6 units of elective courses. Students may choose any course in the Faculty of Engineering as an elective.

Students with an exceptional entrepreneurship project may obtain permission from the Program Lead to complete the following courses towards 3 units of their elective requirements.

SEP 7XX / Entrepreneurship Project (3 units)

**Cross-Disciplinary Elective Course** 

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All students in the Master of Engineering Entrepreneurship and Innovation program are required to complete one half course (3 units) which should be selected from the following approved cross-disciplinary elective list.

- SEP 701 / Theory and Practice of Policy Analysis: Frameworks and Models
- SEP 709 / Emerging Issues, Technology and Public Policy
- SEP 7XX / Cyber Physical Systems and Industry 4.0.
- SEP 729 / Manufacturing Systems,
- SEP 731 / Lean Six Sigma for Engineers.
- SEP 760 / Design Thinking I

# **Engineering Enterprise Project Innovation and Entrepreneurship Projects**

An essential element in the MEEI/MTEI program is an Innovation project (SEP 7xx). Building on key concepts and outcomes of the core course progression, students will work in groups to develop marketaligned and technologically innovative new venture concepts. The project can be derived from several important sources:

- Inventions and intellectual property developed by McMaster researchers
- Innovation initiatives from sponsoring organizations from the community
- Original concepts or inventions from students.

The project will allow students to experience the full cycle modern engineering and technology innovation including:

- Assessing and characterizing markets and technology spaces
- Developing high and unique value propositions for promising technologies
- Thorough market research, competitive research, and IP management
- Proof of Concept and Minimum viable product definitions
- Framing a promising new business with either entrepreneurial or intrapreneurial intent
- Essential financial and operational models for new ventures

Through the program, student groups who exhibit exceptional potential, through either the SEP 7xx

Engineering Innovation Project course or other course activities, may be approved to take the elective

SEP 7yy Engineering Entrepreneurial Project course elective. This intensive course provides an

immersive opportunity for the project team to convert their project concepts into viable ventures that

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will be ready for either incubation via McMaster's Forge organization or to enter global pitch competitions. Key activities of this process include:

- Rigorous proof of concept in business concept and critical technical elements.
- Detailed, credible operational, financial, and marketing plans suitable for a new venture launch.
- Intensive pitch preparations for competitions and even investment discussions with external parties.

The Engineering Enterprise Project will run throughout the entire study period and will result in both a business and a viable Proof of Concept defined as the combination of (i) a technical plan for an engineering prototype product (ideally with an actual prototype device or software produced) plus (ii) an identified customer base and a plan outlining the way to commercialization. The project will bring together the two complementary streams of activities, one technical and the other commercial, to bring an idea to the proof of concept phase. The Entrepreneurial course stream, which will run coincidentally with the advanced engineering studies, will guide the technological work performed in the research laboratory so that the concept becomes, by the end of the degree, the nucleus of a business proposition. The Engineering Enterprise Project will have three phases, which will end with project gate assessments to determine the project's readiness to proceed to the next phase:

Phase 1 - Project Preparation

Market research to arrive at a proposed product or service with clear value proposition; define the market for the intended product or service revealing competitive threat, opportunities, and margins and volumes projections; draw up development plans for the product or service indicating the required resources and estimated investment cost; seek the resources within the university and without; build a team of support that might include a partner.

Phase 2 - Technical Research and the Development of the Engineering Prototype

Develop an engineering research plan, identifying key issues and opportunities (with the assistance of academic technical and business supervisors); conduct technical research and development; implement the engineering research plan within the research group in the host-engineering department; build a development network within the engineering research community; ready the technology for transfer to market; conduct initial market engagement to get customer feedback and reactions.

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# **Phase 3 - Technology Transfer to Market:**

Apply for IP protection if applicable; develop a path-to-market strategy; develop a business case; seek out financing and explore business arrangements; plan for business start-up. Each phase has two equally important components, one technical and the other business:

The Phase 3 evaluation will be a defense of your project in an oral examination to your board (technical mentor, enterprise advisor, business advisor and your business mentor). Candidates are required to complete and pass through each phase in order to graduate.

# **Leadership Skill Development and the Enterprise Project**

The ability to effectively work in a team environment is an important learning outcome of team-based project work on the Enterprise project. The MEEI and MTEI programs use a confidential service to provide each individual with personalized performance feedback from their peers on a period basis. Approaches to improving ones own performance include mentoring and guidance by their Enterprise Advisor.

#### CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Tom Lee Email: leet77@mcmaster.ca Extension: N/A Date submitted: March 3, 2022

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

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# RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

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2. An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).									
							Curriculum and Policy Committee m will be discussed.		
DEPARTME	NT	SEPT							
NAME OF PROGRAM & PLAN	and	nd Master of Engineering Design							
DEGREE	MED								
NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)  Is this change a result of an IQAP review? □ Yes □ No									
CREATION OF NEW MILESTONE									
CHANGE IN ADMISSION REQUIREMENTS				CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE		URE	CHANGE IN COURSE REQUIREMENTS	х	
CHANGE IN THE DESCRIPTION OF A  SECTION IN THE GRADUATE CALENDAR  EXPLAIN:									
OTHER CHANGES	EXF	PLAIN:							

DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:
SEP 772 is currently a mandatory course for all SEPT programs.
PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)
SEP 772 is being removed as a mandatory course for all programs.
RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's
program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):
Changes made over the last few years to SEPT graduate programs have enabled the students to take an
increased number of professional development courses. This enables the students to tailor their learning pathways to suit their individual needs. Replacing Innovation Studio (SEP 772) by an elective interdisciplinary
course selected by the students enhances further options to create the study programs that meet individual student needs.
PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic
year)
Fall 2022
ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND
POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.
N/A
PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR
(please include a tracked changes version of the calendar section affected if applicable):
CHANGE LEGEND: As requested by Mike the levels of changes are in different colours.
Text in BLACK means no calendar change.
Text in GREEN refers to changes already approved at the November GCPC meeting.
Text in RED refers to <u>new</u> changes for the March GCPC meeting that must be approved.
Innovative new designs and the ability to improve performance of existing systems have
become a basis for a competitive advantage in the marketplace. Innovativeness,
performance, environmental sustainability, safety, usability, desirability, viability and efficiency are integral parts of the requirements in the design of industrial products,
healthcare products, large-scale systems, or software solutions. Within this complex set of

constraints, successful engineers and engineering managers must be able to lead transformation of an idea to a complete design by working in interdisciplinary teams and with stakeholders. The Master of Engineering Design program provides its participants with technical expertise and leadership capabilities required to innovate and to lead technically-oriented organizations. The M.Eng. Design program emphasizes development of competencies in Design Thinking and innovations methodologies, as well as leadership, collaboration, and management skills to lead diverse teams. These competencies are combined with advanced technologies to enable design and implementation of solutions which integrate digital reality with the physical world to deliver solutions for daily living or for complex IT or industrial systems.

The following streams are currently offered in the Program:

- Product Design: Design Thinking approach to development of products and services.
- Digital Reality: Design of augmented-, virtual-, and mixed-reality immersive experiences.

# Admission

In addition to the general requirements for entry into a graduate program in Engineering, students must hold a four-year engineering undergraduate degree or equivalent, with at least a B- average (equivalent to a McMaster 7.0 GPA out of 12) in the final year in all courses in the discipline, or relating to the discipline, in which the applicant proposes to do graduate work. Students with a degree in Science, Technology or Mathematics will also be considered.

Strong letters of recommendation are also required. Applicants will be required to complete an online interview.

Professional work experience will be desirable, but not essential.

Candidates may be enrolled on a full- or part-time basis. Full-time students will complete the degree in 24 months with an accelerated path to complete in twelve consecutive months. Students are admitted for September. Part-time students will normally be expected to complete the program in three years and one term (40 months).

Prospective applicants who did not attain the required standing in their undergraduate degree, but who have at least four (4) years of relevant work experience, should discuss their situation with the Program Lead. If the experience is deemed sufficient, the Program Lead may then recommend a live interview. Evidence of ability to do graduate work will still be required. (See Sections 2.1.1 Admission Requirements for Master's Degree and

2.1.5 Admission of Students with Related Work Experience or Course Work beyond the Bachelor's Degree in the Graduate Calendar.)

McMaster Students may receive advanced standing for up to two courses (note that a maximum of two 600-level courses can count towards a SEPT graduate program) with the approval of the Associate Dean of Graduate Studies.

# Curriculum

The curriculum has three main components:

- **1. Professional Development** courses that will enable M.Eng. Design graduates to deal with complex situations in the work environment, to lead teams, and to manage projects.
- **2.** Courses Relevant to the selected stream: some courses are mandatory for a given stream while others are elective.
- **3.** An M.Eng. project that requires synthesis of knowledge from various disciplines.

# **Product Design Stream**

Innovative and creative systems, solutions, and product designs are emphasized through design in a collaborative design studio environment. The interdisciplinary nature of the program enables its participants to work on a variety of design work, such as industrial machinery, consumer products, automotive, etc.

The following course requirements need to be fulfilled by the candidates:

10 courses (30 units)

- 5 mandatory courses
- 4 technical elective courses
- o 1 cross-disciplinary elective course

# **Mandatory Courses**

Candidates are required to take the following five half courses (15 units):

- SEP 700 / M.Eng. Project in Engineering Design Part I
- SEP 700 / M.Eng. Project in Engineering Design Part II
- SEP 760 / Design Thinking
- SEP 761 / Human-Centred Design
- SEP 772 / Innovation Studio (3 units)
- SEP 773 / Leadership for Innovation
- OR
- SEP 6EL3 / Leading Innovation

•

All full-time students must also register for the seminar series courses (attendance is mandatory), which are:

- SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part I (full time students only)
- (full time students only)
- SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part II (full-time students only)

(full-time students only)

SEP 771 is a seminar series presented by guest speakers, invited by the School, of relevance to all M. Eng. programs at the School. All full-time students are required to take these courses. Course grades are either 'pass' or 'fail'. In order to pass the course, the student must attend a minimum of 80% of the seminars.

# **Technical Electives**

Candidates are required to take five-four half courses (15-12 units) which should be selected from graduate courses offered by departments within the Faculty of Engineering. Candidates are required to have their elective course selection approved by the Associate Director of Graduate Studies in SEPT.

Strongly recommended:

- SEP 757 / Rapid Prototyping
- OR
- SEP 758 / Prototyping Tools (Mobile Applications)
- SEP 761 / Human-Centred Design

Other recommended electives include:

- SEP 6CG3 / Fundamentals of computer graphics and animation development
- SEP 6VE3 / Visual effects and animation production technology
- SEP 714 / Workflow Management for Animated Prototypes
- SEP 715 / Rendering techniques
- SEP 791 / Augmented Reality, Virtual Reality and Mixed Reality
- SEP 792 / GPU Intensive applications for real-time projects

# **Cross-Disciplinary Electives**

Candidates are required to take one half course (3 units) which should be selected from the following approved cross-disciplinary elective list.

- SEP 709 / Emerging Issues, Technology and Public Policy
- SEP 710 / International Governance and Environmental Sustainability
- SEP 6X03 / Livable Cities, The Built and Natural Environment
- SEP 6E03 / Opportunity Identification
- SEP 770 / Total Sustainability Management
- SEP 790 / Emerging Technologies for Engineering Innovation
- SEP 729 / Manufacturing Systems
- SEP 731 / Lean Six Sigma for Engineers
- SEP 7XX / Cyber-Physical Systems and Industry 4.0

# **Digital Reality Stream**

Graduates from Digital Reality stream develop competencies required to work on MR/AR/VR applications in e.g. autonomous vehicles, games design, entertainment, architecture, medicine, etc., All candidates will complete a project and an optional co-op with an organization which develops products in the digital reality space.

# **Mandatory Courses**

Candidates are required to take the following four-three half courses (12 units):

- SEP 700 / M.Eng. Project in Engineering Design Part I
- SEP 700 / M.Eng. Project in Engineering Design Part II
- SEP 760 / Design Thinking
- SEP 772 / Innovation Studio (3 units)

•

All full-time students must register for the seminar series courses (attendance is mandatory), which are:

- SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part I
- (full-time students only)
- SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part II
- (full time students only)

SEP 771 is a seminar series presented by guest speakers, invited by the School, of relevance to all M. Eng. programs at the School. All full-time students are required to take these courses. Course grades are either 'pass' or 'fail'. In order to pass the course, the student must attend a minimum of 80% of the seminars.

# **Technical Electives**

Six courses (18 units) from the following list must be completed by the candidates:

- SEP 6CG3 / Fundamentals of computer graphics and animation development
- SEP 6VE3 / Visual effects and animation production technology
- SEP 714 / Workflow Management for Animated Prototypes
- SEP 715 / Rendering techniques
- SEP 791 / Augmented Reality, Virtual Reality and Mixed Reality
- SEP 792 / GPU Intensive applications for real-time projects

# **Cross-Disciplinary Electives**

Candidates are required to take one half course (3 units) which should be selected from the following approved cross-disciplinary elective list.

- SEP 709 / Emerging Issues, Technology and Public Policy
- SEP 710 / International Governance and Environmental Sustainability
- SEP 6X03 / Livable Cities, The Built and Natural Environment
- SEP 6E03 / Opportunity Identification
- SEP 770 / Total Sustainability Management
- SEP 790 / Emerging Technologies for Engineering Innovation
- SEP 729 / Manufacturing Systems
- SEP 731 / Lean Six Sigma for Engineers
- SEP 7XX / Cyber-Physical Systems and Industry 4.0

# CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Vladimir Mahalec Email: mahalec@mcmaster.ca Extension: N/A Date submitted: October 4, 2021

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013



# RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:								
1. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.								
2. An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).								
3. A representative from the department is <u>required to attend</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.								
DEPARTME	NT	SEPT						
NAME OF PROGRAM & PLAN	and	nd Master of Engineering in Systems and Technology						
DEGREE	MEST							
NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)  Is this change a result of an IQAP review? □ Yes □ No								
CREATION OF NEW MILESTONE								
REQUIREMENTS  CO				CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE			CHANGE IN COURSE REQUIREMENTS	
CHANGE IN THE DESCRIPTION OF A  SECTION IN THE GRADUATE CALENDAR  EXPLAIN:  Updating of recommended elective lists								
OTHER CHANGES	EXI	PLAIN:						

Updates to core course and elective lists for each stream. It was determined that these edited lists would be more presentative of the needs of each specific stream.	ore

DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:

PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

Updates to core course and elective lists for each stream. It was determined that these edited lists would be more representative of the needs of each specific stream.

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

Addition of new courses to these lists will assist students in selecting the core courses and electives that most benefit their program knowledge.

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

Fall 2022

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

N/A

PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):

CHANGE LEGEND: As requested by Mike the levels of changes are in different colours.

Text in BLACK means no calendar change.

Text in GREEN refers to changes already approved at the November GCPC meeting.

Text in RED refers to new changes for the March GCPC meeting that must be approved.

The Master of Engineering in Systems and Technology is a 24-month 24-month program for full time students with an accelerated path to complete the program in 12 months of study. Part time students will normally be expected to complete the program in 3 years, one term (40 months). The program attracts t highly motivated students seeking advanced training in area of cyber-physical systems. Students design their own program of studies by selecting (with approval of their academic advisor) courses of interest to them in one of the following streams: (i) Automation and Smart Systems, (ii) Automotive, and (iii) Digital Manufacturing. Application for admission to the program are made through the W Booth School of Engineering Practice and Technology. The program accepts full-time and part-time students.

In addition to the general requirements for entry into a graduate program in Engineering, students must hold a degree in Engineering, Technology, Sciences, or Software with at least a B average (equivalent to a McMaster 8.0/12 GPA) in the penultimate and final years.

Delivery of the program includes a strong emphasis on project-based experience within the Manufacturing Industry, which is obtained through an industry-based project during the coursework portion of the program. Requirements for these are outlined below. Due to the strong practical orientation of the project components of the program, successful completion requires that students have strong interpersonal and communication skills. Applicants will be required to complete an online interview.

Students completing the Program on a course-only basis will be required to complete 10 courses from the approved list of courses. Course selection must be done in consultation with the program lead.

Students completing the Program through course and project work will be required to complete eight courses from the approved list of courses, plus successful completion of the project. Course and project selection must be done in consultation with the program lead.

McMaster students may receive advanced standing for up to two courses (note that a maximum of two 600-level courses can count towards a SEPT graduate program) with the approval of the Associate Dean of Graduate Studies.

# **Project**

Students wishing to pursue the project-based option must submit a project proposal for approval by both the faculty lead as well as the Associate Director of Graduate Studies in SEPT. If the project is not approved by either individual, students will be reverted to course based course-based stream. Students are encouraged to develop their own ideas and find industrial sponsors. Projects are ideally undertaken at local companies but may be conducted at locations inside Canada or abroad with the Program Lead's approval and provided that none of the work on the project was done prior to admission into the program. Project groups or individuals will have an industry-based supervisor (stakeholder) with whom the student

team can discuss progress, arrange trials etc. Students will also have an academic supervisor who will normally have some expertise in the subject area. It is expected that the teams will meet with their supervisors on a regular basis to discuss their progress.

The project team will orally defend their final project report to an examination committee comprised of their academic supervisor and the second reader (faculty member).

# Curriculum

Students enrolling in the program choose their courses in one of the following streams:

- Automation and Smart Systems,
- Automotive, and
- Digital Manufacturing
- Process Systems

Each stream has a set of core courses and a set of recommended elective courses. Students can take maximum of 2 half courses (one term courses) at 600 level.

Students wishing to take an elective course outside of the recommended electives need to obtain a written permission from their graduate advisor.

Students have to complete the minimum required number of core courses in order to complete the program. There are 2 pathways towards the degree:

- 8 courses (24 units) + project (6 units)
  - o 21 required course
  - o 2 professional development courses
  - o 3 to 4 core courses
  - o 0 to 1 technical elective courses
  - o 1 cross-disciplinary elective

Students pursuing this option, in addition to taking 8 courses specified above, must register for the project courses:

- SEP 799 / M.Eng. Project in Systems and Technology Part 1
- SEP 799 / M.Eng. Project in Systems and Technology Part 2
- 10 courses (30 units)
  - o 21 required course
  - o 2 professional development courses

- o 4 to 6 core courses
- o 0 to 2 technical elective courses
- o 1 cross-disciplinary elective

All full-time students must register for the seminar series courses (attendance is mandatory), which are:

- SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part I (seminar series, full-time students only)
- SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part II (seminar series, full-time students only)

SEP 771 is a seminar series presented by guest speakers, invited by the School, of relevance to all M. Eng. programs at the School. All full-time students are required to take these courses. Course grades are either 'pass' or 'fail'. In order to pass the course, the student must attend a minimum of 80% of the seminars.

Students should note that not all courses are offered every year.

Required core courses for all streams:

- SEP 769 / Cyber Physical Systems
- SEP 772 / Innovation Studio (3 units)

# **Professional Development Courses**

Professional Development courses, common to all streams in MEng S&T, are listed below:

- SEP 6TC3 / Technical Communications
- SEP 725 / Practical Project Management for Today's Business Environment
- SEP 773 / Leadership for Innovation
- SEP 760 / Design Thinking
- SEP 7XX / Project Management for High Tech Projects

# **Technical** Courses- Automotive Stream

# **Other** Core Courses

- SEP 6AE3 / Internal Combustion Engines
- SEP 6DV3 / Vehicle Dynamics
- SEP 711 / Electric Powertrain Components Design
- SEP 716 / Automotive Safety Design
- SEP 722 / Electric Drive Vehicles / MECH ENG 760 / Electric Drive Vehicles
- SEP 724 / Intelligent Transportation Systems
- SEP 734 / Issues in Vehicle Productions
- SEP 7XX / Deep Learning
- SEP 7XX / Visual Perception for Autonomous Vehicles
- SEP 7XX / Introduction to Computational Natural Language Processing

# **Recommended Technical Electives**

- MECH ENG 6Z03 / CAD/CAM/CAE
- SEP 780 / Advanced Robotics and Automation
- SEP 783 / Sensors and Actuators
- SEP 791 / Augmented Reality, Virtual Reality and Mixed Reality

# **Cross-Disciplinary Elective Course**

Candidates are required to complete one half course (3 units) which should be selected from the following approved cross-disciplinary elective list.

- SEP 709 / Emerging Issues, Technology and Public Policy
- SEP 710 / International Governance and Environmental Sustainability
- SEP 6X03 / Livable Cities, The Built and Natural Environment
- SEP 6E03 / Opportunity Identification
- SEP 770 / Total Sustainability Management
- SEP 729 / Manufacturing Systems

# **Technical** Courses- Automation and Smart Systems

### Other Core Courses

- SEP 6CS3 / Computer Security
- SEP 6DA3 / Data Analytics and Big Data
- SEP 6DM3 / Data Mining
- SEP 720 / Cloud Computing
- SEP 721 / Data Analytics, Machine Learning and AI on Cloud Platforms
- SEP 728 / Internet of Things (ioT) and industrial Internet of Things (ioT) Systems
- SEP 767 / Multivariate Statistical Methods for Big Data Analysis and Process
   Improvement / CHEM ENG 765 / Multivariate Statistical Methods for Big Data
   Analysis and Process Improvement
- SEP 780 / Advanced Robotics and Automation
- SEP 786 / Artificial Intelligence and Machine Learning Fundamentals / CHEM ENG 786 / Artificial Intelligence and Machine Learning Fundamentals
- SEP 787 / Machine Learning: Classification Models / CHEM ENG 787 / Machine Learning: Classification Models
- SEP 788 / Neural Networks and Development Tools / CHEM ENG 788 / Neural Networks and Development Tools
- SEP 789 / Deep Learning and Its Applications / CHEM ENG 789 / Deep Learning and Its Applications
- SEP 791 / Augmented Reality, Virtual Reality and Mixed Reality
- CAS 771 / Introduction to Big Data Systems and Applications
- SEP 7XX / Deep Learning
- SEP 7XX / Introduction to Computational Natural Language Processing
- SEP 7XX / Visual Perception for Autonomous Vehicles

### **Recommended Technical Electives**

- SEP 718 / Industrial Automation
- SEP 720 / Cloud Computing
- SEP 721 / Data Analytics, Machine Learning, and AI on Cloud Platforms
- SEP 723 / Industrial Components, Networks, and Interoperability / MECH ENG 761 / Industrial Components, Networks, and Interoperability
- SEP 783 / Sensors and Actuators
- SEP 791 / Augmented Reality, Virtual Reality, and Mixed Reality
- SEP 6CS3 / Computer Security
- SEP 6DA3 / Data Analytics and Big Data
- SEP 6DM3 / Data Mining

# **Cross-Disciplinary Elective Courses**

Candidates are required to complete one half course (3 units) which should be selected from the following approved cross-disciplinary elective list.

