



School of Graduate Studies

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To : Members of Graduate Council

From : Christina Bryce
Assistant Secretary & SynApps System Administrator

The next meeting of Graduate Council will be held on **Tuesday, March 25th 2014 at 2:00 pm in GH 111.**

Listed below are the agenda items for discussion.

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

A G E N D A

- I. Minutes of the meeting of January 21st, 2013
- II. Business arising
- III. Report from the Associate Vice-President and Dean of Graduate Studies
- IV. Report from the Graduate Associate Deans
- V. Report from the Assistant Dean, Graduate Student Life and Research Training
- VI. Report from the Associate Registrar and Graduate Secretary
- VII. Professional Code of Conduct for Learners
- VIII. Graduate Examination Policy
- IX. Graduate Calendar Revisions
- X. Report from Faculty of Health Science Graduate Policy and Curriculum Council
- XI. Report from the Faculty of Science Graduate Curriculum, Policy, Admissions and Study Committee
- XII. Thesis Working Group Report / IR Update
- XIII. New Scholarship
- XIV. Other business



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Graduate Council

January 21st – 2:00 pm

GH 111

Present: Dr. A. Sekuler, Ms. S. Baschiera, Ms. A. Thyret-Kidd, Dr. A. Shi, Dr. S. Baker Collins, Ms. E. Tatham, Dr. L. Warren, Ms. M. Callaghan, Dr. D. Novog, Dr. T. Adams, Dr. W. Wiesner, Dr. S. Hanna, Dr. J. McDermid, Dr. A. Holloway, Ms. J. Kim, Dr. M. Rutherford, Ms. B. Basse, Ms. A. Gopaul, Dr. J. Richardson, Ms. V. Lewis, Dr. S. Streeter, Dr. S. Fast, Dr. C. Hayward, Dr. B. Ibhawoh, Mr. P. Self, Dr. B. Milliken

Regrets: Dr. N. Agarwal, Ms. B. Gordon, Dr. V. Ighneski, Dr. M. Heath, Mr. S. Sepehr, Mr. J. Jaskolka, Mr. S. Mulla

I. Minutes of the meeting of December 10th, 2013

The minutes of the meeting of December 10th, 201³ were approved on a motion by Dr. Adams seconded by Dr. Hanna.

II. Business arising

There was no business arising.

III. Report from the Associate Vice-President and Dean of Graduate Studies

Dr. Sekuler reported on the following items:

- The School of Graduate Studies is working across the entire university moving forward on the Productivity Innovation Fund. All of the work has to be complete by the end of March.
- McMaster is in the midst of a busy application period. Numbers are up overall, compared to the same time last year. The number of Masters applications is up but the number of Ph.D. applicants has decreased. McMaster needs to show growth in domestic students.
- The next Best Practices takes place on Thursday and the topic is Mental Health. Important issue as this time is a particularly stressful time of year for students.

IV. Report from the Graduate Associate Deans

Dr. Sekuler reported that Dr. Sheardown has stepped down for the last six months of her term as Associate Dean and that Dr. Sekuler will be acting in her stead. Dr. Ibhawoh reported that the Faculty of Humanities will be holding a social media and academia roundtable. The discussion will be focused on how graduate students can promote their research through social media. Outside experts have been invited to attend. Dr. Hayward reported the subcommittee on mentorship had met. They discussed an alternative to supervisory committee meeting forms that would allow students to receive more constructive feedback. Dr. Milliken reported that programs within the faculty of science can expect to hear about the faculty allocation of OGS money in the near future. Dr. Sekuler added that 40% of total OGS awards have been distributed to faculties to use for

recruitment. If a student receives awards from elsewhere the award will be returned to faculty pool.

V. Report from the Assistant Dean, Graduate Student Life and Research Training

Mr. Peter Self noted that it was Research Week. The library ran a number of events, based on surveys filled out by students at the beginning of the year. Information sessions on the Ph.D. defence process were also held. He also mentioned that his team would be running an information session for students and post docs interested in participating in the second annual 3 Minute Thesis competition. Qualifying heats will be held on February 11th and 12th and the finals will take place on February 13th. The provincial 3 Minutes Thesis finals will be held on April 24th with 17 universities planning to participate. A graduate writing workshop for non-native English speakers will be held on January 29th. The soft launch of the graduate student/post doc space in the library is taking place this week.

VI. Report from the Associate Registrar and Graduate Secretary

Ms. Stephanie Baschiera reported that the Thesis Coordinator had met with almost a hundred Ph.D. candidates to help clarify the defence process. The 2014/2015 IQAP reviews are about to be launched – programs affected will receive an email alerting them. She also reported on the new calendar system that will be put in place for the upcoming Graduate Calendar, to be released at the end of April.