- SEP 709 / Emerging Issues, Technology and Public Policy
- SEP 710 / International Governance and Environmental Sustainability
- SEP 6X03 / Livable Cities, The Built and Natural Environment
- SEP 6E03 / Opportunity Identification
- SEP 770 / Total Sustainability Management
- SEP 729 / Manufacturing Systems

# **Technical** Courses- Digital Manufacturing

#### Other Core Courses

- SEP 718 / Industrial Automation
- SEP 723 / Industrial Components, Networks, and Interoperability / MECH ENG 761 / Industrial Components, Networks, and Interoperability
- SEP 728 / Internet of Things (ioT) and industrial Internet of Things (ioT) Systems
- SEP 735 / ADDITIVE MANUFACTURING / MECH ENG 735 / Additive Manufacturing
- SEP 738 / AI Methods in Advanced Manufacturing
- SEP 780 / Advanced Robotics and Automation
- SEP 783 / Sensors and Actuators
- SEP 791 / Augmented Reality, Virtual Reality and Mixed Reality
- SEP 7XX / Deep Learning

# **Recommended Technical Electives**

- SEP 6FM3 / Computer Integrated Manufacturing (CIM) and Flexible Manufacturing
- SEP 767 / Multivariate Statistical Methods for Big Data Analysis and Process
   Improvement / CHEM ENG 765 / Multivariate Statistical Methods for Big Data
   Analysis and Process Improvement

- SEP 786 / Artificial Intelligence and Machine Learning Fundamentals / CHEM ENG 786 / Artificial Intelligence and Machine Learning Fundamentals
- SEP 787 / Machine Learning: Classification Models / CHEM ENG 787 / Machine Learning: Classification Models
- SEP 788 / Neural Networks and Development Tools / CHEM ENG 788 / Neural Networks and Development Tools
- SEP 789 / Deep Learning and Its Applications / CHEM ENG 789 / Deep Learning and Its Applications
- SEP 7XX / Introduction to Computational Natural Language Processing
- SEP 7XX / Visual Perception for Autonomous Vehicles

# **Cross-Disciplinary Elective Courses**

Candidates are required to complete one half course (3 units) which should be selected from the following approved cross-disciplinary elective list.

- SEP 709 / Emerging Issues, Technology and Public Policy
- SEP 710 / International Governance and Environmental Sustainability
- SEP 6X03 / Livable Cities, The Built and Natural Environment
- SEP 6E03 / Opportunity Identification
- SEP 770 / Total Sustainability Management
- SEP 729 / Manufacturing Systems

# **Technical** Courses - Process Systems Stream

# **Other** Core Courses

- SEP 750 / Model Predictive Control Design and Implementation
- SEP 751 / Process Design and Control for Operability CHEM ENG 764 / Process Control and Design for Operability
- SEP 752 / Systems Modeling and Optimization
- SEP 767 / Multivariate Statistical Methods for Big Data Analysis and Process Improvement
- SEP 718 / Industrial Automation
- SEP 783 / Sensors and Actuators
- SEP 739 / Distributed Computing for Process Control

- SEP 754 / Process Design and Integration for Minimal Environmental Impact
- SEP 7XX / Deep Learning

# **Recommended Technical Electives**

- SEP 730 / Reliability and Risk Management
- CHEM ENG 773 / Advanced Concepts of Polymer Extrusion
- CHEM ENG 740 / Advanced PSE Tools and Methods
- SEP 6IT3 / Internet Technologies and Databases

# **Cross-Disciplinary Elective Courses**

Candidates are required to complete one half course (3 units) which should be selected from the following approved cross-disciplinary elective list.

- SEP 709 / Emerging Issues, Technology and Public Policy
- SEP 710 / International Governance and Environmental Sustainability
- SEP 6X03 / Livable Cities, The Built and Natural Environment
- SEP 6E03 / Opportunity Identification
- SEP 770 / Total Sustainability Management
- SEP 729 / Manufacturing Systems

Students can take other elective courses with permission of their program lead.

Moreover, a maximum of two courses can be selected from the following list

# **Electrical Engineering**

- ECE 710 / Engineering Optimization
- ECE 732 / Non-linear Control Systems
- ECE 736 / 3D Image Processing and Computer Vision
- ECE 744 / System-on-a-Chip (SOC) Design and Test: Part I Methods
- ECE 772 / Neural Networks and Learning Machines

• ECE 778 / Introduction to Nanotechnology

# **Software Engineering**

• SFWR ENG 6HC3 / The Human Computer Interface

# **Computer Science**

- COMP SCI 6F03 / Distributed Computer Systems
- COMP SCI 6TE3 / Continuous Optimization

# **Computing and Software**

- CAS 767 / Information Privacy and Security
- CAS 771 / Introduction to Big Data Systems and Applications

# CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Vladimir Mahalec Email: mahalec@mcmaster.ca Extension: N/A Date submitted: October 4, 2021

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013



# RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:								
This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.								
<ol> <li>An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).</li> </ol>								
3. A representative from the department is <u>required to attend</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.								
DEPARTMEN	ENT SEPT							
NAME OF PROGRAM a PLAN	nd	Master of Engineering in Manufacturing Engineering						
DEGREE	МЕМЕ							
NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)  Is this change a result of an IQAP review? □ Yes □ No								
CREATION OF NEW MILESTONE □								
CHANGE IN ADMISSION REQUIREMENTS				CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS		
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR  EXPLAIN: Addition of Biomanufacturing stream, and clerical changes.						cturing stream, and clerical changes.		
OTHER CHANGES								

### DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:

SEP 772 is currently a mandatory course for all M.Eng. programs in SEPT. Minor updates to both the MEME streams, all of which are clerical and related to updates at recent GCPC meeting such as new courses or removed courses.

### PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

Removal of SEP 772 as a mandatory course.

Minor updates to both the MEME streams, all of which are clerical and related to updates at recent GCPC meeting such as new courses or removed courses. We were asked to include changes that were approved previously within the document so there are two sets of tracked changes, as requested.

CHANGE LEGEND: As requested by Mike the levels of changes are in different colours.

Text in BLACK means no calendar change.

Text in GREEN refers to changes already approved at the November GCPC meeting.

Tracked changes in RED refers to new changes for the March GCPC meeting that must be approved

Program page:

https://academiccalendars.romcmaster.ca/preview\_program.php?catoid=45&poid=23671&returnto=9166 Course page:

https://academiccalendars.romcmaster.ca/preview\_program.php?catoid=45&poid=23672&returnto=9166

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

Changes made over the last few years to SEPT graduate programs have enabled the students to take an increased number of professional development courses. This enables the students to tailor their learning pathways to suit their individual needs. Replacing Innovation Studio (SEP 772) by an elective interdisciplinary course selected by the students enhances further options to create the study programs that meet individual student needs.

Additional changes are clerical in nature and related to previously approved changes that were not carried to the program-level.

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

Fall 2022

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

N/A

PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):

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Text in BLACK means no calendar change.

Text in GREEN refers to changes already approved at the November GCPC meeting.

Text in ORANGE refers to new changes for the March GCPC meeting that must be approved.

# **Program Description**

The Master of Engineering in Manufacturing Engineering is a 24 month 24-month program for full time students with an accelerated path to complete the program in 12 months of study. Part time students will normally be expected to complete the program in 3 years, one term, (40 months). The program attracts highly motivated students seeking advanced training in the discrete manufacturing. Students design their own program of studies by selecting (with approval of their academic advisor) courses of interest to them. Applications for admission to the program are made through the W Booth School of Engineering Practice and Technology. Applicants will be required to complete an online interview.

The program accepts full-time and part-time students.

In addition to the general requirements for entry into a graduate program in Engineering, students must hold a degree in Engineering or Technology with at least a B average (equivalent to a McMaster 8.0/12 GPA) in the penultimate and final years.

Delivery of the program includes a strong emphasis on project-based experience within the Manufacturing Industry, which is obtained through an industry-based project and through projects defined within courses. Requirements for these are outlined below. Due to the strong practical orientation of the project components of the program, successful completion requires that students have strong interpersonal and communication skills. Students completing the Program on a course-only basis will be required to complete 10 courses from

the approved list of courses. Course selection must be done in consultation with the program lead.

Students completing the Program via course and project work will be required to complete eight courses from the approved list of courses and also successfully complete the M.Eng. project. Course and project selection must be done in consultation with the program lead.

McMaster students may receive advanced standing for up to two courses (note that a maximum of two 600-level courses can count towards a SEPT graduate program) with the approval of the Associate Dean of Graduate Studies.

# **Project**

Students wishing to pursue the course plus project-based option must submit a project proposal for approval by both the faculty lead as well as the Associate Director of Graduate Studies in SEPT. If the project is not approved by either individual, students will be reverted to the course based course-based option. Students are encouraged to develop their own ideas and find industrial sponsors. Projects are ideally undertaken at local companies but may be conducted at locations inside Canada or abroad with the Program Lead's approval and provided that none of the work on the project was done prior to admission into the program. Project groups or individuals will have an industry-based supervisor (stakeholder) with whom the student team can discuss progress, arrange trials, etc. Students will also have an academic supervisor who will normally have expertise in the subject area. It is expected that the teams will meet with their supervisors on a regular basis to discuss their progress.

The project team will orally defend their final project report to an examination committee comprised of their academic supervisor and the second reader (faculty member).

# **Streams**

Students enrolling in the MEME program can tailor their program of studies according to their career interests. Students can choose from the following streams:

- Discrete Manufacturing
- · Biomanufacturing and Industrial Biotechnology

Each stream has a set of core courses and a set of recommended elective courses. Students can take maximum of 2 half courses (one term courses) at 600 level. Courses can be selected from WBooth SEPT, Chemical, Materials or Mechanical Engineering departments.

Students wishing to take an elective course outside of the recommended electives need to obtain a permission from their graduate advisor.

Students should note that not all courses are offered every year.

# **Discrete Manufacturing Courses**

Students enrolling in the program can tailor their program of studies according to their career interests. Students can take maximum of 2 half courses (one term courses) at 600 level. Courses can be selected from WBooth SEPT, Chemical, Materials or Mechanical Engineering departments. Students wishing to take an elective course outside of the recommended electives need to obtain a permission from their program lead.

Students should note that not all courses are offered every year.

# There are 2 pathways towards the degree:

- 8 courses (24 units) + project (6 units)
  - → 1 mandatory course
  - o 2 professional development courses
  - o 3 to 4 core courses
  - o 1 to 2 technical elective courses
  - o 1 cross-disciplinary elective
  - o 2 project courses

Students pursuing this option, in addition to taking 8 courses specified above, must register for the project-courses:

- MANUF 701 / Project, Part I
- MANUF 701 / Project, Part II

10 courses (30 units)

- o 2 professional development courses
- o 4 to 6 core courses
- o 1 to 3 technical elective courses
- o 1 cross-disciplinary elective

All full-time students must register for the seminar series courses (attendance is mandatory), which are:

- SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part
- SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part
   II

(seminar series, full-time students only)

SEP 771 is a seminar series presented by guest speakers, invited by the School, of relevance to all M.Eng. programs at the School. All full-time students are required to take these courses. Course grades are either 'pass' or 'fail'. In order to pass the course the student must attend a minimum of 80% of the seminars.

#### **Required Course**

SEP 772 / Innovation Studio (3 units)

#### **Professional Development Courses**

Professional Development courses in MEng of Manufacturing Engineering, are listed below:

- SEP 6TC3 / Technical Communications
- SEP 725 / Practical Project Management for Today's Business Environment
- SEP 760 / Design Thinking
- SEP 773 / Leadership for Innovation
- SEP 7XX / Project Management for High Tech Projects

# **Technical** Core Courses

The following are core courses:

- SEP 6I03 / Sustainable Manufacturing Processes MATLS 6I03 / Sustainable Manufacturing Processes
- SEP 726 / Discrete Manufacturing Processes I
- SEP 727 / Discrete Manufacturing Processes II
- SEP 738 / Artificial Intelligence Methods in Advanced Manufacturing
- MECH ENG 729 / Manufacturing Systems / SEP 729 / Manufacturing Systems
- CHEM ENG 720 / Lean Six Sigma for Engineers / SEP 731 / Lean Six Sigma for Engineering

- SEP 757 / Rapid Prototyping MECH ENG 759
- SEP 780 / Advanced Robotics and Automation

#### **Technical Elective Courses**

### Recommended technical elective courses are:

- MATLS 6T03 / Properties and Processing of Composites SEP 6T03 / Properties and Processing of Composites
- SEP 767 / Multivariate Statistical Methods for Big Data Analysis and Process Improvement
- SEP 718 / Industrial Automation
- SEP 7XX / Manufacturing Systems 2
- SEP 7XX / Cyber-Physical Systems and Industry 4.0
- Other Elective Courses Available

# **Cross-Disciplinary Elective Courses**

Candidates are required to complete one half course (3 units) which should be selected from the following approved cross-disciplinary elective list.

- SEP 709 / Emerging Issues, Technology and Public Policy
- SEP 710 / International Governance and Environmental Sustainability
- SEP 6X03 / Livable Cities, The Built and Natural Environment
- SEP 6E03 / Opportunity Identification
- SEP 770 / Total Sustainability Management

#### **Biomanufacturing and Industrial Biotechnology Courses**

Students enrolling in the program can tailor their program of studies according to their career interests. Students can take maximum of 2 half courses (one term courses) at 600 level. Courses can be selected from WBooth SEPT, Chemical, Materials or Mechanical Engineering

departments. Students wishing to take an elective course outside of the recommended electives need to obtain a permission from their program lead.

Students should note that not all courses are offered every year.

## There are 2 pathways towards the degree:

- 8 courses (24 units) + project (6 units)
  - o **1** 2 mandatory courses
  - o 2 professional development courses
  - o 3 2 to 34 core courses
  - o 10 to 21 technical elective courses
  - o 1 cross-disciplinary elective course

Students pursuing this option, in addition to taking 8 courses specified above, must register for the project-courses:

- MANUF 701 / Project, Part I
- MANUF 701 / Project, Part II
- 10 courses (30 units)
  - o **12** mandatory courses
  - o 2 professional development courses
  - o 4-3 to 6 5 core courses
  - o 10 to 22 technical elective courses
  - o 1 cross-disciplinary elective course

All full-time students must register for the seminar series courses (attendance is mandatory), which are:

- SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part
- SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part
   <u>II</u>

(seminar series, full-time students only)

SEP 771 is a seminar series presented by guest speakers, invited by the School, of relevance to all M.Eng. programs at the School. All full-time students are required to take these courses.

Course grades are either 'pass' or 'fail'. In order to pass the course the student must attend a minimum of 80% of the seminars.

#### **Required Course**

SEP 772 / Innovation Studio (3 units)

#### **Professional Development Courses**

Professional Development courses in MEng of Manufacturing Engineering, are listed below:

- SEP 6TC3 / Technical Communications
- SEP 725 / Practical Project Management for Today's Business Environment
- SEP 760 / Design Thinking
- SEP 773 / Leadership for Innovation
- SEP 7XX / Project Management for High Tech Projects

#### **Technical**-Core Courses

The following are core courses:

2 required core courses:

- SEP 7XX / Biomanufacturing
- SEP 767 Multivariate Statistical Methods for Big Data Analysis and Process Improvement

Other core courses:

- SEP 7XX / cGMP Upstream Operations
- SEP 7XX / Fermentation of Recombinant Microorganisms
- SEP 7XX / Animal Cell Culture Engineering
- SEP 7XX / cGMP Downstream Operations

#### **Technical Elective Courses**

Recommended technical elective courses are:

BIOMED-701 SEP 7XX / Biomedical Engineering

- BIOMED-799 / Independent Study in Biomedical Engineering
- CHEMENG SEP 742 / Membrane based bioseparation
- SEP 6BI3 / Bioinformatics
- SEP 6BS3 / Biotechnology Regulations

#### **Cross-Disciplinary Elective Courses**

Candidates are required to complete one half course (3 units) which should be selected from the following approved cross-disciplinary elective list.

- SEP 709 / Emerging Issues, Technology and Public Policy
- SEP 710 / International Governance and Environmental Sustainability
- SEP 6X03 / Livable Cities, The Built and Natural Environment
- SEP 6E03 / Opportunity Identification
- SEP 770 / Total Sustainability Management

#### Other Elective Courses Available to all Streams

These courses require a written permission of the student's graduate advisor.

Courses from Chemical Engineering, Materials Science Engineering, and from Mechanical Engineering.

In addition to the recommended elective courses listed above, students can take up to two 600 and an unrestricted number of 700 level courses as electives from Chemical Engineering, Materials Science Engineering, and from Mechanical Engineering.

#### **Additional Elective Courses**

Students can select additional elective courses from the following list, provided that the approval has been received prior from their program lead:

Note that not all courses are offered every year.

#### **Chemical Engineering**

- CHEM ENG 6B03 / Polymer Reaction Engineering
- CHEM ENG 6E03 / Digital Computer Process Control
- CHEM ENG 6X03 / Polymer Processing
- CHEM ENG 6Z03 / Interfacial Engineering
- CHEM ENG 742 / Membrane Based Bioseparations
- CHEM ENG 752 / Optimization of Chemical Processes
- CHEM ENG 753 / Systems Modeling and Optimization
- CHEM ENG 761 / Multivariable, Stochastic and Adaptive Control of Chemical Processes
- CHEM ENG 764 / Process Control and Design for Operability
- CHEM ENG 765 / Multivariate Statistical Methods for Big Data Analysis and Process Improvement
- CHEM ENG 770 / Selected Topics in Polymer Science and Engineering
- CHEM ENG 773 / Advanced Concepts of Polymer Extrusion
- CHEM ENG 774 / Advances in Polymeric Materials
- CHEM ENG 782 / Biopharmaceuticals
- CHEM ENG 786 / Artificial Intelligence and Machine Learning Fundamentals
- CHEM ENG 787 / Machine Learning: Classification Models
- CHEM ENG 788 / Neural Networks and Development Tools
- CHEM ENG 789 / Deep Learning and Its Applications
- CHEM ENG 791 / Nanotechnology in Chemical Engineering

#### **Materials Science and Engineering**

- MATLS 6C03 / Modern Iron and Steelmaking
- MATLS 6H03 / Thin Film Science and Engineering
- MATLS 6I03 / Sustainable Manufacturing Processes
- MATLS 6P03 / Properties of Polymeric Materials
- MATLS 6T03 / Properties and Processing of Composites
- MATLS 6MS4 / Materials Selection in Design and Manufacturing
- MATLS 754 / Fracture Mechanics
- MATLS 771 / Principles of Heterogeneous Kinetics
- MATLS 780 / Metallic and Non-metallic Coatings

#### **Mechanical Engineering**

- MECH ENG 6B03 / Topics in Product Development
- MECH ENG 6K03 / Robotics

- MECH ENG 6L03 / Industrial Design
- MECH ENG 6Q03 / Mechanical Vibrations
- MECH ENG 6T03 / Finite Element Applications
- MECH ENG 6Z03 / CAD/CAM/CAE
- MECH ENG 702 / Advanced Dynamics of Machines
- MECH ENG 705 / Advanced Finite Element Analysis
- MECH ENG 710 / Machine Tool Analysis
- MECH ENG 714 / Solidification Processing
- MECH ENG 724 / Solid and Surface Modeling Techniques
- MECH ENG 728 / Manufacturing Processes I
- MECH ENG 729 / Manufacturing Systems
- MECH ENG 734 / Theory of Plasticity
- MECH ENG 735 / Additive Manufacturing
- MECH ENG 738 / Manufacturing Processes II
- MECH ENG 743 / Advanced Mechatronics
- MECH ENG 751 / Advanced Mechanical Engineering Control Systems
- MECH ENG 752 / Advanced MEMS Fabrication and Microfluidics
- MECH ENG 759 / Rapid Prototyping
- MECH ENG 760 / Electric Drive Vehicles

#### A maximum of two courses can be selected from the following list:

#### **Electrical Engineering**

- ECE 710 / Engineering Optimization
- ECE 732 / Non-linear Control Systems
- ECE 736 / 3D Image Processing and Computer Vision
- ECE 744 / System-on-a-Chip (SOC) Design and Test: Part I Methods
- ECE 772 / Neural Networks and Learning Machines
- ECE 778 / Introduction to Nanotechnology

#### Software Engineering

• SFWR ENG 6HC3 / The Human Computer Interface

#### Computer Science

• COMP SCI 6F03 / Distributed Computer Systems

COMP SCI 6TE3 / Continuous Optimization

Computing and Software

- CAS 767 / Information Privacy and Security
- CAS 771 / Introduction to Big Data Systems and Applications

School of Engineering Practice and Technology

- SEP 6AS3 / Advanced System Components and Integration
- <u>SEP 6AT3 / Conceptual Design of Electric and Hybrid Electric Vehicles</u>
- SEP 6DM3 / Data Mining
- SEP 735 / ADDITIVE MANUFACTURING
- SEP 748 / Development of Sustainable Communities
- SEP 751 / Process Design and Control for Operability
- SEP 752 / Systems Modeling and Optimization
- SEP 754 / Process Design and Integration for Minimal Environmental Impact

Manufacturing Engineering

- MANUF 6RM3 / Robot Mechanics and Mechatronics
- MANUF 710 / SYSTEM ANALYSIS SIMULATION

#### Courses

#### **Discrete Manufacturing Courses**

Students enrolling in the program can tailor their program of studies according to their career interests. Students can take maximum of 2 half courses (one term courses) at 600 level. Courses can be selected from WBooth SEPT, Chemical, Materials or Mechanical Engineering

#### Commented [SS1]: GREEN ALREADY APPROVED NOV 2021

Please note that the following section of changes refers to the 'Course' page specifically which currently incorrectly references program requirements:

https://academiccalendars.romcmaster.ca/preview\_program.p hp?catoid=45&poid=23672&returnto=9166

Changes/text in green already approved at November 2021 meeting, only a few small changes to the CHEMENG courses have been made in RED to reflect deletions/new courses.

departments. Students wishing to take an elective course outside of the recommended electives need to obtain a permission from their program lead.

Students should note that not all courses are offered every year.

There are 2 pathways towards the degree:

- 8 courses (24 units) + project (6 units)
  - 1 mandatory course
  - o 2 professional development courses
  - o 3 to 4 core courses
  - 1 to 2 elective courses

Students pursuing this option, in addition to taking 8 courses specified above, must register for the project courses:

- MANUF 701 / Project, Part I
- MANUF 701 / Project, Part II

-

- 10 courses (30 units)
  - 1 mandatory course
  - 2 professional development courses
  - 4 to 6 core courses
  - 1 to 3 elective courses

All full-time students must register for the seminar series courses (attendance is mandatory), which are:

- SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part
   ±
- SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part
   III.

(seminar series, full-time students only)

-

SEP 771 is a seminar series presented by guest speakers, invited by the School, of relevance to all M.Eng. programs at the School. All full-time students are required to take these courses. Course grades are either 'pass' or 'fail'. In order to pass the course the student must attend a minimum of 80% of the seminars.

#### Required Course

SEP 772 / Innovation Studio (3 units)

#### **Professional Development Courses**

Professional Development courses in MEng of Manufacturing Engineering, are listed below:

- SEP 6TC3 / Technical Communications
- SEP 725 / Practical Project Management for Today's Business Environment
- SEP 760 / Design Thinking
- SEP 773 / Leadership for Innovation

#### **Technical Courses**

#### The following are core courses:

- SEP 6103 / Sustainable Manufacturing Processes MATLS 6103 / Sustainable Manufacturing Processes-
- SEP 726 / Discrete Manufacturing Processes I
- SEP 727 / Discrete Manufacturing Processes II
- MECH ENG 729 / Manufacturing Systems / SEP 729 / Manufacturing Systems
- <u>CHEM ENG 720 / Lean Six Sigma for Engineers / SEP 731 / Lean Six Sigma for Engineering</u>
- SEP 757 / Rapid Prototyping MECH ENG 759
- <u>SEP 780 / Advanced Robotics and Automation</u>
- Recommended elective courses are:
- MATLS 6T03 / Properties and Processing of Composites SEP 6T03 / Properties and Processing of Composites
- <u>SEP 767 / Multivariate Statistical Methods for Big Data Analysis and Process Improvement</u>
- SEP 718 / Industrial Automation
- Other Elective Courses Available

These courses require a written permission of the student's graduate advisor.

-

Courses from Chemical Engineering, Materials Science Engineering, and from Mechanical Engineering.

In addition to the recommended elective courses listed above, students can take up to two 600 and an unrestricted number of 700 level courses as electives from Chemical Engineering, Materials Science Engineering, and from Mechanical Engineering.

Additional Elective Courses

Students can select additional elective courses from the following list, provided that the approval has been received prior from their program lead:

Note that not all courses are offered every year.

Chemical Engineering

- CHEM ENG 6B03 / Polymer Reaction Engineering
- CHEM ENG 6E03 / Digital Computer Process Control
- CHEM ENG 6X03 / Polymer Processing
- CHEM ENG 6Z03 / Interfacial Engineering
- <u>CHEM ENG 742 / Membrane Based Bioseparations</u>
- CHEM ENG 752 / Optimization of Chemical Processes
- CHEM ENG 753 / Systems Modeling and Optimization
- CHEM ENG 761 / Multivariable, Stochastic and Adaptive Control of Chemical Processes
- CHEM ENG 764 / Process Control and Design for Operability
- CHEM ENG 765 / Multivariate Statistical Methods for Big Data Analysis and Process Improvement
- <u>CHEM ENG 770 / Selected Topics in Polymer Science and Engineering</u>
- <u>CHEM ENG 773 / Advanced Concepts of Polymer Extrusion</u>
- CHEM ENG 774 / Advances in Polymeric Materials
- CHEM ENG 782 / Biopharmaceuticals
- CHEM ENG 786 / Artificial Intelligence and Machine Learning Fundamentals
- CHEM ENG 787 / Machine Learning: Classification Models
- CHEM ENG 788 / Neural Networks and Development Tools-
- CHEM ENG 789 / Deep Learning and Its Applications

• CHEM ENG 791 / Nanotechnology in Chemical Engineering

#### **Materials Science and Engineering**

- MATLS 6C03 / Modern Iron and Steelmaking
- MATLS 6H03 / Thin Film Science and Engineering
- MATLS 6I03 / Sustainable Manufacturing Processes
- MATLS 6P03 / Properties of Polymeric Materials
- MATLS 6T03 / Properties and Processing of Composites
- MATLS 6MS4 / Materials Selection in Design and Manufacturing
- MATLS 754 / Fracture Mechanics
- MATLS 771 / Principles of Heterogeneous Kinetics
- MATLS 780 / Metallic and Non-metallic Coatings

#### **Mechanical Engineering**

- MECH ENG 6B03 / Topics in Product Development
- MECH ENG 6K03 / Robotics
- MECH ENG 6L03 / Industrial Design
- MECH ENG 6Q03 / Mechanical Vibrations
- MECH ENG 6T03 / Finite Element Applications
- MECH ENG 6Z03 / CAD/CAM/CAE
- MECH ENG 702 / Advanced Dynamics of Machines
- MECH ENG 705 / Advanced Finite Element Analysis
- MECH ENG 710 / Machine Tool Analysis
- MECH ENG 714 / Solidification Processing
- MECH ENG 724 / Solid and Surface Modeling Techniques
- MECH ENG 728 / Manufacturing Processes I
- MECH ENG 729 / Manufacturing Systems
- MECH ENG 734 / Theory of Plasticity
- MECH ENG 735 / Additive Manufacturing
- MECH ENG 738 / Manufacturing Processes II
- MECH ENG 743 / Advanced Mechatronics
- MECH ENG 751 / Advanced Mechanical Engineering Control Systems
- MECH ENG 752 / Advanced MEMS Fabrication and Microfluidics
- MECH ENG 759 / Rapid Prototyping

MECH ENG 760 / Electric Drive Vehicles

A maximum of two courses can be selected from the following list:

#### **Electrical Engineering**

- ECE 710 / Engineering Optimization
- ECE 732 / Non-linear Control Systems
- ECE 736 / 3D Image Processing and Computer Vision
- ECE 744 / System-on-a-Chip (SOC) Design and Test: Part I Methods
- ECE 772 / Neural Networks and Learning Machines
- ECE 778 / Introduction to Nanotechnology

Software Engineering

• SFWR ENG 6HC3 / The Human Computer Interface

**Computer Science** 

- COMP SCI 6F03 / Distributed Computer Systems
- COMP SCI 6TE3 / Continuous Optimization

Computing and Software

- CAS 767 / Information Privacy and Security
- CAS 771 / Introduction to Big Data Systems and Applications

School of Engineering Practice and Technology

- SEP 6AS3 / Advanced System Components and Integration
- SEP 6AT3 / Conceptual Design of Electric and Hybrid Electric Vehicles
- SEP 6DM3 / Data Mining
- SEP 735 / ADDITIVE MANUFACTURING
- SEP 748 / Development of Sustainable Communities
- SEP 751 / Process Design and Control for Operability
- SEP 752 / Systems Modeling and Optimization

- <u>SEP 754 / Process Design and Integration for Minimal Environmental Impact</u>
- SEP 780 / Advanced Robotics and Automation
- <u>SEP 772 / Innovation Studio (3 units)</u>
- <u>SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's</u> <u>Forum Part I</u>
- SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part II

#### Manufacturing Engineering

- MANUF 6RM3 / Robot Mechanics and Mechatronics
- MANUF 710 / SYSTEM ANALYSIS SIMULATION

#### CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Vladimir Mahalec Email: mahalec@mcmaster.ca Date submitted: February 23, 2022

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013



#### RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:									
This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.									
2. An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).									
3. A representative from the department is <u>required to attend</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.									
DEPARTMEN	ENT SEPT								
NAME OF PROGRAM a PLAN	Master of Engineering and Public Policy								
DEGREE		MEPP							
	NATUR	E OF RE	COM	IMEND/	ATION (PLEASE CHE	CK APPROPRIATE BOX)			
Is this change a result of an IQAP review? ☐ Yes ☐ No									
CREATION OF NEW MILESTONE □									
CHANGE IN REQUIREME	I ADMISSION ENTS				SE IN REHENSIVE NATION PROCEDURE	CHANGE IN COURSE REQUIREMENTS	x		
CHANGE IN THE DESCRIPTION OF A  SECTION IN THE GRADUATE CALENDAR  EXPLAIN:									
OTHER CHANGES	EXF	PLAIN:							

#### DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:

Currently there is no circular economy course offered, and currently SEP 772 is mandatory for all SEPT M.Eng. programs.

### PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

Addition of a new circular economy elective, and removal of SEP 772 as a mandatory course.

### RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

The recommended addition of a circular economy elective is to address a key topic in sustainability and public policy in Canada. The relevance and activity (industrial and academic) on this topic has reached a level that warrants a focused elective. This addresses the Program Learning Outcomes listed below to develop application knowledge for students completing their degree in Engineering & Public Policy.

PLO #1: Create and select paradigmatic alternatives based on their analysis and evaluation;

PLO #2: Apply the key dimensions of deep sustainability in developing and advancing solutions to societal challenges;

PLO #3: Lead (enlist the aid and support of) stakeholders to attain a common goal that is consistent with "sustainability";

PLO #4: Work effectively in teams composed of persons with diverse backgrounds, levels of knowledge and/or expertise;

PLO #5: Be able to communicate effectively in public and professional environments via oral or written formats;

PLO #6: Demonstrate the personal integrity and maturity that enables them to build trust with others, value differences, and create synergistic relationships

Changes made over the last few years to SEPT graduate programs have enabled the students to take an increased number of professional development courses. This enables the students to tailor their learning pathways to suit their individual needs. Replacing Innovation Studio (SEP 772) by an elective interdisciplinary course selected by the students enhances further options to create the study programs that meet individual student needs.

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

Fall 2022

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

No

PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):

In today's complex world engineers and scientists are called upon to design technical systems that provide goods and services to society in a safe, efficient and environmentally sound manner. In this context, engineers and scientists can serve as key advisors to and take the lead as decision makers in both the public and private sectors. Therefore, engineers and scientists need more than extensive technical skills; they also need an enhanced understanding of public policy and the role of engineering and science in sustainable technological, social, ecological and economic systems.

A professional Master's degree in Engineering and Public Policy (MEPP) is offered within the W Booth School of Engineering Practice and Technology. Engineers and applied scientists from a wide cross-section of organizations who want professional graduate training will find our program goes well beyond a conventional technical Master's to develop candidates as leaders in the public policy area.

#### Admission

Students must hold a undergraduate degree in STEM or a 4-year non-STEM degree in a public policy-related field including, for example, political science, public policy, public administration or global studies. Applicants must have at least a B- average (equivalent to a McMaster 7.0 GPA out of 12) in the final year in all courses in the discipline, or relating to the discipline, in which the applicant proposes to do graduate work. Applicants will be required to complete an online interview. Professional work experience is desirable but not essential.

Prospective applicants who did not attain the required standing in their undergraduate degree, should discuss their situation with the Associate Director of Graduate Studies in SEPT. If the applicant's experience is deemed sufficient, the Associate Director of Graduate Studies in SEPT will recommend a live interview. Evidence of ability to do graduate work will be required. (See Sections 2.1.1 Admission Requirements for Master's Degree and 2.1.3 Admission of Students with Related Work Experience or Course Work Beyond the Bachelor's Degree in the Graduate Calendar.)

The W Booth School of Engineering Practice and Technology has the following program objectives for the Master's degree in Engineering and Public Policy (MEPP):

to provide a <a href="high-quality-high-quality">high-quality</a> educational experience to graduate engineers and scientists in the areas of engineering, science and public policy;

- to foster applied research in the areas of engineering, science and public policy through the successful completion and dissemination of a research paper;
- to develop viable, working linkages between engineering, science and fields of study within social sciences and the humanities (public policy, economics, society, and others);
- to produce graduates who will provide inspired leadership in the engineering, science and public policy areas within the public, private and NGO sectors.

Candidates may be enrolled on a full- or part-time basis. Full-time students will complete the degree in 24 months with an accelerated path to complete the program in 12 months of study, beginning in September or January. Part-time students will normally be expected to complete the program in 3 years, one term (40 months).

McMaster students may receive advanced standing for up to two courses (note that a maximum of two 600-level courses can count towards a SEPT graduate program) with the approval of the Associate Dean of Graduate Studies.

#### Curriculum

The curriculum has the following components:

- Core courses that provide the content and methodological skills necessary for understanding and analyzing societal issues for which engineering and science can contribute to public policy solutions;
- Focus elective courses that allow students to deepen their knowledge of a range of engineering, science and social science applications;
- 3. The completion of a substantive research paper on a problem at the interface of engineering, science and public policy

# Research Project - Inquiry/Thesis in Engineering and Public Policy

Students select a research topic at the interface of engineering, science and public policy which is of interest to them and carries out inquiry-driven research; completes a formal research paper and prepares to publish their results for broad dissemination.

Candidates for the MEPP degree will follow a program consisting of the following and will need to complete 30 units to meet the degree requirements:

#### **Required Courses**

Candidates are required to take the following seven half courses (21 units):

- SEP 701 / Theory and Practice of Policy Analysis: Frameworks and Models
- SEP 702 / Systems Engineering and Public Policy
- SEP 709 / Emerging Issues, Technology and Public Policy
- SEP 772 / Innovation Studio (3 units)
- SEP 6EL3 / Leading Innovation OR
- SEP 773 / Leadership for Innovation
- SEP 704 / Public Research Project, Part 1
- SEP 704 / Public Policy Research Project, Part 2
- In addition students are required to take
- SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part I (zero units)
- (full-time students only)
- SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part II (zero units)
- (full-time students only)

#### **Focus Elective Courses**

Three Two half-courses (9-6 units) are required for electives. Recommended electives include but are not limited to:

- SEP 6I03 / Sustainable Manufacturing Processes
- SEP 6X03 / LIVABLE CITIES, THE BUILT AND NATURAL ENVIRONMENT
- SEP 705 / Green Engineering, Sustainability and Public Policy
- SEP 706 / Energy and Public Policy
- SEP 708 / Special Topics in Engineering and Public Policy
- SEP 710 / International Governance and Environmental Sustainability
- SEP 7XX / Circular Economy
- POL SCI 784 / Quantitative Political and Policy Analysis
- POL SCI 785 / Public Sector Management
- POL SCI 790 / The Politics of Economic Policy in Market Economies

**Cross-Disciplinary Elective Courses** 

<u>Candidates are required to take one half course (3 units) which should be selected from the following approved cross-disciplinary elective list.</u>

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- SEP 770 / Total Sustainability Management
- SEP 790 / Emerging Technologies for Engineering Innovation
- SEP 760 / Design Thinking
- SEP 7XX / Cyber Physical Systems and Industry 4.0

#### **Additional Courses**

- Up to two graduate engineering half courses from departments within the Faculty of Engineering
- Other courses in other departments and Faculties with approval of the Associate Director of the Graduate Studies in SEPT.

#### CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Gail Krantzberg Email: krantz@mcmaster.ca Extension: N/A Date submitted: February 22, 2022

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013

Formatted: Bulleted + Level: 1 + Aligned at: 0.25" + Indent at: 0.5"



School of Graduate Studies 1280 Main Street West Phone 905.525.9140 Hamilton, Ontario, Canada Ext. 23679 L8S 4L8 http://graduate.mcmaster.ca

To **Graduate Council** 

From: Christina Bryce

**Assistant Graduate Secretary** 

At its meetings on January 12<sup>th</sup>, February 1<sup>st</sup> and March 17<sup>th</sup> the Faculty of Health SCiences Graduate Policy and Curriculum Committee approved the following graduate curriculum recommendations.

Please note that these recommendations were approved by the Faculty of Health Sciences.

#### For Approval of Graduate Council:

- Child Life and Pediatric Psychosocial Care
  - Change to Program Requirements
- Health Policv\*
  - Change to Field Name
  - Change to Course Requirements
- Health Research Methodology
  - Change to Course Requirements and Calendar Copy
- Occupational Therapy
  - Change to Calendar Copy
- **Physiotherapy** 
  - Change to Calendar Copy
- **Psychotherapy** 
  - Change to Calendar Copy

#### For Information of Graduate Council:

- Child Life and Pediatric Psychosocial Care
  - Course Cancellation
    - 711 Pediatric Psychosocial Care Residency 2
  - Change to Unit Count
    - 701 Pediatric Psychosocial Care Residency 1
- **Global Health\*** 
  - New Course
    - 714 Special Topics in Global Health
- **Health Management\*\*** 
  - New Course
    - 709 Selected Topics in Healthcare Management and Leadership

#### Occupational Therapy

- Change to Mode of Delivery
  - 772 Person, Environment and Occupation: Inquiry and Integration
  - 773 Disability and Occupation: Inquiry and Integration
  - 774 Complexities of Practice 1: Children, Youth & Adults Inquiry & Integration
  - 776 Complexities of Practice II: Older Adults & Transition to Practice Inquiry & Integration
  - 791 Occupational Therapy Practicum I
  - 792 Occupational Therapy Practicum II
  - 795 Occupational Therapy Practicum III
  - 796 Occupational Therapy Practicum IV

#### Change to Course Evaluation

 786 Complexities of Practice II: Older Adults & Transition to Practice - Professional Reasoning and Skills

#### Change to Course Title, Description and Evaluation and Mode of Delivery

771 Wellness, Health and Occupation: Inquiry and Integration

#### Physiotherapy

- Change to Course Title and Description
  - 703 Women's Health

#### Change to Course Evaluation

- 781 Clinical Practice I
- 782 Clinical Practice II
- 783 Clinical Practice III
- 784 Clinical Practice IV

#### Change to Mode of Delivery

- 761 Society, Health, Innovation: Foundational Knowledge for the Physiotherapy Practitioner (PTPRAC) I
- 762 Society, Health, Innovation: Foundational knowledge for the Physiotherapy Practitioner (PTPRAC) II
- 763 Society, Health, Innovation: Foundational Knowledge for the Physiotherapy Practitioner (PTPRAC) III
- 764 Society, Health, Innovation: Foundational knowledge for the Physiotherapy Practitioner (PTPRAC) IV
- 765 Society, Health, Innovation: Foundational knowledge for the Physiotherapy Practitioner (PTPRAC) V

#### Psychotherapy

- Change to Course Description
  - 710 Practicum I

#### Public Health

- New Course
  - 717 The Fundamentals of Environmental Health and the Health Impacts of Global Climate Change

<sup>\*</sup>Also approved by the Faculties of Business and Social Sciences

\*\*Also approved by the Faculty of Business



### RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

<u>IMPO</u>	RTANT:	PLEASE	READ T	HE FO	LLOWING NOTES BEF	ORE	<b>COMPLETING THIS FORM:</b>	
This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.								
2. An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).								
3. A representative from the department is <u>required to attend</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.								
DEPARTME	<b>DEPARTMENT</b> Pediatrics							
NAME OF PROGRAM a PLAN	GRAM and Child Life and Pe				Psychosocial Care			
DEGREE	DEGREE MSc. Child Life and Pediatric Psychosocial Care							
	NATUR	E OF RI	ECOMME	ENDA <sup>*</sup>	TION (PLEASE CHEC	CK A	PPROPRIATE BOX)	
Is this change a result of an IQAP review? ☐ Yes ☒ No								
CREATION OF NEW MILESTONE								
CHANGE IN REQUIREME	SE IN ADMISSION REMENTS			HANGE IN DMPREHENSIVE (AMINATION PROCEDURE			CHANGE IN COURSE REQUIREMENTS	
					EXPLAIN:			
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR			Yes	The tracked changed sections highlight the request to move the CLPPC 711 Pediatric Psychosocial Care Residency 2 course (1.5 credits) to a milestone.				
OTHER CHANGES		PLAIN:						
DESCRIBE T	HE EXIS	TING RE	QUIREMI	ENT/PF	ROCEDURE:			

## PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

The edits being brought forward highlight the recommended change to cancel the CLPPC 711 Pediatric Psychosocial Care Residency 2 course (1.5 credit pass/fail course) and instead move its content and related outcomes to a *Pediatric Psychosocial Care Milestone*. Removing the 1.5 credit allocation from this course will also address the challenge experienced by part-time Stream 2 students who find themselves over their credit limit when taking this course in their final term. It will also support Stream 2 learners completing their degree in early August vs. late August and reduce the associated financial costs at the end of their studies when they are already stretched.

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

## PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

New graduate calendar. We would however like to seek Dean's approval to commence this change with the current cohort of Stream 2 learners who anticipate taking this course in late summer 2022.

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

No.

PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):

#### MSc degree – Stream 2 Option

Stream 2 the Child Life and Pediatric Psychosocial Care program provides advanced practice skills in pediatric psychosocial care. It is offered on both a full and part-time basis to applicants who already hold qualifications as a healthcare professional with an interest in pediatric psychosocial care. Clinical internships and clinical skills seminars are therefore not required. The anticipated completion time of all Stream 2 program requirements for full-time students is 1 year, and 2-4 years from initial enrollment for part-time students. Stream 2 students are not permitted to transfer to Stream 1. Changing streams requires reapplication.

#### **Stream 2 Application Requirements**

Stream 2 applicants are required to submit:

- An official transcript(s) of academic work completed to date at all post-secondary institutions attended, sent directly from the issuing institution(s). Non-English transcripts must be translated and notarized.
- A current CV
- Proof of active registration in a professional association (e.g. membership number, certification or licensure number) must be included on the applicant's resume.

- Two confidential reference forms from an instructor most familiar with the applicant's academic work. Consideration on the use of an employer reference will be provided on a case-by-case basis.
- A personal statement (maximum 750 words) of intent that addresses the specific questions posed in the application checklist.

Meeting the above minimum admissions requirement does not guarantee admission. Limited space will be available. The admission process is competitive.

#### **Course requirements**

Complete with at least a B- standing 67 core and 3 elective graduate courses. Stream 2 students will also be required to complete the **Pediatric Psychosocial Care Milestone**. This milestone will provide students with the opportunity to engage in 3 interactive virtual workshops and develop ways to integrate pediatric psychosocial simulation and debriefing within their roles and in interprofessional education with others. Each learner will collate an e-portfolio with their reflections and assessment components. A 4<sup>th</sup> virtual session will be scheduled with the Centre for Simulation-Based Learning to participate in standardized patient scenarios to apply and integrate clinical skills and clinical reasoning within the presented scenarios on psychosocial topics.

#### Core Courses:

- CLPPC 701/Pediatric Psychosocial Care Residency 1
- CLPPC 703/Research Methods in Pediatric Psychosocial Care
- CLPPC 707/Evaluating Evidence: An Approach to Critical Evaluation of the Literature
- CLPPC 712/Professional Ethics
- CLPPC 711/Pediatric Psychosocial Care Residency 2
- CLPPC 704/Current Issues in Pediatric Psychosocial Care
- CLPPC 713/Independent Master's Project

#### **Elective Options**

- CLPPC 714/Special Topics in Pediatric Psychosocial Care
- RS 708 Reasoning and Decision Making
- RS 770 Leadership in Rehabilitation
- CLPPC 709/The Vulnerable Child and Youth
- CLPPC 706/Pediatric Psychosocial Assessment
- CLPPC 705/Grief, Loss & Bereavement in Childhood and Adolescence
- CLPPC 708/Child Life Foundations of Play
- CLPPC 717/Program Planning and Evaluation
- CLPPC 702/The Child, Youth and Family in Healthcare
- CLPPC 721/Independent Study
- Other graduate elective(s) approved in advance by the program

All courses are offered online with the exception of the mandatory on-campus <u>CLPPC 701 Pediatric</u> Psychosocial Care #Residency week-1 courses.

Course CLPPC 720 is only offered to students eligible for remediation.

#### CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Cathy Humphreys Email: <a href="mailto:humphrc@mcmaster.ca">humphrc@mcmaster.ca</a> Extension: 22795 Date submitted: Nov. 2021

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013

# Health Policy, Ph.D.

Return to: Interdisciplinary

### Ph.D. Degree

The purpose of the Ph.D. in Health Policy is to train intellectual leaders in the field who will make seminal contributions to policy understanding and practice. The curriculum provides the student with theoretical and empirical tools for answering a range of questions about health policy, and the ability to develop new investigation approaches to move the field forward. An emphasis on theoretical and conceptual frameworks for policy analysis distinguishes this program from health degrees with a primary focus on empirical methodologies or on specific substantive problems.

The Ph.D. program integrates intellectual resources for education and research across McMaster University. Participating faculty members have appointments predominantly in departments within the Faculty of Social Sciences, the Faculty of Health Sciences, and the School of Business. Graduates with a Ph.D. in Health Policy will be well prepared for academic appointments in interdisciplinary departments or institutes. Their training will also prepare them for fruitful engagement with policy makers as providers of useful knowledge, insightful research, and innovative solutions to policy problems. Outside of academia, graduates would be qualified for leadership positions in government, policy consulting, nongovernmental organizations throughout the health sector, and private industry.

## Specializations

The program offers three fields of specialization: *Health Economics, Political Studies, and Social Organization* Health Systems and Society.

### **Health Economics**

The health economics field addresses the economic analysis of health policies and health systems, as well as the economic analysis of responses to health policies. Topics may include, for example, health resource allocation, configuration of health human resources, economic evaluation of policy options, public and private financing of health care, societal investments in health production, etc. The dominant disciplinary perspective is that of microeconomics, but insight into economic behaviour may also be provided by perspectives such as business, psychology, and others.

### **Political Studies**

The political studies field emphasizes the political aspects of health policy including the influences by political institutions, actors, values, and ideas operating within state and global jurisdictions. Topics of interest, for example, may include the role of historical institutional arrangements in shaping health governance reforms, the impact of global trade agreements on domestic home care and pharmaceutical policy, the role of the public, stakeholders, and prevailing values on policy agendas, etc. Political science is the dominant disciplinary perspective, with related areas including, public policy analysis and administration, comparative public policy, law, political theory and philosophy.

### Social Organization Health Systems and Society

The social organizationhealth systems and society field emphasizes the analysis of the social influences that shape the production of health (and illness), the organization of health systems and services, and their associated policies. Topics of interest may include the generation and use of information to inform policy, political economies of health and its production, policies to address the social determinants of health and professional roles and behaviour, etc. Relevant disciplinary perspectives include anthropology, business administration or management, health systems, history, philosophy, political science, psychology and sociology.

### Admission

Admission to the Ph.D. program requires previous graduate training in a relevant field (e.g., social sciences, health professions, policy, business, legal or administrative professions), with at least an A- grade average in past graduate coursework. A Master's degree is preferred. At least one graduate-level statistics half-course should be passed prior to

admission. Students without this preparation in statistics may be admitted, but would be required to take a graduate statistics course in addition to normal program requirements. Successful applicants must also meet all School of Graduate Studies admissions requirements. Current admission procedures, forms, and deadlines are available on the Health Policy program website: <a href="https://healthsci.mcmaster.ca/hpphd">https://healthsci.mcmaster.ca/hpphd</a>

## Degree Requirements

The Health Policy Ph.D. curriculum has three parts, which will normally be completed over a four-year period: (1) coursework (first and second years); (2) comprehensive examinations (first and second years); (3) the doctoral dissertation, which involves the approval and defense of the proposal for the doctoral research (third year), dissertation research (third and fourth years), and the completion, approval, and defense of the written dissertation (fourth year).

### Course Requirements

Coursework is normally completed during the first and second years of full-time study. Between 4-10 half courses are required. Courses are chosen from the list of recommended courses for each curriculum area (listed below). Required coursework includes 2 terms of the Doctoral Seminar in Health Policy, 2-3 specialty field courses, 0-2 breadth field courses outside the student's specialty field, and 0-3 half courses, including both quantitative and qualitative or mixed methods.

Students without prior graduate training in a given area are required to take the maximum number of required courses for that area. Students who have completed some relevant training prior to admission may have relevant course requirements waived at the time of admission to the Health Policy Ph.D. program. A minimum of 4 half-courses (including the 2 doctoral seminar half-courses) may not be waived and must be completed while the student is enrolled in the Health Policy Ph.D. program.

#### **Doctoral** seminar

2 terms of:

• HLTH POL 711 / Doctoral Seminar in Health Policy
Breadth field courses

0-2 half courses, one from each of two fields other than the student's specialty:

#### Health Economics:

- HTH RS M 788 / Health Economics
- HLTH POL 706 / Introduction to health and public health economics

With program permission:

- HLTH POL 750 / Special Topics in Health Policy
- HLTH POL 798 / Independent Study in Health Policy

#### Political Studies:

HTH RS M 738 / Health Policy Analysis

With program permission:

- HLTH POL 750 / Special Topics in Health Policy
- HLTH POL 798 / Independent Study in Health Policy

Social Organization Health Systems and Society:

- HTH RS M 729 / The Canadian Health Care System in Comparative Perspective
- HLTH AGE 703 / Social Systems, Services and Policy: Critical Perspectives
- HLTH AGE 708 / Health and Aging in a Global and International Context
- HLTH AGE 709 / Socio-Cultural Aspects of Health and Aging

With program permission:

- HLTH POL 750 / Special Topics in Health Policy
- HLTH POL 798 / Independent Study in Health Policy

Specialty field courses

2-3 half courses in 1 of the following 3 fields:

#### Health Economics:

Required for all Health Economics field students, unless waived:

- HTH RS M 788 / Health Economics
- ECON 727 / Microeconomic Theory for Public Policy

Additional choices:

- HTH RS M 791 / Topics in Advanced Health Economics
- ECON 793 / Health Economic Policy
- HTH RS M 737 / Economic Analysis for the Evaluation of Health Services

With program permission:

- HLTH POL 750 / Special Topics in Health Policy
- HLTH POL 798 / Independent Study in Health Policy

**Political Studies:** 

Required for all Political Studies field students, unless waived:

HTH RS M 738 / Health Policy Analysis

Additional choices:

- POL SCI 783 / Comparative Public Policy
- POL SCI 785 / Public Sector Management
- POL SCI 740 / Theories of Comparative Politics

With program permission:

- HLTH POL 750 / Special Topics in Health Policy
- HLTH POL 798 / Independent Study in Health Policy

### Social Organization Health Systems and Society:

Required for all Social Organization Health Systems and Society field students, unless waived:

- HTH RS M 729 / The Canadian Health Care System in Comparative Perspective
- HLTH AGE 703 / Social Systems, Services and Policy: Critical Perspectives
- HLTH AGE 708 / Health and Aging in a Global and International Context
- HLTH AGE 709 / Socio-Cultural Aspects of Health and Aging
- HTH RS M 748 / Population and Public Health

With program permission:

- HLTH POL 750 / Special Topics in Health Policy
- HLTH POL 798 / Independent Study in Health Policy

### Methodology courses

0-3 half courses, including both quantitative and qualitative or mixed methods:

Quantitative Methods:

Required for Health Economics specialty field students, unless waived

• ECON 761 / Econometrics I

Additional choices for students in all specialty fields:

- ECON 762 / Econometrics II
- ECON 795 / Analysis of Health Data
- ECON 770 / Use of Secondary Data Analyses to Examine Social Determinants of Health
- HTH RS M 727 / Theory and Practice of Measurement
- HTH RS M 751 / Observational and Analytical Research Methods
- HTH RS M 762 / Approaches to the Evaluation of Health Services

- HTH RS M 723 / Regression Analysis
- HTH RS M 731 / Advanced Linear Models for Health Data
- HTH RS M 740 / Advanced Decision Analysis in Health Technology Assessment (HTA)
- HTH RS M 737 / Economic Analysis for the Evaluation of Health Services
- POL SCI 784 / Quantitative Political and Policy Analysis
- SOCIOL 740 / Statistical Methods for Social Research
- SOCIOL 761 / Topics in Statistical Methods for Social Research

#### With program permission:

- HLTH POL 750 / Special Topics in Health Policy
- HLTH POL 798 / Independent Study in Health Policy

#### Qualitative Methods:

- HTH RS M 745 / Qualitative Research Methods
- HTH RS M 758 / Qualitative Research Methods for Analysing and Interpreting Data
- SOCIOL 743 / Historical Methods
- SOCIOL 742 / Qualitative Methods
- HTH RS M 705 / Independent Study in Clinical Epidemiology and Health Research Methods
- HLTH POL 747 / Qualitative and Conceptual Methods

#### With program permission:

- HLTH POL 750 / Special Topics in Health Policy
- HLTH POL 798 / Independent Study in Health Policy

#### Mixed Methods:

- HTH RS M 700 / Philosophy of Science for Health Research
- POL SCI 796 / Research Design and Methods
- HTH RS M 770 / Mixed Methods Research Designs for Health Services and Policy Research
- HTH RS M 705 / Independent Study in Clinical Epidemiology and Health Research Methods
- HTH RS M 726 / The Science and Practice of Knowledge Translation: Foundations

#### With program permission:

- HLTH POL 750 / Special Topics in Health Policy
- HLTH POL 798 / Independent Study in Health Policy

### Comprehensive Examination

Comprehensive examinations are completed during the first and second years of full time study, as the relevant coursework requirements are completed. Students complete three required comprehensive examinations in the following areas:

- Two breadth fields outside the student's specialty area (social organizationhealth systems and society, political studies, and health economics);
- One chosen specialty area (social organization health systems and society, political studies, or health economics); and
- Research methods (qualitative and quantitative empirical approaches).

### **Doctoral Dissertation**

All Health Policy Ph.D. students are required to research, write, and successfully defend a doctoral dissertation, which constitutes an original contribution to knowledge in the field of health policy. The dissertation is developed and completed under the guidance of the student's primary supervisor and a dissertation supervision committee consisting of at least two additional faculty members.

- Normally by the beginning of the third year of full time study, the doctoral dissertation *proposal* is formally presented and defended before a committee;
- The doctoral dissertation research is normally completed during the third and fourth years of full time study, with the completion, approval, and defense of the written dissertation by the end of the fourth year.

### Supervision

Each student will be assigned a provisional faculty supervisor upon admission to the program. A final faculty supervisor and a three member supervisory committee will be appointed within 6 months of the student's enrollment in the program. At least two (of three) supervisory committee members must be core faculty members of the Health Policy Ph.D. Program. The

faculty supervisor and supervisory committee provide guidance and monitor the student's progress. The supervisory committee is expected to meet with the student twice annually to assess the student's progress and to file a written progress report with the Program.

### Additional Regulations

Students and prospective applicants should consult the Graduate Calendar for a complete description of regulations concerning the Ph.D. degree and graduate studies at McMaster University.



#### RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:								
1. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.								
2. An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).								
3. A representative from the department is <u>required to attend</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.								
DEPARTME	NT	Health F	Health Policy (Interdisciplinary Program)					
NAME OF PROGRAM and PLAN Health Policy								
DEGREE	Ph	D						
NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)								
Is this change a result of an IQAP review? ⊠ Yes □ No								
CREATION OF NEW MILESTONE								
REQUIREME	REQUIREMENTS  CI		CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS			
		DESCRIPTIO GRADUATE	N OF	A	EXPLAIN:			
OTHER CHANGES	Х	EXPLAIN:  We are changing the name of one of the program's 3 specialty fields as part of a modest curriculum refresh arising from our recent IQAP review (20-21).						

DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:
Current field name is Social Organization
PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space
is not sufficient.)
Proposed new field name is <i>Health Systems and Society</i> .
Tropossa new nota name to ribatan systems and society.
DATIONALE FOR THE DECOMMENDED CHANGE (How does the requirement fit into the description of
RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):
During our recent IQAP review (20-21), a sense of a lack of identity and coherence to this field was identified. We consulted with students and faculty in the field who supported a re-naming of the field to give it a stronger and
more recognizable identity and to better align with changes to core faculty and areas of expertise over time.
PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic
year)
September 1, 2022
ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND
POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.
PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR
(please include a tracked changes version of the calendar section affected if applicable):
All places in the graduate calendar where Social Organization is referenced will be replaced with the new field
name <i>Health Systems and Society</i> (track change version of the calendar attached). Additionally, the name change
will be implemented in the HP program handbook and on the HP website.
CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Julia Abelson Email: abelsonj@mcmaster.ca Extension: Date submitted: Nov 1, 2021

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013



## RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

IMPO	RTA	NT: P	PLEASE	REAL	THE F	<u>OLLOW</u>	ING NOTE	S BEFORI	E COMPLETING THIS FORM:	
	1. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.									
	2. An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).									
	3. A representative from the department is <u>required to attend</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.									
DEPARTME	NT	1	Health P	olicy (	Interdis	ciplinary	Program)			
NAME OF PROGRAM and PLAN Health			Health P	olicy						
DEGREE	Ph	D								
Is this char						·	•		APPROPRIATE BOX)	
CREATION (	OF N	IEW M	ILESTOI	NE 🗆						
CHANGE IN ADMISSION REQUIREMENTS					EXAMI	REHENS	SIVE PROCED	URE	CHANGE IN COURSE REQUIREMENTS	
CHANGE IN SECTION IN CALENDAR		GRAI	DUATE	N OF	A	EXPLA	AIN:			
OTHER CHANGES	Х	<b>EXPL</b> Upda		/ailab	le cours	es in Gra	iduate Cale	endar.		

DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:
Existing courses listed in grad calendar.
PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)
Several courses that have not been offered in the past 5 or more years have been removed. Additional, new
courses have been added to ensure students have adequate choices among course requirements.
None of the courses removed or added were/are mandatory.
RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's
program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):
As described above – outdated courses removed and new courses now available have been added to allow for a
wide range of courses for HP students to choose from. No courses (removed or added) are mandatory.
PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic
year)
September 1, 2022
ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND
POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.
PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):
(ploude motade a macked offanger versient of the edicinal section affected in applicable).
A copy of the Grad Calendar is attached using track changes to highlight deleted/added courses.
CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:
Name: Julia Abelson Email: abelsonj@mcmaster.ca Extension: Date submitted: Nov 1,
2021

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013

### Ph.D. Degree

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### Specializations

The program offers three fields of specialization: *Health Economics, Political Studies, and Social Organization*.

**Health Economics** 

The health economics field addresses the economic analysis of health policies and health systems, as well as the economic analysis of responses to health policies. Topics may include, for example, health resource allocation, configuration of health human resources, economic evaluation of policy options, public and private financing of health care, societal investments in health production, etc. The dominant disciplinary perspective is that of microeconomics, but insight into economic behaviour may also be provided by perspectives such as business, psychology, and others.

**Political Studies** 

The political studies field emphasizes the political aspects of health policy including the influences by political institutions, actors, values, and ideas operating within state and global jurisdictions. Topics of interest, for example, may include the role of historical institutional arrangements in shaping health governance reforms, the impact of global trade agreements on domestic home care and pharmaceutical policy, the role of the public, stakeholders, and prevailing values on policy agendas, etc. Political science is the dominant disciplinary perspective, with related areas including,

public policy analysis and administration, comparative public policy, law, political theory and philosophy.

### Social Organization

The social organization field emphasizes the analysis of the social influences that shape the production of health (and illness), the organization of health systems and services, and their associated policies. Topics of interest may include the generation and use of information to inform policy, political economies of health and its production, policies to address the social determinants of health and professional roles and behaviour, etc. Relevant disciplinary perspectives include anthropology, business administration or management, health systems, history, philosophy, political science, psychology and sociology.

### Admission

Admission to the Ph.D. program requires previous graduate training in a relevant field (e.g., social sciences, health professions, policy, business, legal or administrative professions), with at least an A- grade average in past graduate coursework. A Master's degree is preferred. At least one graduate-level statistics half-course should be passed prior to admission. Students without this preparation in statistics may be admitted, but would be required to take a graduate statistics course in addition to normal program requirements. Successful applicants must also meet all School of Graduate Studies admissions requirements. Current admission procedures, forms, and deadlines are available on the Health Policy program

website: https://healthsci.mcmaster.ca/hpphd

**Degree Requirements** 

The Health Policy Ph.D. curriculum has three parts, which will normally be completed over a four-year period: (1) coursework (first and second years); (2) comprehensive examinations (first and second years); (3) the doctoral dissertation, which involves the approval and defense of the proposal for the doctoral research (third year), dissertation research (third and fourth years), and the completion, approval, and defense of the written dissertation (fourth year).

### **Course Requirements**

Coursework is normally completed during the first and second years of full-time study. Between 4-10 half courses are required. Courses are chosen from the list of recommended courses for each curriculum area (listed below). Required coursework includes 2 terms of the Doctoral Seminar in Health Policy, 2-3 specialty field courses, 0-2 breadth field courses outside the student's specialty field, and 0-3 half courses, including both quantitative and qualitative or mixed methods.

Students without prior graduate training in a given area are required to take the maximum number of required courses for that area. Students who have completed some relevant training prior to admission may have relevant course requirements waived at the time of admission to the Health

Policy Ph.D. program. A minimum of 4 half-courses (including the 2 doctoral seminar half-courses) may not be waived and must be completed while the student is enrolled in the Health Policy Ph.D. program. Doctoral seminar 2 terms of: • HLTH POL 711 / Doctoral Seminar in Health Policy Breadth field courses 0-2 half courses, one from each of two fields other than the student's specialty: **Health Economics:** • PUBHLTH/HLTH POL 706 / Introduction to health and public health economics Formatted: Font: (Default) Calibri, 11 pt, Font color: Custom Color(RGB(68,68,68)) HTH RS M 788 / Health Economics HLTH POL 706 / Introduction to health and public health economics Formatted: Indent: Left: 0.5", No bullets or numbering With program permission: • HLTH POL 750 / Special Topics in Health Policy Formatted: Outline numbered + Level: 1 + Numbering Style: Bullet + Aligned at: 0.25" + Tab after: 0.5" + Indent at: 0.5" • HLTH POL 798 / Independent Study in Health Policy **Political Studies:** • HLTH POL/HTH RS M 738 / Health Policy Analysis With program permission: • HLTH POL 750 / Special Topics in Health Policy • HLTH POL 798 / Independent Study in Health Policy Social Organization: • HTH RS M 729 / The Canadian Health Care System in Comparative Perspective • HLTH AGE 703 / Social Systems, Services and Policy: Critical Perspectives HLTH AGE 708 / Health and Aging in a Global and International Context HLTH AGE 709 / Socio-Cultural Aspects of Health and AgingPublic With program permission: • HLTH POL 750 / Special Topics in Health Policy HLTH POL 798 / Independent Study in Health Policy Formatted: No underline, Font color: Custom Color(RGB(68,68,68)), Border: : (No border) HTHRSM 748 / Population & Public Health PHILOS 759 / Topics in Applied Ethics Formatted: Indent: Left: 0.5", No bullets or numbering Specialty field courses

2-3 half courses in 1 of the following 3 fields:

**Health Economics:** 

Required for all Health Economics field students, unless waived:

- HTH RS M 788 / Health Economics
- ECON 727 / Microeconomic Theory for Public Policy

Additional choices:

- HTH RS M 791 / Topics in Advanced Health Economics
- ECON 793 / Health Economic Policy
- HTH RS M 737 / Economic Analysis for the Evaluation of Health Services

With program permission:

- HLTH POL 750 / Special Topics in Health Policy
- HLTH POL 798 / Independent Study in Health Policy

**Political Studies:** 

Required for all Political Studies field students, unless waived:

HLTH POL/HTH RS M 738 / Health Policy Analysis

Additional choices:

- POL SCI 783 / Comparative Public Policy
- POL SCI 785 / Public Sector Management
- POL SCI 740 / Theories of Comparative Politics
- POL SCI 706 / Comparative Politics of Health Policy
- POL SCI/GLOBALST 777 / Global Governance

With program permission:

- HLTH POL 750 / Special Topics in Health Policy
- HLTH POL 798 / Independent Study in Health Policy

Social Organization:

Required for all Social Organization field students, unless waived:

- HTH RS M 729 / The Canadian Health Care System in Comparative Perspective
- HLTH AGE 703 / Social Systems, Services and Policy: Critical Perspectives
- HLTH AGE 708 / Health and Aging in a Global and International Context
- HLTH AGE 709 / Socio-Cultural Aspects of Health and Aging
- HTH RS M 748 / Population and Public Health

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### With program permission:

- HTH RS M 748 / Population and Public Health
- HLTH AGE 715 / Critical Perspectives in Health & Society
- PHILOS 759 / Topics in Applied Ethics
- SOCSCIocSci 701 / Critical Approaches to Community Based Research
- SOCIOL 714 / Political Sociology
- SOCIOL 718 / Sociology of Occupations
- GLOBHTH 708 / Challenges in Global Health Equity
- GLOBHTH 709 / Refugee Health Policies and Practice
- ANTHRO 717 / Readings in the Anthropology of Health
- GLOBALST 701 / Topics in Globalization I: Cultures of Globalization
- GLOBALST 704 / Global Social Policy
- —GLOBALST / ANTHRO 720 / Topics in Political Culture
- HTH RS M 736 / Design Innovation for Health System Challenges
- HLTH POL 750 / Special Topics in Health Policy
- HLTH POL 798 / Independent Study in Health Policy

Methodology courses

0-3 half courses, including both quantitative and qualitative or mixed methods:

Quantitative Methods:

Required for Health Economics specialty field students, unless waived

ECON 761 / Econometrics I

Additional choices for students in all specialty fields:

- ECON 762 / Econometrics II
- ECON 6G03 / Econometrics I,
- ECON 769 / Applied Microeconometrics
- ECON 795 / Analysis of Health Data
- ECON 770 / Use of Secondary Data Analyses to Examine Social Determinants of Health
- HTH RS M 727 / Theory and Practice of Measurement
- HTH RS M 751 / Observational and Analytical Research Methods
- HTH RS M 762 / Approaches to the Evaluation of Health Services
- HTH RS M 723 / Regression Analysis
- HTH RS M 731 / Advanced Linear Models for Health Data
- HTH RS M 740 / Advanced Decision Analysis in Health Technology Assessment (HTA)
- HTH RS M 737 / Economic Analysis for the Evaluation of Health Services
- POL SCI 784 / Quantitative Political and Policy Analysis
- SOCIOL 740 / Statistical Methods for Social Research
- SOCIOL 761 / Topics in Statistical Methods for Social Research

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### With program permission:

- HLTH POL 750 / Special Topics in Health Policy
- HLTH POL 798 / Independent Study in Health Policy

### Qualitative Methods:

- HLTH POL 747 / Qualitative and Conceptual Methods
- HTH RS M 745 / Qualitative Research Methods
- HTH RS M 758 / Qualitative Research Methods for Analysing and Interpreting Data.
- SOCIOL 701 / Special topics in Sociology II
- SOCIOL 743 / Historical Methods
  - SOCIOL 742 / Qualitative Methods
- HTH RS M 705 / Independent Study in Clinical Epidemiology and Health Research Methods
- HLTH POL 747 / Qualitative and Conceptual Methods

With program permission:

- HLTH POL 750 / Special Topics in Health Policy
- HLTH POL 798 / Independent Study in Health Policy

### Mixed Methods:

- HTH RS M 700 / Philosophy of Science for Health Research
- POL SCI 796 / Research Design and Methods
- HTH RS M 770 / Mixed Methods Research Designs for Health Services and Policy Research
- POL SCI 796 / Research Design and Methods
- BUS C780 / Mixed Methods Research HTH RS M-705 / Independent Study in Clinical Epidemiology and Health Research Methods
- HTH RS M 726 / The Science and Practice of Knowledge Translation: Foundations

\_\_\_

### With program permission:

- HLTH POL 750 / Special Topics in Health Policy
- HLTH POL 798 / Independent Study in Health Policy

Comprehensive Examination

Comprehensive examinations are completed during the first and second years of full time study, as the relevant coursework requirements are completed. Students complete three required comprehensive examinations in the following areas:

- Two breadth fields outside the student's specialty area (social organization, political studies, and health economics);
- One chosen specialty area (social organization, political studies, or health economics); and
- Research methods (qualitative and quantitative empirical approaches).

**Doctoral Dissertation** 

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All Health Policy Ph.D. students are required to research, write, and successfully defend a doctoral dissertation, which constitutes an original contribution to knowledge in the field of health policy. The dissertation is developed and completed under the guidance of the student's primary supervisor and a dissertation supervision committee consisting of at least two additional faculty members.

- Normally by the beginning of the third year of full time study, the doctoral dissertation proposal is formally presented and defended before a committee;
- The doctoral dissertation research is normally completed during the third and fourth years
  of full time study, with the completion, approval, and defense of the written dissertation
  by the end of the fourth year.

### Supervision

Each student will be assigned a provisional faculty supervisor upon admission to the program. A final faculty supervisor and a three member supervisory committee will be appointed within 6 months of the student's enrollment in the program. At least two (of three) supervisory committee members must be core faculty members of the Health Policy Ph.D. Program. The faculty supervisor and supervisory committee provide guidance and monitor the student's progress. The supervisory committee is expected to meet with the student twice annually to assess the student's progress and to file a written progress report with the Program.

### Additional Regulations

Students and prospective applicants should consult the Graduate Calendar for a complete description of regulations concerning the Ph.D. degree and graduate studies at McMaster University.



## RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

IMPO	RTA	NT: PLEASE	REAL	D THE FO	<u>OLLOWING NOTES BE</u>	FORE	E COMPLETING THIS FORM:		
	1. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.								
				•	in MS WORD <u><b>not</b></u> PDF) @mcmaster.ca).	) shou	ld be emailed to the Assistant		
	3. A representative from the department is <u>required to attend</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.								
DEPARTME	NT	Health I	Resear	ch Metho	odology				
NAME OF PROGRAM and PLAN Health Research				ch Metho	odology – HRM PhD Pro	ogram	(GHSPH, HRMTHPHD)		
DEGREE			PhD						
Is this char					ATION <i>(PLEASE CHE</i> w? □ Yes ⊠ No	ECK A	APPROPRIATE BOX)		
CREATION (	OF N	IEW MILESTO	NE 🗆						
CHANGE IN ADMISSION REQUIREMENTS				EXAMII	GE IN REHENSIVE NATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS		
		DESCRIPTICE GRADUATE		A	EXPLAIN:				
OTHER CHANGES	Х	EXPLAIN:	of 'Pos	sible Add	ditional Make-up Course	s' for l	HRM PhD Courses		

### DESCRIBE THE **EXISTING** REQUIREMENT/PROCEDURE:

The HRM PhD possible additional make-up courses depend on the students field of specialization (Refer to the current HRM PhD Degree Requirement Table: <a href="https://healthsci.mcmaster.ca/docs/librariesprovider45/default-document-library/hrm-phd-requirement-table.pdf?sfvrsn=6a3ab3c7\_2">https://healthsci.mcmaster.ca/docs/librariesprovider45/default-document-library/hrm-phd-requirement-table.pdf?sfvrsn=6a3ab3c7\_2</a>). The proposed changes are to ensure that all HRM PhD students complete similar background courses in addition to the minimum 3 required courses for the HRM PhD.

Possible additional make-up courses:

-HRM Classic: 721, 702, 730 or 751

-Clinical Epidemiology: 721, 702, 730 and 751, 743

-Biostatistics: 721

-Health Technology Assessment: 721, 702, 730 or 751, 737, 741

# PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

Possible additional make-up courses:

-HRM Classic: no changes

-Clinical Epidemiology: no changes

-Biostatistics: 721, <u>730 or 751</u>

-Health Technology Assessment: no changes

Refer to attached HRM PhD Degree Requirement Table for more information

# RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

The HRM Program attracts interested students with a wide array of academic backgrounds and this is a strength of the HRM Program. We want to encourage the diversity among academic backgrounds while also ensuring that graduates of the HRM PhD Program have an understanding of the core principles of HRM, including: HRM 721: Fundamentals of Health Research & Evaluation Methods, HRM 702: Introduction to Biostatistics and either HRM 730: Introduction to Research Methods for Randomized Controlled Trials or HRM 751: Observational and Analytical Research Methods. All incoming HRM PhD students who do not have these HRM courses in their previous academic work will meet with Dr. Levine, Assistant Dean – HRM to clarify their academic background and possible additional course requirements. These possible additional make-up courses would be in addition to the minimum three required PhD level courses. Students who believe that they have obtained the required competencies in ways that are not reflected in their previous graduate coursework may,

with the written support of their supervisory committee, request to the Assistant Dean, HRM that the requirement for a make-up course be waived.

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

Sept 1, 2022

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

Biostatistics Field Leader agrees and approves.

PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):

Students who have not taken courses that represent the fundamentals an introduction to health research methods and evaluation (HTH RS M 721 [or its equivalent]) and introduction to quantitative research methods (HTH RS M 730 or HTH RS M 751 [or their equivalents]) and basic biostatistics (HTH RS M 702 [or equivalent]), and theory and practice of measurement (HTH RS M 727 [or its equivalent]) may be required to take these courses in addition to the regular course load. Students should consult Perogram documentatio Administration for the specific requirements for the fields of specialization, along with the procedure for requesting alternative background course requirements.

### CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Mitch Levine Email: <u>levinem@mcmaster.ca</u> Extension: Date

submitted: ——March 2022

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013

# Fields Initiative – PhD Curriculum Requirements

	ı		(20 <u>22</u> + <del>9</del> )								
			FIELDS OFFERED AT THE PhD LEVEL								
	DEGREE REQUIREMENTS <sup>1</sup>	HRM Classic	Clinical Epidemiology	Biostatistics	Health Technology Assessment						
	COURSEWORK										
	Common Courses		no com	mon course							
	Field Specific Courses		Research Ethics (742)	Biostatistical Collaboration (739)	Advanced HTA (740)						
	Elective(s)	3	2	2	2 (Usually PUBHLTH/HRM 706, 743)						
PhD	Possible Additional Make-up Courses <sup>2</sup>	721 702 730 or 751	721 702 730 and 751 743	721 730 or 751	721 702 751 737 741						
	COMPREHENSIVE EXAMINATION	Seminar Independent Study	Seminar Independent Study is appropriate for field								
	THESIS	Thesis		Thesis topic is appropriate for fie	eld						

<sup>1</sup>PhD Level Degree Requirements include:

- Coursework
  - No common course across all fields
  - one mandatory advanced field specific course
  - total number of required courses = 3 (special note: 3 is the minimum number of required courses. A student's PhD supervisory committee may ask the student to take more courses if it is appropriate to the student's learning plan.
- Comprehensive Examination
  - Student must successfully complete the Comprehensive Exam (seminar and Independent Study), where the Independent Study is appropriate for field
- Thesis
  - the thesis must be approved by the supervisor and field leader (must be appropriate topic for the field)

<sup>2</sup>Possible additional make-up courses: It is important to note that for each field, some courses are designated as "additional make-up courses". Those courses reflect core competencies at the MSc level that a student in that field is expected to have before arriving to the PhD. Adjudication is the responsibility of the Assistant Dean -HRM and supervisory committee.



## RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

<b>IMPO</b>	RTANT:	PLEASE	REA	D THE F	OLLOWING NOTES BEF	ORE	<b>COMPLETING THIS FORM:</b>	
	1. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.							
					e in MS WORD <u>not</u> PDF) e@mcmaster.ca).	shou	ld be emailed to the Assistant	
					equired to attend the Fac change in graduate curric		Curriculum and Policy Committee n will be discussed.	
DEPARTME	NT	School	of Reh	nabilitatio	on Science			
NAME OF PROGRAM and PLAN Occupational Th			Therapy	Program - Admissions				
DEGREE	Master	of Science	e (Occ	cupation	al Therapy)			
	NATUR	E OF RE	ECON	MEND	ATION (PLEASE CHE	CK A	APPROPRIATE BOX)	
Is this char	nge a res	sult of a	n IQA	AP revie	ew? □ Yes ⊠ No			
CREATION (	OF NEW	MILESTO	NE 🗆	1				
CHANGE IN REQUIREME		ON	х		GE IN REHENSIVE NATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS	
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR			X	EXPLAIN:  Changes to graduate calendar to reflect the change in admission processes.				
OTHER CHANGES	EXF	PLAIN:						

### DESCRIBE THE **EXISTING** REQUIREMENT/PROCEDURE:

Existing wording in the 2021-2022 Graduate Calendar:

https://academiccalendars.romcmaster.ca/preview\_progFram.php?catoid=45&poid=23533&returnto=9169

# PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

Change submitted on previous GPCC form from November 8, 2021 outlined the switch to the KIRA process. Change submitted on previous GPCC form from January 12, 2022 outlined the change related to the facilitated Black Applicant process. Although the Indigenous applicant process is not new, we have now added it to the Graduate Calendar description.

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

As noted on the previous GPCC forms, we are making these changes to increase opportunities for applicants from under-represented communities and equity-deserving groups. The KIRA process will allow us to engage up to 800 applicants (up from 250 in the current MMI process). Noting the facilitated application process for Indigenous and Black students will also underline our commitment to supporting equity and diversity in our admissions process.

# PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

For the 2022-2023 graduate calendar for the September 2023 admission deadline.

# ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

Changes are consistent with the processes among all SRS programs (PT & SLP).

Submitted on previous GPCC form from November 8, 2021.

# PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):

### Admissions Requirements (Note: Info in blue is the recommended change)

To be eligible for admission to the M.Sc.(OT) program, applicants must have completed a four-year baccalaureate degree or the equivalent number of courses (120 units/credits) and have achieved a minimum grade-point average of "B+" or 77%, or 3.3/4.0 or 9.0/12.0 in their final 60 units of credit. Post-graduate coursework is also considered in this sub-GPA calculation, and calculated on a case-by-case basis.

Applicants may apply during the fourth year of their degree. In this case, the pre-admission sub-GPA for eligibility purposes is calculated using the most recent 60 units of credit towards their degree. If an applicant in this category

is subsequently offered admission to the program, the offer is "conditional" upon successful completion of their four-year degree by June 30 in that year and maintenance of a B+ average in their final 60 units of credit.

Vulnerable Sector Checks are required as a condition of continued registration with a FHS Health Professional Program. An original Vulnerable Sector Check must be submitted on an annual basis and meet the directives of the current FHS Police Records Check Policy approved June 26, 2019. Click <a href="here">here</a> for the full policy.

### **Application Procedure**

Applicants are required to apply via the Ontario Rehabilitation Sciences Programs Application Service (ORPAS) online application service located on their website: <a href="http://www.ouac.on.ca/orpas/">http://www.ouac.on.ca/orpas/</a>. Please review the ORPAS Application Guide for information about the admissions process.

All applicants who meet the minimum sub-GPA criteria (to a maximum of 800 applicants) will be invited to participate in an on-line video-based interview comprised of a series of 'mini interview' questions (which include verbal as well as written response questions). Personal qualities, aptitudes and skills are assessed through these questions. Evaluators are drawn from the faculty and the community, and will be provided with anti-bias and diversity training prior to evaluating applicants.

Once applicants have submitted their online application and paid the \$55 interview fee, the M.Sc. (OT) Program will notify applicants of the link to the on-line video-based interview, provide instructions on how to complete the interview, and give the due date for completion of this component of the application. Please refer to the M.Sc. (OT) program website for more details. Applicants will require an internet connection, a computer/laptop with a functioning webcam, and a microphone to complete the on-line video-based interview.

Professionalism is an important requirement of the McMaster Occupational Therapy Program. Graduates of the program that register with a regulatory college will be expected to demonstrate professional behaviours in practice. In preparation for licensure and in keeping with the standard of excellence required in our program, we expect applicants to the M.Sc. (OT) Program to conduct themselves in a professional manner throughout all phases of the application process. Any and all interactions throughout the admissions process, where applicants are engaged with M.Sc. (OT) Program staff, faculty, students, and/or community volunteers may be taken into consideration in making admissions decisions. Admission may be denied to applicants who, amongst other critical determinants, behave in a manner that is considered unprofessional, regardless of their academic standing or interview performance.

### **Education Equity**

The Faculty of Health Sciences at McMaster University acknowledges the barriers and challenges of students accessing post graduate education programs and opportunities. The M.Sc. (OT) Program has a Facilitated Admissions program for individuals who self-identify as Indigenous, and for individuals who self-identify as Black. These processes were developed to provide equitable access to under-represented students and aligns with the School of Rehabilitation Science (SRS) commitment to the principles of equity, diversity, inclusion and social justice in all that we do, and McMaster University's statement on Building an Inclusive Community with a Shared Purpose.

### **Indigenous Applicants**

Indigenous applicants wishing to apply are encouraged to self-identify when completing an application in ORPAS, and to complete an application with the Facilitated Indigenous Admissions Program (FIAP), to access the Indigenous specific criteria for admissions. See M.Sc. (OT) Program website for details.

### **Black Applicants**

Applicants wishing to apply to this stream must self-identify for the Black Equity stream at the time of the application *and* follow the program-specific application process. See M.Sc. (OT) Program website for details.

Enquiries: 289-659-3787, OT Program Coordinator Email: askOT@mcmaster.ca
Website: https://healthsci.mcmaster.ca/srs-ot

### CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Email: molls@mcmaster.ca Extension: N/A Date submitted: Feb 22, 2022 Name: Sandra Moll

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013



### RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

<u>IMPO</u>	RTANT:	PLEASE	REA	D THE F	OLLOWING NOTES BEI	FORE COMPLETING 1	THIS FORM:
	. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.						
					in MS WORD <u>not</u> PDF) @mcmaster.ca).	should be emailed to the	ne Assistant
					equired to attend the Fac change in graduate curri		
DEPARTMEN	NT	School o	of Reh	abilitatio	n Science		
NAME OF PROGRAM a PLAN	ind	Physioth	nerapy				
DEGREE		Master of Science (Physiotherapy)					
NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)  Is this change a result of an IQAP review? □ Yes ☒ No							
CREATION C	OF NEW	MILESTO	NE 🗵				
CHANGE IN A		ION	x		GE IN REHENSIVE NATION PROCEDURE	CHANGE IN CO REQUIREMENT	
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR			A X	<b>EXPLAIN:</b> If approved, the requested change in admission requirements will impact a section of the calendar.			
OTHER CHANGES	EXF	PLAIN:					

### DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:

- Admission Requirements section: A minimum of one (1) statistics course, at any level, with a grade of at least B+ (77%) or higher.
- 2. Application Procedure section: Online interview fee is currently \$50.00.
- Application Procedure section: Please see attached document for the existing procedure for Education
  Equity.
- 4. **Program Requirements** section: Please see attached document for existing procedure.
- Review of Student Progress section: Essential Competency Profile for Physiotherapists in Canada (www.physiotherapy.ca)
- 6. **Regulation of Practice** section: In Ontario, successful completion of the Physiotherapy Competency Examination is also required.

## PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

Admission Requirements section: Update Academic Calendar to state "A minimum of one (1) statistics
course or research methods in a health-related field, at any level, with a grade of at least B+ (77%) or
higher".

The admission update was approved at the March 2021 GPCC meeting however the update to the calendar was omitted.

- 2. **Application Procedure** section: Update Academic Calendar to state "Once applicants have submitted their online application and paid the \$55 video interview fee...:
- Application Procedure section: The Program has sought guidance from relevant departments/committees regarding the language to be used for the Facilitated Indigenous Admission Program. Additionally, the Program is adding a Facilitated Black Admissions Program. Please see attached document for recommended changes.
- Program Requirements section: Inclusion of a land acknowledgement, and update to the name and link
  to the Competency Profile. Please see attached document for recommended changes.
- Review of Student Progress section: The Essential Competency Profile for Physiotherapists in Canada
  is now called the Competency Profile for Physiotherapists in Canada and the link is
  <a href="https://physiotherapy.ca/essential-competency-profile">https://physiotherapy.ca/essential-competency-profile</a>. Please see attached document for recommended changes.
- Regulation of Practice section: In Ontario, successful completion of the Physiotherapy Competency Examination may also be required.

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

1. To reflect the prerequisite change approved at the March 2021 GPPC meeting.

- On February 14, 2022 the Fees Committee approved the increase of the online interview fee to \$55.00 for the 2023 admissions cycle. The increased fee is to cover the operating cost of the SRS Moneris payment processing fee.
- 3. The language change of the Indigenous Admission Stream section, and inclusion of the Black Admission Stream (approved Jan 12, 2022, at GPCC), is to better align with the University's commitment to equity, diversity, inclusion, and social justice.
- The inclusion of the land acknowledgment is to better align with the University's commitment to equity, diversity, inclusion, and social justice.
- Align the language on the Academic Calendar to the language on the Canadian Physiotherapy Association website.
- 6. Align the language on the Academic Calendar to the language on the Canadian Alliance of Physiotherapy Regulators website.

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

All changes effective as of July 1, 2022 for applicants who are seeking admissions in the Fall of 2023

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

No

PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):

Please see the attached document with tracked changes for a detailed description of the changes to be included in the calendar (changes highlighted in yellow).

### CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Sarah Wojkowski Email: wojkows@mcmaster.ca Extension: 27814

Date submitted: March 3, 2022

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013

# Physiotherapy, M.Sc.

## Admission Requirements

To be eligible for admission to the M.Sc. (PT) Program, applicants will have completed a four-year baccalaureate degree or the equivalent number of courses (120 units/credits), and will have achieved a minimum grade-point average of "B+" or 77% or 3.3/4.0 or 9/12.0 in their final 60 units of credit. Post-graduate coursework is also considered in this GPA calculation. Applicants may apply during the fourth year of their degree. In this case, the pre-admission GPA for eligibility purposes is calculated using the most recent 60 units of credit towards their degree. If an applicant in this category is subsequently offered admission to the Perogram, the offer is "conditional" upon successful completion of their four-year degree by June 30 in Formatted: Highlight that year, and maintenance of a B+ average in their final 60 units of credit.

### Additional requirements include:

- a. A minimum of one (1) human anatomy course, at any level, with a grade of at least B+ (77%) or higher
- b. A minimum of one (1) human physiology course, at any level, with a grade of at least B+ (77%) or higher
- c. A minimum of one (1) statistics course or research methods course in a health-related field, at any **Formatted**: Highlight level, with a grade of at least B+ (77%) or higher
- d. A minimum of one (1) humanities or social sciences course, at any level, with a grade of at least B+ (77%) or higher

Note only subject areas identified by McMaster University's Faculties of Humanities or Social Sciences will be Formatted: Highlight

Please see <u>Program website</u> for more details regarding prerequisites.

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Vulnerable Sector Checks are required as a condition of continued registration with a FHS Health Professional Program. An original Vulnerable Sector Check must be submitted on an annual basis and meet the directives of the current FHS Police Records Check Policy approved June 26, 2019. Click <a href="https://example.com/here-forthe-full-policy">here-forthe-full-policy</a>.

## **Application Procedure**

Applicants are required to apply *via* the ORPAS on-line application service located at the Ontario Rehabilitation Sciences Programs Application Service (ORPAS), Guelph, Ontario website: http://www.ouac.on.ca/orpas/.

### **Applicant On-line Video Interview**

All applicants who meet the required GPA admission requirements and pre-requisite courses requirements

will be invited to participate in an on-line, video-based interview comprised of a series of 'mini interview'

questions. Once applicants have submitted their online application and paid the \$559 video interview fee; Formatted: Highlight

Program will notify applicants of the link to the video interview questions, instructions on how to complete

the interview and the due date for completion of this component of the application. Please refer to the Prof Formatted: Highlight

<mark>website</mark> for more details. Applicants will require an internet connection, a computer/laptop with a functioning

webcam and microphone to complete the on-line, video-based interview.

### Education Equity: Indigenous Applicants:

ach year, up to six(6) Year 1 positions will be designated for Indigenous (First Nations, Inuit or Métis)

pplicants. Applicants should identify their Indigenous nation/citizenship when completing the ORPAS

<del>oplication.</del>

adigenous applicants will be required to meet the admissions requirements and will be required to provide

oof of Indigenous nation/citizenship - see website for more details.

rdigenous applicants who have concerns about the technology requirements of the application protess Formatted: Space Before: 0 pt, After: 0 pt

nould contact the PT Program Coordinator.

<del>nquiries: 905 525-9140 Ext. 27859, PT Program Coordinator</del>

ax: 905 524 0069

mail: askPT@mcmaster.ca

<sup>l</sup>ebsite: http://srs-mcmaster.ca

raduates with a strong research bias may be eligible to proceed to thesis-based graduate programs should

ney wish to do so in the future.

he Faculty of Health Sciences at McMaster University acknowledges the barriers and challenges for

Formatted: Highlight digenous students accessing post graduate education programs and opportunities. The MSsc (PT) Program

as a Facilitated Indigenous Admission Program (FIAP) for individuals with Indigenous North American (First

ations, Inuit, or Metis) ancestry.

he Truth and Reconciliation Commission of Canada in (2015) called on all levels of government to:

Increase the number of Aboriginal Professionals working in the Health Care Field

Ensure the retention of Aboriginal Health-Care providers in Aboriginal Communities

Provide cultural competency training for all health-care professional.

hese principles guide the MSc (PT) Program in working towards an environment for all students, patients

nd educators to create focused learning opportunities of cultural awareness and humility.

eference: Truth and Reconciliation Commission of Canada, United Nations., National Centre for Truth and Reconciliation, Truth a Formatted: Highlight

conciliation Commission of Canada., Truth and Reconciliation Commission of Canada., & United Nations. (2015). Truth &

conciliation: Calls to action.

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pplicants wishing to apply through FIAP must complete the self-identification application and follow the ogram-specific application process (i.e. application through ORPAS, where Indigenous identification is	
ogram-specific application process (i.e. application through OKFAS, where malgenous identification is eclared).	
<u>Cial Cuj.</u>	
etails about FIAP are available on the website: https://ihll.mcmaster.ca/students/future-students/facilitated	Formatted: Highlight
missions-self-identification/	Formatted: Hyperlink, Font: Font color: Auto, Pattern: Clear Highlight
ne deadline for application through FIAP is the same as the application to the Program.	Formatted: Highlight
pport for individuals applying to FIAP is available through the Indigenous Health Learning Lodge:	
isapc@mcmaster.ca	Field Code Changed
ack Applicants:	Formatted: Hyperlink, Font: (Default) +Body (Calibri), 11 Font color: Auto, Highlight
ACT 19 DICUITO	Formatted: Highlight
ne Faculty of Health Sciences at McMaster University acknowledges the barriers and challenges of Black	Formatted: Highlight
udents accessing post graduate education programs and opportunities. The MSc(PT) Program has a	
cilitated Black Admissions Program for individuals whothat self-identify as Black.	Formatted: Highlight
is process was developed to provide equitable access to Black Canadians and aligns with the McMaster	Formatted: Highlight
e School of Rehabilitation Science's (SRS) commitment to the principles of equity, diversity, inclusion	Formatted: Highlight
cial justice in all that we do, and McMaster University's statement on Building an Inclusive Community	Formatted: Highlight
<u>Shared Purpose.</u>	Formatted: Highlight
nese principles guide the MSc (PT) Program in working towards an environment for all students, patien	Tormatted: Highlight
d educators to create focused learning opportunities of cultural awareness and humility.	Formatted: Highlight
	Formatted: Highlight
ack applicants wishing to apply for the Black Admissions Stream must follow the program-specific	Formatted: Highlight
plication progress (i.e. application through ORPAS) and follow directions posted on the MSc(PT) Progr	Formatted: Highlight
ebsite,	Formatted: Hyperlink, Font: (Default) +Body (Calibri), 11 Font color: Auto, Highlight
	Formatted: Highlight
rogram Requirements	

All students will be required to complete the equivalent of 23 required half-courses and one Program approved elective half-course over the five (5) units of full-time study, across two study years (24 months). All

etween the Crown and the Mississaugas of the Credit First Nation.

also be required to participate in learning experiences at McMaster University and across the City of Hamilton, which is situated upon the traditional territories of the Erie, Neutral, Huron-Wendat, Haudenosaunee and Mississaugas. This land is covered by the Dish With One Spoon Wampum Belt Covenant, which was an agreement between the Haudenosaunee and Anishinaabek to share and care for the resources around the Creat Lakes. We further acknowledge that this land is covered by the Between the Lakes Purchase, 1792.

elective course and a research project. The MSc(PT) Program recognizes and acknowledges that students: Formatted: Highlight

courses are required\*, with the exception of <u>PHYSIOTH 797</u>, <u>PHYSIOTH 798</u> or <u>PHYSIOTH 799</u>, which are differed to students eligible for remediation.

\*Note: The MSc\_(PT) Program offers a dual degree option in collaboration with Rehabilitation Sciences. For program fulfillment requirements for students enrolled in the dual degree option please see the <u>Dual Degree</u> section of the Graduate Calendar.

The University reserves the right to cancel academic privileges of a student at any time should the student's scholastic record or conduct warrant so doing. Serious deficits in matters pertaining to work in clinical settings, research ethics or professionalism when interacting with human or other subjects may result in termination of the work in a clinical placement or research project. Unsatisfactory standing or serious deficits in matters pertaining to professional skills, which include but are not limited to patient safety, professionalism, ethical behavior and technical skills, as described in the Essential Competency Profile for Hhysiotherapists in Canada (https://physiotherapy.ca/essential-competency-profilewww.physiotherapy.ca), may Formatted: Highlight result in a decision to terminate the clinical placement or research project. In most situations termination Formatted: Highlight the clinical placement or research project constitutes a failure and will result in the student receiving a grade of F in the Clinical Education course or the Research and Evidence-Based Practice course, and may result in dismissal from the Perogram. For Health Sciences Graduate programs with clinical courses, all clinical Formatted: Highlight activities associated with such courses must be successfully achieved for attainment of a passing grade in the course. Students will receive a Program Handbook, a Clinical Education Handbook and Unit Handbooks which provide additional information and details regarding procedures, guidelines and requirements. In the event of a discrepancy between these documents and the Graduate Calendar, the Graduate Calendar represents the official policy.

## **Review of Student Progress**

The progress of students in the MSc (PT) Program is overseen by a team of McMaster faculty and registered therapists. Student progress in the program is regularly reviewed by a Program Academic Study Commit Formatted: Highlight (PASC). The PASC's responsibilities include, but are not limited to, determining if a student may proceed to the next unit of study.

The Perogram may, in appropriate circumstances, defer a student's clinical placement or remove a student Formatted: Highlight from a clinical placement if the student, including but not limited to, fails to maintain timely and professional communication with the Perogram, exhibits behaviours that place clients or others at risk, or fails to comp Formatted: Highlight with other Perogram (academic or non-academic) requirements (e.g., obtain and receive clearance for Formatted: Highlight mandatory health screening, mask fit testing, etc.).

Deficits in matters pertaining to work in clinical settings, research ethics or professionalism may result in restrictions or termination of the work in a clinical placement or research project. Unsatisfactory standing or deficits in matters pertaining to professional skills, which include but are not limited to patient safety, professional and ethical behavior, and knowledge and skills, as described in the Essential Competency Profile for Physiotherapists in Canada (https://physiotherapy.ca/essential-competency-profile). (www.physiotherapy.ca), may result in a decision to terminate the clinical placement or research project. In most situations termination

grade of F in the Clinical Education course or the Research and Evidence-Based Physiotherapy Practice course, and may result in dismissal from the Per ogram.  Formatted: Highlight
The may result in all most in the Estograms
Accreditation
The M.Sc. (PT) Program is accredited by Physiotherapy Education Accreditation Canada (PEAC).
Regulation of Practice
All physiotherapists in Canada must be registered with the appropriate provincial regulatory body in order Formatted: Highlight
practice in that province. Each regulatory body has a separate and distinct registration process; however, in
all circumstances, a degree in physiotherapy is required. In Ontario, successful completion of the

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## RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

IMPO	RTANT:	PLEASE	READ	THE F	<u>OLLOWING NOTES BEF</u>	FORE COMPLETING THIS FORM:	
	1. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.						
			•		e in MS WORD <u>not</u> PDF) @mcmaster.ca).	should be emailed to the Assistant	
					equired to attend the Fac change in graduate curri	culty Curriculum and Policy Committee culum will be discussed.	
DEPARTME	NT	Del	partmer	nt of Ps	ychiatry and Behavioural	Neurosciences	
NAME OF PROGRAM and PLAN  MSc in Psychotherapy							
DEGREE		MSc					
Is this char					ATION <i>(PLEASE CHE</i> w? □ Yes ⊠ No	CK APPROPRIATE BOX)	
CREATION (	OF NEW	MILESTO	NE 🗆				
CHANGE IN ADMISSION REQUIREMENTS			СОМР	CHANGE IN CHANGE IN COURSE REQUIREMENTS			
CHANGE IN	THE DES	CRIPTIO	N OF A		EXPLAIN:		
SECTION IN THE GRADUATE CALENDAR			X	Minor edits to the wording	ng of the calendar description.		
OTHER		PLAIN:					

DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:
DROVIDE A DETAIL ED DECORDETION OF THE DECOMMENDED CHANCE (Attack additional masses if annotation
PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)
13 Hot Sumolena)
We are making minor edits to the calendar description. These edits include:
4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Addition of the IELTS as an option for the test of English proficiency      Change to the page of detailed in the application. Provide the applicants what
<ol><li>Change to the personal statement description required for the application. Previously applicants wrote about their interest in the program and past experiences, but moving forward will provide students with</li></ol>
questions to answer in the statement to better facilitate the application process.
3. Course requirements – formatting of this section to omit the specific term when courses are run, but
rather to indicate first versus second year courses, as the term that the course is offered may differ
across years.
RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's
program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):
Now having gone through three admission cycles, these changes are based on reflection of how we can improve
our admission process.
PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic
year)
, your,
2022-2023 academic year
ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND
POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.
no
PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR
(please include a tracked changes version of the calendar section affected if applicable):
Discount of the bod decomposity with the tracked shown as of the shown stated shown as to be used to the
Please see attached document with the tracked changes of the above noted changes to be made to the calendar description for the MSc Psychotherapy Program.
acsomption for the inicial sychotherapy i rogiani.

CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:								
Name: Elizabeth Pawluk 24, 2022	Email: pawluke@mcmaster.ca	Extension:	Date submitted: Feb					

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013

### Academic Calendar - Psychotherapy, MSc

Version: V1 (13Jan2020)

### **Program Description**

The Psychotherapy Program is a full-time, course-based professional program. The program spans over 5 terms. Courses cover introduction to advanced topics in mental health and evidence-based psychotherapy, with a specific focus on Cognitive Behavioural Therapy. During the 5-term program, students will complete 9 classroom-based courses and 2 clinical practicums.

### **Admission Requirements**

The admissions criteria include:

- a. Honours Bachelor's degree in Psychology, Social Sciences or Health Sciences from a recognized university with at least a B+ average (equivalent to a McMaster 8.5 GPA out of 12) in the final year courses in the related discipline of study. This requirement is consistent with the School of Graduate Studies' admissions requirements.
- b. For applicants whose first language is not English and who did not attend an English-speaking University for their undergraduate degree, a test of English language proficiency is required. Minimal scores on the Test of English as a Foreign Language (TOEFL): written score (600) or computer (250), or internet-based test (iBT = 92; reading = 22, speaking = 24, listening = 24 and writing = 22). Minimum scores on the 3-IELTS is 7.0.
- c. Applicants will also be asked to submit the following documents with their application:
  - i. A current Curriculum Vitae (include education, work, and volunteer experiences)-
  - ii. A personal statement (maximum 750 words) that includes answers the questions listed in the admission checklist on the program website. identifies reasons for wishing to join the program and relevant work or volunteer experiences that will contribute to their success in the program.
  - iii. Two letters of reference: At least one from academic referee (i.e., professors or research supervisors). One letter may be from a professional referee (i.e., employer who can provide a professional reference).
  - iv. Official transcript(s) of academic work completed to date at all post-secondary institutions attended, sent directly from the issuing institution(s). Non-English transcripts must be translated and notarized. Applicants may apply during the fourth year of their degree. In such cases, the pre-admission GPA for eligibility purposes is calculated using the most recent 10 courses towards their degree. Should an applicant in this category be offered admission to the program, the offer is "conditional" upon successful completion of their four-year degree by June 30 in that year, and maintenance of a B+ average in their final year of study.

Additional Requirements:

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### Academic Calendar - Psychotherapy, MSc

Version: V1 (13Jan2020)

### <u>Admissions Procedure</u>

Interview. The admissions committee will review every application to the program to ensure that prospective students have the necessary academic background, proficiency in English, and relevant experience to enroll in the Psychotherapy Program. Those students who are short-listed based on this review will be offered an interview. Interviews will be conducted in person or onlineover the telephone.

Admission selections will be based on academic achievement as well as personal qualities and experiences that are evaluated during the Admissions Interview.

The program has a limited number of available spots for students each year, therefore meeting the minimum requirements does not guarantee entry into the program.

### **Course Requirements**

Students are required to complete 11 courses, which include <a href="mailto:seven7">seven7</a> mandatory courses, <a href="mailto:two2">two2</a> elective courses and two <a href="mailto:clinical">clinical</a> practicum courses. All courses are half-courses (3 units) with the exception of the Applied Psychotherapy Skills Course (6 units) and the Practicum II Course (6 units), which span over two terms. Students must achieve at least a B- standing in all mandatory and elective courses and pass the <a href="mailto:two2">two2</a> clinical practicum to complete the program.

<u>Year 1</u>All classroom-based courses are offered in person and will be primarily held at St. Joseph's Healthcare Hamilton, West 5<sup>th</sup> Campus.

### First Year Fall Term Mandatory Courses:

- Principles of Evidence-Based Psychotherapy
- Introduction to Mental Health and Wellness
- Assessment and Case Formulation

### First Year Winter Term Mandatory Courses:

- Cognitive Behavioural Therapy
- Ethical Standards and Professional Practice

### First Year Summer Term Mandatory Course:

■ Practicum I

### Year 2 Second Year Fall Term Mandatory Courses:

- Clinical Research Methods Introduction to Psychotherapy Research
- Applied Psychotherapy Skills (a)
- -- Practicum II (a)

### Academic Calendar - Psychotherapy, MSc

Version: V1 (13Jan2020)

Second Year Winter Term Mandatory Courses:

- Applied Psychotherapy Skills (b)
- Practicum II (b)

2

### **Elective Courses**

Students are required to complete <u>two2</u> elective courses. Elective courses can be completed during any term. The elective courses will be offered on a rotating basis and therefore, not all elective courses will be offered each year. Elective courses will be scheduled <u>+a</u> year in advance.

### **Clinical Practicum**

Practicum will be conducted in various locations including community hospitals, community-based counselling centres, university wellness centres, family health teams, and private practices. Practicum may occur outside of Hamilton. Students are responsible for their own transportation and all associated costs in order to meet this program requirement. The program may defer a student's clinical practicum under special circumstances (e.g., the student has not met academic requirements).

Students will receive a mid-point and final evaluation from their supervisor that will inform whether all clinical activities associated with the placement were successfully achieved for attainment of a passing grade in the course. Students will also be required to submit an integration paper relevant to their clinical experience while on practicum (e.g., case study, literature review). Unsatisfactory evaluations or poor professional conduct when interacting with patients/clients, staff and supervisors while on practicum may result in the termination of the practicum. If a practicum is terminated, in most situations this will result in the student receiving a failing grade for the practicum and subsequently lead to a dismissal from the program. Additional detail is included in the Program Handbook (Graduate Calendar represents the official policy).

### **Required Online Modules**

Online modules must also be completed by all graduate students in the first month of study.

- SGS 101/Academic Research Integrity and Ethics
- SGS201/Accessibility for Ontarians with Disabilities Act (AODA)

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School of Graduate Studies 1280 Main Street West Phone 905.525.9140 Hamilton, Ontario, Canada Ext. 23679 L8S 4L8 http://graduate.mcmaster.ca

To **Graduate Council** 

From: Christina Bryce

**Assistant Graduate Secretary** 

Via e-ballot on February 8th and 15th Faculty of Humanities Graduate Curriculum and Policy Committee approved the following graduate curriculum recommendations.

Please note that these recommendations were approved by the Faculty of Humanities.

### For Approval of Graduate Council:

- Cognitive Science of Language
  - Change to Course Requirements
- **Gender and Social Justice** 
  - Change to Calendar Copy

### **For Information of Graduate Council:**

- **English and Cultural Studies** 
  - **New Course** 
    - 717 Global Sex



### RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING DEGREE PROGRAM REQUIREMENTS / PROCEDURES / MILESTONES

IMPORT	ANT: PLEASI	E READ THE FO	<u>OLLOWING NOTES BE</u>	FORE COMPLETING THIS FORM:				
	1. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.							
2. An electronic Secretary, School				should be emailed to the Assistant				
	3. A representative from the department is <u>required to attend</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.							
DEPARTMENT	Linguist	ics and Langua	ges					
NAME OF PROGRAM and PLAN Cognitive Science of Language graduate program								
DEGREE		MSc/PhD						
N/	ATURE OF R	ECOMMENDA	ATION (PLEASE CHE	CK APPROPRIATE BOX)				
Is this change	a result of a	n IQAP reviev	w? □ Yes ⊠ No					
CREATION OF	NEW MILESTO	ONE 🗆						
CHANGE IN ADMISSION REQUIREMENTS		CHANG COMPR EXAMIN PROCEI	EHENSIVE IATION	CHANGE IN COURSE REQUIREMENTS	X			
	CHANGE IN THE DESCRIPTION OF A  SECTION IN THE GRADUATE CALENDAR  EXPLAIN:							
OTHER CHANGES	EXPLAIN:							

### DESCRIBE THE **EXISTING** REQUIREMENT/PROCEDURE:

- 1. The existing **required courses for the MSc** program are as follows:
  - COGSCIL 721 / Fundamentals of the Cognitive Neuroscience of Language and
  - COGSCIL 722 / Contemporary Issues in the Cognitive Neuroscience of Language
  - COGSCIL 730 / Language Analysis Methods: Phonology and Morphology or
  - COGSCIL 731 / Language Analysis Methods: Syntax and Semantics
  - plus one half course approved by the student's supervisory committee

# PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

1. The current set of required courses for the MSc program consists of COGSCL 721, 722 and one of the following (COGSCIL 730 and 731), plus one half course approved by the student's supervisory committee. We recommend to change such that students are required to take any three out of the four courses (COGSCIL 721, 722, 730, and 731), plus one half course approved by the student's supervisory committee. The remainder of the MSc degree requirements is unchanged.

No changes are required to the PhD program requirements.

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

The recommended change in required courses reflects the recent hires in the department (Drs Biggs, Repiso-Puigdelliura) available to teach graduate courses in syntax and phonology, as well as a recent retirement of faculty (Dr Connolly) who taught neuroscience courses. The change enables the graduate program to fine-tune its offerings to the strengths and interests of graduate students coming from different educational backgrounds (notably, linguistics and psychology) and realign the offerings with the current strengths in research and graduate teaching.

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

Sep 1, 2022

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.  No.	
PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED (please include a tracked changes version of the calendar section affected if appl	
See attached files (Recommendation tracked changes.docx)	
CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:	
Name: Victor Kuperman Email: vickup@mcmaster.ca Extension: 289-2440563 01-28	Date submitted: 2022-

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013

**Calendar Change** 

MSc in the Cognitive Science of Language

Coursework

4 half courses plus one pass/fail modules

**Required Courses:** 

Students are required to take 3 of the following four courses:

- COGSCIL 721 / Fundamentals of the Cognitive Neuroscience of Language and
- <u>COGSCIL 722 / Contemporary Issues in the Cognitive Neuroscience of Language</u>
- COGSCIL 730 / Language Analysis Methods: Phonology and Morphology
- COGSCIL 731 / Language Analysis Methods: Syntax and Semantics
- COGSCIL /31 / Language Analysis Methods: Syntax and Semantics

plus one half additional courses approved by the student's supervisory committee to total of four half courses.

**Additional Requirements** 

(this is a Pass/Fail course):

• COGSCIL 725 / The Cognitive Science of Language Master's Lecture Series

M.Sc. Thesis.

The M.Sc. Thesis is a work of original research (empirical or theoretical) under the supervision of a participating faculty member and evaluated by a thesis committee established by the department. The thesis must be submitted by August of the second year of the M.Sc. program.

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IMPO	<u> RTANT:</u>	PLEASE	REAL	D THE FO	OLLOWING NOTE	S BEFORI	E COMPLETING THIS FORM:		
1. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.									
	2. An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).								
3. A representative from the department is <u>required to attend</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.									
DEPARTME	NT	Gender a	and So	ocial Jus	tice				
NAME OF PROGRAM & PLAN	and	Graduate Diploma (PhD) in Gender and Social Justice							
DEGREE		GDip							
NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)  Is this change a result of an IQAP review? □ Yes ☒ No									
CREATION (	OF NEW	MILESTO	NE 🗵						
CHANGE IN ADMISSION REQUIREMENTS				CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE		URE	CHANGE IN COURSE REQUIREMENTS		
CHANGE IN SECTION IN CALENDAR	THE GR	ADUATE	N OF	A	EXPLAIN:				
OTHER CHANGES	EXI	PLAIN:							

#### DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:

The current calendar description describes the requirement quite broadly: "participation in the Program's Research Symposium, including **regular attendance** at symposium events..." No details are currently provided as to what constitutes regular attendance.

# PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

The program proposes to make the participation requirement specific: "Attending at least two symposium events per year"

# RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

Attendance of diploma students at symposium events has been irregular. Without a specific requirement, there is no fair way to assess students' completion of this requirement. A specific attendance requirement makes this milestone realistically attainable, and makes it possible for the program to assess completion fairly and unambiguously.

# PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

1 Sept 2022

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

# PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):

Program requirements for the Graduate Diploma (Ph.D.), in addition to those of the student's home department, are:

- one compulsory core course (<u>GENDR ST 700 / Theorizing Gender and Social Justice</u>) (3 units) (also required for Master's students)
- one additional elective course in gender and social justice (3 units) (from an approved list).
- participation in the Program's Research Symposium, including
  - attending at least two symposium events per year. regular attendance at symposium events.
     Important Note: The symposium is a key way in which we attempt to create an intellectual community in a program in which students come from many different disciplines. Students who anticipate missing more than one symposium event per year must contact the Director of the Program to discuss their particular circumstances.
  - o an oral presentation based on the doctoral student's own research; and
- a doctoral thesis on a topic related to Gender and Social Justice.

CONTACT INFORMATION FOR THE RECOMMENDED CHA	ANGE:	
Name: Catherine Anderson Email: gsj_dir@mcmaster.ca 2022	Extension:	Date submitted: 31 Jan

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013



DESCRIPTION

#### SCHOOL OF GRADUATE STUDIES

# RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING COURSES

<u>IMP</u>	ORTANT:	PLEA	SE READ THE FO	OLLOWING	NOTES BEFORE COMPLETI	NG THIS FORM:				
1. This form must be completed for ALL course changes. Sections of this form pertaining to your requested change must be completed.										
2. An electronic version of this form (must be MS WORD not PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).										
•		•		•	to attend the Faculty Curricuduate curriculum will be discu	•	tee			
DEPARTMENT		English	n & Cultural Studie	es						
COURSE TITLE		Global	Sex							
COURSE NUMBER	English/		COURSE CREDIT							
COOKSE NOMBER	717	6	Unit Course (	)	3 Unit Course (X)	1.5 Unit Course ( )				
REQUISITE(S)		,				•				
(Pre/Co/Anti or program enrollment requirement)										
NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)  Is this change a result of an IQAP review? □ Yes ☒ No										
	TO BE <b>O</b> FF		OR <u>NEW</u> COURSES	WAS TH	E PROPOSED COURSE OFFERED O	n Dean's Approval?				
WILL THE COURSE BE C	ROSS-LISTE	ED (COM	BINED SECTIONS) W	ITH ANOTHE	R DEPARTMENT? IF YES, PLE	EASE NOTE WHICH DEPARTME	NT:			
ATTACH TO THIS FORM ANY RELEVANT CORRESPONDENCE WITH THE OTHER DEPARTMENT(S). NOTE: CROSS-LISTING OF COURSES REQUIRES WRITTEN APPROVAL FROM EACH DEPARTMENT AND FACULTY CONCERNED. IF YOU WOULD LIKE TO REMOVE A CROSS-LISTING YOU MUST INCLUDE A WRITTEN EXPLANATION AGREED UPON BY BOTH DEPARTMENTS AFFECTED.  CROSS-LISTED WITHIN THE DEPARTMENT OF ENGLISH & CULTURAL STUDIES										
			DE THE NEW COU							
CHANGE IN COURSE TITLE										
CHANGE IN COURSE			600-LEVEI	L COURSE	(Undergraduate course for gi	raduate credit) Please				

see #4 on page 2 of this form

COURSE		Provide the Reason for Course Cancellation:  Please note: cross-listed (combined sections) courses can only be cancelled by the department who owns the course.
OTHER CHANGES	Х	EXPLAIN: This course was previously offered but was deleted from the calendar during Dr. Susan Searls Giroux's term in administration. Dr. Searls Giroux is returning to the department in the fall and would like to be able to offer the course again. We anticipate there will be good demand among our students, and if space permits GSJ students may also enrol as an elective.

BRIEF COURSE DESCRIPTION FOR CALENDAR - Provide a brief description (maximum 6 lines) to be included in the Graduate Calendar.

This course explores the culture of neoliberalism in terms of its specifically gendered dynamics. It will engage three related moments that map the transformation of human relations, moving out from the most intimate of human bonds to the broadly political: (1) the shifting nature of human connectedness-of intimacy, family, community, national unity; (2) the commodification of sexual relations recast as sexual revolution for some, sexual slavery for others; and (3) the emergence of rigidly fundamentalist and patriarchal discourses globally.

CONTENT/RATIONALE - Provide a brief description that explains how the new course or changes to an existing course are related to the program learning objectives, including a list of tentative topics to be covered."

This course explores the culture of privatization—the concentration on and transformation of private life, new divisions of (immaterial) labour, the care of the self, the family, intimacy, hyper-individualism—associated with neoliberal ascendency, specifically in terms of its gendered and sexual dynamics. What exactly is the relationship between the economic privatization of the past several decades and cultural privatization—why this shift, and why now? Ironically, the compulsively personalistic dimension of nearly all aspects of social life is seldom read (outside of the academy) as a dangerous, or even lamentable symptom of the global triumph of late capitalism, or the extension of the repressive apparatuses of a reconfigured state bereft of a commons, but is more often understood as a kind of safe haven or bulwark against these very logics. In other words, the emphasis on the personal, the home, the family, and other small, private, intimate, dimensions of everyday life are seen to offer, as Richard Sennett and others have argued, an antidote to the cold, efficient, and even inhuman logics of the market and its profit motives.

1. STATEMENT OF PURPOSE (How does the course fit into the department's program?)

This course adds to the current English & CSCT offerings in the field of Cultural Studies.

2. EXPECTED ENROLMENT:

15 max

3. DESCRIBE IN DETAIL THE METHOD OF PRESENTATION OF COURSE MATERIAL (i.e., lectures, seminars):

Seminars and Presentations

4. DESCRIBE IN DETAIL THE METHOD OF EVALUATION (percentage breakdown, if possible): (For 600-level course, indicate the Extra Work to be required of graduate students, i.e., exams, essays, etc. Please also note if a lab or tutorial will be included.)

15% Participation

30% Short Papers: 3 papers, 2 p. each

10% Topic Proposal and Bibliography

45% Final Conference-length Paper (12-15 p.)

5.	TO PREVENT OVERL	LAP, IS A COURSE IN THE SAMI	E OR A RELATED AREA	OFFERED IN ANOTHER DEPARTMENT?
	IF YES, PLEASE ATT	ACH TO THIS FORM ANY RELE	VANT CORRESPONDEN	ICE WITH THE OTHER DEPARTMENT(S).
N/A	4			
6.	IF THE COURSE IS IN	NTENDED PRIMARILY FOR STU	DENTS OUTSIDE YOUR	DEPARTMENT, DO YOU HAVE THE
	SUPPORT OF THE D	EPARTMENT/PROGRAM CONC	ERNED?	
N/A	4			
PL	EASE PROVIDE THE C	CONTACT INFORMATION FOR T	HE RECOMMENDED CH	IANGE:
Naı	me: Dr. Amber Dean	Email: deanamb@mcmaster.ca	Extension: 23725	Date submitted: Feb 9, 2022

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca.



School of Graduate Studies 1280 Main Street West Phone 905.525.9140 Hamilton, Ontario, Canada Ext. 23679 L8S 4L8 http://graduate.mcmaster.ca

To **Graduate Council** 

From: Christina Bryce

**Assistant Graduate Secretary** 

At its meeting on November 9th, via e-ballot on February 8th and at it's meeting on March 15th the Faculty of Science Graduate Curriculum, Policy Admissions and Study Committee approved the following graduate curriculum recommendations.

Please note that these recommendations were approved by the Faculty of Science.

#### **For Approval of Graduate Council:**

- Chemical Biology\*
  - Change to Course Requirements
- Chemistry
  - Change to Course Requirements and Calendar Copy
- Kinesiology
  - Change to Comprehensive Exam Procedure

#### For Information of Graduate Council:

- Biology
  - Course Cancellations
    - 717 Advanced Topics in Ecology II
    - 742 Molecular and Metabolomic Responses of Plants to Environmental Perturbations
  - Change to Course Title
    - 716 Advanced Topics in Ecology I
- Chemistry
  - Course Cancellations
    - 6PA3 Molecular Driving Forces
    - **6PC3 Thermal Properties of Materials**
  - **New Courses** 
    - 6D03 Organic Structure and Synthesis
    - 6W03 Natural and Synthetic Materials

#### **Earth and Environmental Sciences**

New Courses

- 716 Community-Engaged Research
- 719 Geoscience Field Studies
- o Change to Course Title and Description
  - 751 Environmental Micropaleontology
- o New Cross-Listed Course
  - 718 Social Hydrology

<sup>\*</sup>Also approved by the Faculty of Health Sciences



IMPC	<u>RTANT:</u>	PLEASE	REAL	THE FC	LLOWING NOTES BEF	ORE	COMPLETING THIS FORM:	
1. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.								
	2. An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).							
3. A representative from the department is <u>required to attend</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.								
DEPARTME	NT	Chemist	ry & Cl	hemical E	Biology / Interdisciplinary			
NAME OF PROGRAM & PLAN	and Chemical Biology							
DEGREE		M.Sc.						
Is this char					TION <i>(PLEASE CHEC</i> v? □ Yes ⊠ No	CK AI	PPROPRIATE BOX)	
CREATION (	OF NEW	MILESTO	NE 🗆					
CHANGE IN REQUIREME	NTS			CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE			CHANGE IN COURSE REQUIREMENTS	
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR				×	EXPLAIN:  Name of graduate collocations	quium	r	
OTHER CHANGES	EXI	PLAIN:						

From current calendar " <u>CHEM BIO 700</u> as a core course, and must also enroll in the <u>CHEM BIO 701</u> colloquium course, which must be completed within 20 months of registration."

PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

In the sentence above CHEM BIO 701 should be replaced by CHEM BIO 701 or 702

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

Chemical biology graduate students have two options to fulfill the graduate colloquium requirement: 1) Present a seminar at our annual colloquium day as part of CHEM BIO 701, which is a pass/fail non-credit course; 2) Present a seminar at our annual colloquium day as part of CHEM BIO 702, which is a three unit course that requires, besides the colloquium seminar, the submission of a written literature review to be graded by the members of the student's supervisory committee. This is also what is explained in the remaining part of the calendar. Therefore it is important to include 702 as well in the Calendar description indicated above.

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

Sept 1 2022

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

no

PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):

In the sentence above CHEM BIO 701 should be replaced by CHEM BIO 701 or 702

#### CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Giuseppe Melacini Email: melacin@mcmaster.ca Extension: 26959

memaster.ca

Date submitted: Nov

22, 2021

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013



IMPC	RTANT:	PLEASE	REAL	THE FO	OLLOWING NOTES BEF	FORE	COMPLETING THIS FORM:	
1. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.								
2. An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).								
3. A representative from the department is <u>required to attend</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.								
DEPARTME	NT	Chemist	try & C	hemical	Biology / Interdisciplinary			
NAME OF PROGRAM & PLAN	and Chemical Biology							
DEGREE		Ph.D.						
NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)  Is this change a result of an IQAP review? □ Yes ☒ No								
CREATION (	OF NEW	MILESTO	NE 🗆					
CHANGE IN REQUIREME		ION		COMPR	CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS	
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR			A ×	EXPLAIN:  Name of graduate cours	se			
OTHER CHANGES	EXI	PLAIN:		•				

DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:						
From surrent colondar "Condidates for the Dh.D. degree must complete the CHEM DIO 701 source if this source						
From current calendar "Candidates for the Ph.D. degree must complete the CHEM BIO 701 course if this course						
was not completed at the M.Sc. level."						
PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space						
is not sufficient.)						
In the sentence above CHEM BIO 701 should be replaced by CHEM BIO 700						
RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's						
program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):						
All chemical biology doctoral students, irrespective of whether they transferred from MSc or they are direct entry,						
have to take the introductory CHEM BIO 700 course. So the typo in the calendar should be corrected from 701 to						
700.						
PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic						
year)						
0. 44,0000						
Sept 1 2022						
ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND						
POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.						
no						
PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR						
(please include a tracked changes version of the calendar section affected if applicable):						
In the sentence above CHEM BIO 701 should be replaced by CHEM BIO 700						
CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:						
Name: Giuseppe Melacini Email: melacin@mcmaster.ca Extension: 26959 Date submitted: Nov						
22, 2021						

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013



IMPO	<u> PRTANT:</u>	PLEASE	READ	THE F	OLLOWING NOTES BE	FORE	E COMPLETING THIS FORM:	
1. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.								
	2. An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).							
3. A representative from the department is <u>required to attend</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.								
DEPARTME	NT	Chemistr	y & Cl	hemical	Biology			
NAME OF PROGRAM and PLAN GSCPH			CHEN	MPHD				
DEGREE	PHD							
Is this char	NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)  Is this change a result of an IQAP review? □ Yes ☒ No							
CREATION (	OF NEW	MILESTO	NE 🗆					
CHANGE IN ADMISSION REQUIREMENTS				CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE			CHANGE IN COURSE REQUIREMENTS	
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR				A X	EXPLAIN:  Adjust PhD coursework	requi	irements.	
OTHER CHANGES	EXF	PLAIN:						

DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:									
Additional coursework is required only for PhD students in the inorganic chemistry subfield.									
PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)									
PhD coursework adjusted so that all students have the same requirements.									
RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):									
The current differentiation of the inorganic subfield causes unnecessary confusion in the communication of our program requirements. As per the language of the calendar, all supervisors/committee can recommend additional									
coursework as needed and this provision adequately addresses the concerns of the inorganic faculty.									
PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)									
September 2022									
ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.									
N/A									
PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):									
See below for the part of the calendar we recommend removing.									
CONTACT INFORMATION FOR THE RECOMMENDED CHANCE.									
CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:									
CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:									
Name: Peter Kruse Email: pkruse@mcmaster.ca Extension: 23480 Date submitted: 19 Feb 2022									

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

## Course Requirements

The minimum course requirement for the Ph.D. degree varies with sub-disciplines as follows:

Analytical, Organic, Physical, and Theoretical Chemistry: There is no course requirement at the Ph.D. level for students who have completed the M.Sc. requirements (listed <a href="here">here</a>). Students with direct entry into the Ph.D. program (without first completing an M.Sc.) must complete a minimum of two prescribed modules within their subdiscipline (See <a href="Service Module List under Chemistry">Service Module List under Chemistry Courses</a>), and must present a departmental research colloquium. However, in all cases, additional courses may be recommended by the supervisory committee.

A student who enters the Ph.D. program in these sub-disciplines with an appropriate M. Sc. degree from another university must complete a minimum of two prescribed modules, or the equivalent, and present a departmental research colloquium (see <a href="here">here</a>). Additional courses may be recommended by the supervisory committee in cases where background is deemed inadequate for the research being undertaken.

Inorganic Chemistry: The minimum course requirement for students in this sub-disciplined is two graduate modules or the equivalent beyond the requirements for the M.Sc. degree. Students with direct entry into the Ph.D. program (without first completing an M.Sc.) must complete a minimum of two prescribed modules within this sub-discipline (see <a href="Service Module List under Chemistry Courses">Service Module List under Chemistry Courses</a>), and must present a departmental research colloquium. However, in all cases, additional courses may be recommended by the supervisory committee.

A student who enters the Ph.D. program in this sub-discipline with an appropriate M.Sc. degree from another university must complete a minimum of two prescribed modules, or the equivalent, and present a departmental research colloquium (see <a href="here">here</a>). Additional courses may be recommended by the supervisory committee in cases where background is deemed inadequate for the research being undertaken.



IMPO	RTANT:	PLEASE F	READ	THE FO	OLLOWING NOTES BE	FORE	E COMPLETING THIS FORM:	
1. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.								
	2. An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).							
3. A representative from the department is <u>required to attend</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.								
DEPARTME	NT	Chemistry	/ & Ch	nemical	Biology			
NAME OF PROGRAM & PLAN	and	Chemistry						
DEGREE		MSc & PhD						
Is this char					ATION <i>(PLEASE CHE</i> w? □ Yes ⊠ No	CK A	APPROPRIATE BOX)	
CREATION (	OF NEW	MILESTON	IE 🗆					
CHANGE IN ADMISSION REQUIREMENTS			I	CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE			CHANGE IN COURSE REQUIREMENTS	
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR				X	EXPLAIN: Update language in the	e cour	se listings to reflect current practice	e
OTHER CHANGES	EXF	PLAIN:						

# DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE: see calendar section "Chemistry Courses"

# PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

Update "Chemistry Courses" section to include three changes:

- 1. List CHEM 700 as a required course for all incoming students
- 2. Update list of 600-level courses to match current 400-level offerings (remove 6PA3 and 6PC3, add 6D03)
- 3. Remove "Service Modules" section (these have not been offered in over 20 years)

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

reflect current departmental course offerings

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

September 2022

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

n/a

# PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):

In the "Chemistry Courses" section of the Calendar, delete the bottom section about Service Modules, since none of them have been offered in at least 2 decades.

Update section on 600-level courses, see attached forms for course changes.

Ahead of the "Prescribed Courses in ..." sections, insert the following section to reference a recently introduced course which has already been approved for inclusion in the calendar and as a program requirement:

Required Course for all New Graduate Students

Chem 700 / Tools for the Chemical Profession

#### CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Peter Kruse Email: pkruse@mcmaster.ca Extension: 23480 Date submitted: 19 Oct 2021

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca
SGS/2013
See below for tracked changes version of the Calendar:

# **Chemistry Courses**

Return to: Calendar Search

The Department of Chemistry and Chemical Biology offers graduate courses in the form of "modules," whi equivalent of one-quarter of a full graduate course. 600-level half courses are also available for credit, to a half course (equivalent to one module credit).

Modules marked with a plus sign (+) may be taken more than once for credit, as long as the content is different the course is taken. Brief descriptions of all graduate modules are available on the departmental website (http://www.chemistry.mcmaster.ca/graduate). Not all graduate courses are offered in a given year-pleas website for current courses. Student are free to include EDUCATION 750 (Principles and Practice of University in their program, but this cannot be counted towards their course requirements for the degree.

Required Course for all New Graduate Students

Chem 700 / Tools for the Chemical Profession

## Prescribed Courses in Analytical Chemistry

CHEM 708 / Analytical Separation Science

CHEM 711 / Chemometrics

CHEM 737 / Mass Spectrometry

CHEM 799 / Special Topics

# Prescribed Courses in Inorganic Chemistry

CHEM 715 / Organometallic Chemistry of the Transition Metals, Lanthanides and Actinides

CHEM 717 / Main Group Chemistry

CHEM 725 / Group Theory

CHEM 727 / Symmetry and Properties of Solids

CHEM 730 / X-Ray Theory

CHEM 736 / X-Ray Structure Determination

CHEM 743 / Inorganic Problems

CHEM 799 / Special Topics

## Prescribed Courses in Organic Chemistry

CHEM 753 / Organic Photochemistry

CHEM 754 / Physical Organic Chemistry

CHEM 758 / Bio-Organic Chemistry

CHEM 760 / Principles of Organic Synthesis

CHEM 762 / Conformational Analysis and Reaction Mechanisms

CHEM 765 / Advanced Polymer Chemistry

CHEM 799 / Special Topics

# Prescribed Courses in Physical Chemistry

CHEM 703 / Numerical Methods and Computational Chemistry

CHEM 725 / Group Theory

CHEM 727 / Symmetry and Properties of Solids

CHEM 749 / Introduction to Biomolecular NMR

CHEM 770 / Molecular Electronic Structure Theory

CHEM 776 / Spectroscopy

CHEM 778 / Solid State Surface Science

CHEM 784 / Physical Chemistry of Materials

CHEM 799 / Special Topics

## Other Available Courses

CHEM 730 / X-Ray Theory

CHEM 736 / X-Ray Structure Determination

CHEM 737 / Mass Spectrometry

CHEM 740 / Basic Theory of 1D & 2D NMR Spectroscopy

CHEM 757 / Applications of Lab-on-a-chip Devices

## 600-Level Courses

CHEM 6IA3 / Physical Methods of Inorganic Structure Determination

CHEM 6IB3 / Bio-Inorganic Chemistry

CHEM 6OA3 / Natural Products

CHEM 6OB3 / Polymers and Organic Materials

CHEM 6IC3 / Solid State Chemistry

CHEM 6II3 / Transition Metal Organometallic Chemistry and Catalysis

CHEM 6PA3 / Molecular Driving Forces

CHEM 6PB3 / Computational Models for Electronic Structure and Chemical Bonding

CHEM 6PC3 / Thermal Properties of Materials

CHEM 6D03 - Organic Structure and Synthesis

## Service Modules

The following modules will be offered as student demand dictates. These are technique-oriented modules formal credit is offered.

Modern Techniques in Handling Air-Sensitive Compounds

Rudimentary Glassblowing

Return to: Calendar Search



IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:							
This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.							
	<ol> <li>An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).</li> </ol>						
	<ol> <li>A representative from the department is <u>required to attend</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.</li> </ol>						
DEPARTMEN	ΝΤ	Kinesiol	ogy				
NAME OF PROGRAM a PLAN	nd	GSC PH	l				
DEGREE	KINESPHD						
NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)  Is this change a result of an IQAP review? □ Yes □ No							
CREATION C	OF NEW I	MILESTO					
REQUIREME	CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE  CHANGE IN CHANGE IN COURSE REQUIREMENTS						
	CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR  EXPLAIN: Change to our Comprehensive Examination Section						
OTHER CHANGES							

#### DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:

Candidates for the Ph.D. degree are expected to complete their comprehensive examination within the first 24 months of the program and in accordance with general regulations outlined by the School of Graduate Studies. However, unless agreed upon by the department's Graduate Management Committee, the comprehensive examination cannot begin until the student has been in the program (full-time) for 2 semesters and has completed all required course work. The examination will be on a topic that is independent of the student's thesis area, and once selected by the candidate and supervisor, must be approved by the supervisory committee. An examination committee will consist of three faculty members who have expertise in three sub-topics related to the main topic area. The comprehensive examination will consist of a written and oral component. The written component will consist of three questions, one from each examiner. The examination will cover material from a selected set of readings provided to the student 8 weeks in advance of the exam date. The written examination will be completed within a single working day in a closed-book format. The student will advance to the oral examination stage within one week of the written exam date. If this time frame cannot be adhered to, petition must be made to the department's Associate Chair, Graduate Program for special allowances. Following the oral examination, examiners will provide a single grade of fail (F), pass (P) for the student's combined written and oral answers to each question. The student will be deemed to have passed the comprehensive examination if he/she obtains a pass (P) on all three questions during the oral examination. Students who are unsuccessful in the examination process will be given a second opportunity according to the Policy and Regulations set out by the School of Graduate Studies.

## PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

In the process of reviewing our comprehensive exam process with faculty and graduate students, we found that our Calendar description was much longer than provided by other units in the Faculty of Science. Reducing the description of how our comprehensive examination process works is more in line with other departments within the Faculty of Science.

The PhD comprehensive written exam will be an 8 hour take home exam delivered and submitted electronically. Submitted materials will be checked for originality by the Associate Chair, Graduate Studies or delegate.

## RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

During the pandemic restrictions we had to resort to a take home examination with the execution of the examination being done electronically via Avenue to Learn. This has proven to be valuable with the overall administration of the examination. We are wanting to continue with this process. It will ensure the students answers are received/processed accordingly.

Reduction in the description of how our comprehensive examination process works to be in line with other departments within the Faculty of Science. As well as the change in delivery of the examination has changed.

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

September 2022

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

No

PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):

Candidates for the Ph.D. degree are expected to must complete their comprehensive examination within the first 24 months of the program, as per and in accordance with general regulations outlined by the School of Graduate Studies. However, unless agreed upon by the department's Graduate Management Committee, the The comprehensive examination cannot begin until the student has been in the program (full-time) for 2 semesters and has completed all required course work, unless agreed upon by the department's Graduate Management Committee. The examination will be on a topic that is independent of the student's thesis area, and once selected by the candidate and supervisor, must be approved by the supervisory committee independent of the students thesis. Once the topic is selected by the candidate and supervisor, it must be approved by the supervisory committee. An examination committee will consist of three faculty members who have expertise in three sub-topics related to the main topic area. The comprehensive examination will consist of a written and oral component. The written component will consist of three questions, one from each examiner. The examination will cover material from a selected set of readings provided to the student 8 weeks in advance of the written exam date. The written examination will be completed within a single working day in a closed-book format. The student will advance to the oral examination stage will be held within one week of the written exam date. If this time frame cannot be adhered to, petition must be made to the department's Associate Chair, Graduate Program for special allowances. Following the oral examination, examiners will provide a single grade of fail (F), pass (P) for the student's combined written and oral answers to each question. The student will be deemed to have passed the comprehensive examination if he/she obtains a pass (P) on all three questions during the oral examination. Students who are unsuccessful in the examination process will be given a second opportunity according to the Policy and Regulations set out by the School of Graduate Studies.

#### CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Peter Keir Email: pjkeir@mcmaster.ca Extension: 23543 Date submitted: 2022/03/04

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013

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School of Graduate Studies 1280 Main Street West Phone 905.525.9140 Hamilton, Ontario, Canada Ext. 23679 L8S 4L8 http://graduate.mcmaster.ca

To **Graduate Council** 

From: Christina Bryce

**Assistant Graduate Secretary** 

At it's meetings on October 14th, December 9th, February 10th and April 7th the Faculty of Social Sciences Graduate Curriculum and Policy Committee approved the following recommendations.

Please note that these recommendations were approved by the Faculty of Social SCience.

#### For Approval of Graduate Council:

- Economics
  - Change to Comprehensive Exam Requirements
  - **Change in Course Requirements**
- Sociology
  - Change to Course Requirements
- **Public Policy** 
  - Addition of Part-time Option

#### **For Information of Graduate Council:**

- **Anthropology** 
  - Course Cancellation
    - 741 Metabolic Disease
  - Change to Course Title and Description
    - 706 Anthropologies of Quantification and Data
  - **New Courses** 
    - 707 Past Perspectives on Health
    - 708 Anthropology of Infectious Disease

#### **Economics**

- Change to Course Description
  - 784 Industrial Organization
- New Course
  - 702 Topics in Economics II

#### **Health Aging and Society**

- o New Course
  - 719 Health Equity: Interdisciplinary Perspectives

#### Sociology

- o New Course
  - 726 Social Psychology of Colonialism and Decolonization
  - 728 Sociology of Immigration

#### • Public Policy

- o Change to Course Title
  - 709 Tech Sector Business Models
- Change to Grading Basis
  - Skill Labs

#### • Political Science

- New Courses
  - 733 Indigenous State Relations
  - 734 Marx and Marxisms

#### Globalization

- o New Cross-listed Course
  - 734 Marx and Marxisms



IMPO	RTA	NT: PLEASE	REA	D THE F	OLLOWING NOTES BEI	ORE	E COMPLETING THIS FORM:	
1. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.								
				•	e in MS WORD <u>not</u> PDF) @mcmaster.ca).	shou	lld be emailed to the Assistant	
					equired to attend the Fac change in graduate curri		Curriculum and Policy Committee n will be discussed.	
DEPARTME	NT	Econon	nics					
NAME OF PROGRAM & PLAN	and	N	1A Eco	nomics				
DEGREE		·			MA in Economi	cs		
Is this char	NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)  Is this change a result of an IQAP review? □ Yes ☒ No							
CREATION (	OF N	EW MILESTO	ONE 🗆	l				
CHANGE IN REQUIREME					GE IN REHENSIVE NATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS	
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR				A x	•		y in the calendar description of cou be updated to reflect current	ırse
OTHER CHANGES		EXPLAIN:						

The current language states: Subject to the approval of the Department, an elective program comprising of a sufficient number of courses, from those listed below, to bring the student's total load to 8 half course equivalents.
PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)
Subject to the approval of the Department, an elective program comprising of four courses, from
those listed below.
RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):
The program actually has 6 required courses and 4 electives. The old language implies that there must be 4 required courses and this is incorrect.
PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic
year)
Start of 2022-23 academic year.
ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.
PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):
,
CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:

Name: Alok Johri Email: johria@mcmaster.ca Extension: 23830Date submitted: 10-4-2021

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013

## McMaster University

## School of Graduate Studies Calendar, 2021-2022

## Economics, M.A.

#### M.A. Degree

Candidates proceeding to the degree M.A. in Economics will follow a program comprising:

#### **Required Courses**

- ECON 721 / Microeconomic Theory I
- ECON 723 / Macroeconomic Theory I
- ♦ ECON 761 / Econometrics I
- ECON 762 / Econometrics II
- \* ECON 701 / Applied Research Workshop for MA in Economics
- ECON 765 / Mathematical Methods

#### **Additional Information**

ECON 761 may be waived if equivalent work has already been completed by the student in undergraduate course work. A student's claim to have completed equivalent work will be tested by examination at the beginning of the academic year.

#### **Electives**

Subject to the approval of the Department, an elective program comprising of four courses, from those listed below.

Subject to the approval of the Department, an elective program comprising of a sufficient number of courses, from those listed below, to bring the student's total load to 8 half course equivalents. The course load may include up to two half courses taken outside of the Department, in each case to be approved by the Department.

Candidates must obtain a grade of at least B- in all courses taken for credit in order to receive the degree.

#### **Work Integrated Learning Stream**

The Work integrated learning (WIL) stream in either the M.A. in Economics, the M.A. in Economic Policy or the PhD in Economics Degree

Students in any graduate program of the Economics Department who have obtained a GPA of B or higher at the time of application and a grade of B+ or higher in ECON 761 OR ECON 6Go3 may apply to be moved from the regular stream of their program to the work integrated learning (WIL) stream associated with their degree program. The number of students who will be accepted into the WIL stream of the relevant program will be small and may change over time. Admission to the stream does not guarantee a placement. Working with information available to the department and through their own efforts and contacts, a WIL stream student will compete for and apply for positions on their own.

1 of 2 5/27/2021, 3:08 PM

Acalog ACMS<sup>TM</sup>: Preview Program

These positions can be held anywhere in the world. To complete the WIL stream, students must work in either one or two placements and successfully complete both ECON 796 and ECON 797. A student who fails to complete both courses will be switched back to the regular stream of the program that they are enrolled in. Both of these courses are for credit and are Pass/Fail. Registration in these courses will be restricted to students who have a placement that has been approved by the Econ 796 or Econ 797 course instructor as appropriate. In addition, PhD students must get permission from their supervisor. PhD students will normally enter the WIL stream having passed all comprehensive examinations as well as the research paper. A placement must include a significant research opportunity. At the completion of four months of a placement, the student must write an academic report discussing the work undertaken in light of their academic studies and must request a letter of evaluation from the mentor(s). These documents must be judged satisfactory by the course instructor to successfully complete either ECON 796 or ECON 797 as appropriate. Successful completion of these courses will be indicated on the student's transcript. In the event that the student does not complete the full term of a placement, the student will drop the course and join the regular stream of their program.

Interested Masters students should normally register for the WIL stream associated with their Masters program (MA or MAEP) at the beginning of term 2 of the first year of their program. Because of the nature of hiring, it is sometimes not known which students will be doing each placement until the month before that placement commences. Students who do not find a position can switch back into the regular stream of their program. Students taking Econ 796 or Econ 797 by working at a placement while still enrolled in other courses are expected to fulfill requirements of these othercourses outside their placement work hours. While registered in either ECON 796 or ECON 797, a student will be considered a full-time student and will pay term tuition.

2 of 2 5/27/2021, 3:08 PM



IMPC	RTA	NT: PLEASE	REAL	THE F	OLLOWING NOTES BEI	FORE	E COMPLETING THIS FORM:	
This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.								
	2. An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).							
-			-		<b>equired to attend</b> the Fac change in graduate curri	-	Curriculum and Policy Committee n will be discussed.	
DEPARTME	NT	Econom	nics					
NAME OF PROGRAM & PLAN	and	PhD in	Econor	nics				
DEGREE		PhD in Economics						
	NA	TURE OF RI	ECOM	MENDA	ATION (PLEASE CHE	CK A	APPROPRIATE BOX)	
Is this char	nge	a result of a	n IQA	P revie	w? □ Yes ⊠ No			
CREATION (	OF N	EW MILESTO	ONE 🗆					
	ANGE IN ADMISSION				E IN EHENSIVE NATION PROCEDURE	х	CHANGE IN COURSE REQUIREMENTS	
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR				A x	_	amin	lives the removal of certain courses nation fields as they are not ogram.	
OTHER CHANGES		EXPLAIN:						

PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.) As part of the IQAP review, the report made the following recommendation.
Please see attachment.
RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):
PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic
year)
September 1, 2022.
ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.
CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:
Name: Alok Johri Email: ecngrdch@mcmaster.ca Extension: 23830 Date submitted: 11/25/2021

Currently the calendar provides an outdated list of courses that are **usually** required to write a comprehensive field exam. The object is to be consistent with current practice so as not to confuse students.

DESCRIBE THE **EXISTING** REQUIREMENT/PROCEDURE:

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies,

cbryce@mcmaster.ca

This is the section about comprehensive exams in the calendar. The proposed changes to courses are shown using strike-out font. Econ 769, a course created recently has been added to the Econometrics comp and two more basic courses removed so as to have symmetry across all fields.

#### Phase 2

The second phase is passing the comprehensive exams in two areas of specialization and writing a research paper. Certain courses, selected at the discretion of the field examination committee, must be completed before attempting these exams. The usual areas of specialization, and typical course requirement for each of them, are given below however additional areas of specialization in which the department has research strength may be allowed with the permission of the graduate chair if they are based on courses offered by the department. Health Economics

• ECON 788 / Health Economics

Two of:

- ECON 791 / Advanced Topics in Health Economics
- ECON 793 / Health Economic Policy
- ECON 795 / Analysis of Health Data

**International Economics** 

- ECON 751 / International Trade, Development and Investment
- <u>ECON 752 / International Finance</u>

**Labour Economics** 

- ECON 785 / Economics of Human Resource Policies
- ECON 781 / Labour Economics I
- ECON 782 / Labour Economics II

**Growth and Monetary Economics** 

- ECON 741 / Monetary Economics
- ECON 742 / Topics in Money and Macroeconomics

**Population Economics** 

- ECON 785 / Economics of Human Resource Policies
- ECON 710 / Population Economics I
- <u>ECON 711 / Population Economics II</u>

**Public Economics** 

- <u>ECON 735 / Economics of Public Sector Policies</u>
- ECON 733 / Topics in Public Economics
- ECON 731 / Public Finance

**Econometrics** 

- ECON 761 / Econometrics I
- ECON 762 / Econometrics II

- ECON 768 / Advanced Econometrics
- ECON 769 / Advanced Microeconometrics



<b>IMPO</b>	RTAN	IT: PLEASE F	READ THE F	OLLOWING NOT	ES BEFORE	COMPLETING THIS FORM:			
1. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.									
	2. An electronic version of this form (must be in MS WORD <u>not</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).								
						Curriculum and Policy Committee n will be discussed.			
DEPARTMEN	NT	Sociolog	у						
NAME OF PROGRAM a PLAN	ınd	Sociolog	Sociology - socispma						
DEGREE	MA	·							
	NAT	URE OF REC	OMMEND	ATION (PLEASE	CHECK A	APPROPRIATE BOX)			
Is this char	ige a	result of an	IQAP revie	ew? □ Yes ⊠ No	0				
CREATION (	OF NE	W MILESTON	E□						
CHANGE IN ADMISSION CHANGE IN ADMISSION REQUIREMENTS CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE CHANGE IN COURSE REQUIREMENTS									
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR									
OTHER CHANGES	Х	<b>EXPLAIN:</b> Designating a	EXPLAIN: Designating a course to be included as part of the stream in social psychology						

#### DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:

#### Coursework with Stream in Social Psychology

A candidate must pass a minimum of eight half courses. Of these, at least one half course must be a course in Sociological Theory and another half course in Sociological Methods. In addition, students must complete two courses relating to social psychology (702, 704, 711, 718, 755, 758). Other than SOCIOL 6Z03, no other 600-level courses are permitted. Students are limited to one supervised research course (SOCIOL 730, 731), or one half course in another department. Students may petition the Department Graduate Committee on a case-by-case basis for greater flexibility. All courses will normally be completed by the end of the summer term.

# PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

New course Sociol 726 to be included within the listing of courses eligible to be included for the stream in social psychology.

Note: the course Sociol 726 can also taken for degree credit for all MA and PhD Sociology students.

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

This change would increase the selection of choices within the popular stream of social psychology.

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

Fall 2022

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):

#### Coursework with Stream in Social Psychology

A candidate must pass a minimum of eight half courses. Of these, at least one half course must be a course in Sociological Theory and another half course in Sociological Methods. In addition, students must complete two courses relating to social psychology (702, 704, 711, 718, 726, 755, 758). Other than SOCIOL 6Z03, no other 600-level courses are permitted. Students are limited to one supervised research course (SOCIOL 730, 731), or one half course in another department. Students may petition the Department Graduate Committee on a case-by-case basis for greater flexibility. All courses will normally be completed by the end of the summer term.

#### CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Marisa Young Email: myoung@mcmaster.ca Extension: 23621 Date submitted: November 23,

2021

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

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IMPO	RTANT:	PLEASE	READ	THE F	OLLOWING NOTES BEI	FORI	E COMPLETING THIS FORM:	
1. This form must be completed for <u>ALL</u> changes involving degree program requirements/procedures. <u>All</u> sections of this form <u>must</u> be completed.								
					in MS WORD <u>not</u> PDF) @mcmaster.ca).	shou	ıld be emailed to the Assistant	
					<b>quired to attend</b> the Fac change in graduate curri		Curriculum and Policy Committee m will be discussed.	
DEPARTME	NT	Faculty	of Socia	al Scien	ces			
NAME OF PROGRAM a PLAN	ınd	Master	of Publi	c Policy	in Digital Society			
DEGREE	MPP							
	NATUE	RE OF RE	COMI	MENDA	ATION (PLEASE CHE	CK A	APPROPRIATE BOX)	
Is this char	Is this change a result of an IQAP review? ☐ Yes ☒ No							
CREATION OF NEW MILESTONE								
CHANGE IN REQUIREME		SION			E IN REHENSIVE NATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS	X
CHANGE IN SECTION IN CALENDAR			ON OF A	A X	EXPLAIN:  We will need to add a d MPP-DS.	escri	iption of the part-time option for the	
OTHER CHANGES	EX	PLAIN:						

Currently the MPP-Ds is delivered as a 12-month full-time continuous degree in a cohort model. Students take a total of 13.5 units/hours of class per week. Each term there are 3 graduate seminars (3 units each) and 3 skills labs (1.5 units each).

# PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE (Attach additional pages if space is not sufficient.)

We are proposed to add a part-time option to the MPP-DS, whereby the 12 month period is extended to 24 months (doubled).

In this scenario, learners would still progress in a cohort model – alternatively taking either 2 graduate seminars and 1 skills lab OR 1 graduate seminar and 2 skills labs the following term over a period of 2 years.

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):

This option allows the program to be more accessible to learners that may be more mature and want to keep a high level of professional engagement to their career while also studying.

PROVIDE IMPLEMENTATION DATE: (Implementation date should be at the beginning of the academic year)

May 2023

ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.

N/A

PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR (please include a tracked changes version of the calendar section affected if applicable):

The <u>current text</u> is as follows:

The Master of Public Policy in Digital Society is a professional graduate degree that combines traditional seminarbased learning formats along with skill development labs in order to establish a set of core competencies at the intersection of public policy and digital technology. We suggest adding a sentence:

The Master of Public Policy in Digital Society is a professional graduate degree that combines traditional seminar-based learning formats along with skill development labs in order to establish a set of core competencies at the intersection of public policy and digital technology. The degree is offered on a full-time (12 months) or part-time (24 months) basis.

#### CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Vass Bednar Email: <a href="mailto:vass.bednar@mcmaster.ca">vass.bednar@mcmaster.ca</a> Extension: 647.801.5856 Date submitted:Feb4,

22

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, cbryce@mcmaster.ca

SGS/2013