VII. Graduate Student Evaluations

Dr. Hayward explained that the rationale for the study was the idea that evaluation is integral for improvement in higher education. She learned early in her role as associate dean that the supervisor has an important role to play but their performance is rarely evaluated. Through focus groups, graduate students said this had to be fixed and faculty have also noted that regular feedback is important. The goal of the study was to address the feasibility of effective evaluation of supervisors and programs as quality improvement indicators. The evaluation tools used were refined based on feedback. The survey was organized into four sections, demographic data, student evaluation of their graduate program and the program rating tool, student evaluation of faculty and the faculty evaluation tool and then overall comments. The main conclusion was that evaluation tools are valid. The data collected indicated that four was the minimum number of surveys required for a meaningful and anonymous result. In general, supervisors were rated more highly than programs and few supervisors or programs had problematic ratings. While most of the feedback was positive, the weaknesses identified were commonly in some selected domains for supervisors and would likely be able to be addressed by training. Areas of program strengths were areas of weaknesses for other programs.

A council member asked if there was any way to break it out across faculties. Dr. Hayward responded that they could but that they had purposely not done so to ensure anonymity. Another council member asked if the intention was to provide feedback to the instructors and was concerned that the feedback would be readable in such a way that the instructor would know who provided the feedback and that there might be negative consequences for the student. Dr. Hayward

responded that this should be taken into consideration when deciding how often to share survey data over time. A council member suggested that faculty be put in charge of reviewing each other. Dr. Hayward responded that the students in the focus groups felt very strongly that they should be able to give feedback.

VIII. Graduate Examination Policy

Ms. Andrea Thyret-Kidd noted that the policy had come to Graduate Council for information and feedback. The new policy came about because the University Secretariat had a lot of policies on the books that had not been updated for a really long period of time. Undergraduate Council is voting on their policy at the end of January. Graduate examinations are very different and required a separate policy. She noted that instructor responsibilities, student responsibilities and what happened in the event an exam had to be terminated had been clarified and a new section on take home examinations had been added. Andrea noted that it had already been sent to a couple of programs for feedback and asked graduate council members to send any additional feedback along so the revised policy can be voted on at the next Graduate Council meeting.

IX. Interdisciplinary Program – Chemical Biology

Dr. Sekuler report that the memo, from the former acting Dean of Science and AVP of Health Science confirms that it's interdisciplinary and it is an acknowledgement that we're treating it among the class of interdisciplinary programs. In fellowship allocations the coordinating faculty takes responsibility for interdisciplinary programs. Nothing has changed for students.

Dr. Holloway moved and Dr. Hayward seconded "that Graduate Council approve Chemical Biology is as interdisciplinary program."

The motion was **carried**.

X. New Scholarship

Dr. McDermid moved and Dr. Chamberlain seconded "that Graduate Council approve the new scholarship as described in the document."

The motion was **carried**.

XI. Other business

There was no other business.

The meeting was adjourned at 3:11 pm

McMaster University, Faculty of Health Sciences Professional Behaviour Code of Conduct for Learners

Preamble

The Faculty of Health Sciences at McMaster University has identified as its mission statement "*Together, Advancing Health Through Learning and Discovery*". Within a culture of innovation, courage and collaboration, the Faculty of Health Sciences at McMaster will lead by challenging what is, and embracing what could be.

In 2005, the Faculty of Health Sciences adopted a guiding statement of purpose for the Faculty of Health Science, namely, "*In Health Sciences Education Research and Practice we are here to question, to learn, to discover and to communicate*".

As current and future members of the caring professions, health science learners at McMaster shall demonstrate their commitment to the professional behaviours that are outlined in this document. These professional behaviours exemplify the six tenets of the Faculty of Health Sciences guiding vision, namely: inter-professional collaboration, commitment to our communities, accountability/responsibility, excellence, integrity and respect, and optimism. As such, health science learners at McMaster are held to a standard beyond the basic conduct expected of other learners at McMaster University.

All learners at McMaster are required to adhere to the McMaster University "Student Code of Conduct" for non-academic offences (approved April 10, 2013 and effective May 1, 2013). Procedures for handling allegations, complaints or charges are set out in that document. Additionally, breaches of academic integrity including academic dishonesty, cheating and plagiarism are defined in the McMaster University "Academic Integrity Policy" (revised April 10, 2013 and effective July 1, 2013). As with non-academic offences, procedures for handling allegations, complaints or charges are set out in that document.

Scope of the Guideline

All Faculty of Health Science's learners shall demonstrate these professional behaviours in all academic and clinical settings at all times. For the purposes of this Code, Faculty of Health Sciences learners shall be governed by this policy whether they are engaged in purely academic or academic/clinical activities, whether they are engaged in administrative functions associated with their learning, whether they are conducting or assisting in research, and whether the activities be on or off site, in real time or in a virtual reality online. Furthermore, the Faculty of Health Sciences Professional Behaviour Code of Conduct for Learners shall be applicable to all contexts and circumstances in which learners were, or could reasonably be, considered to be representing their educational program in either a real-world or on-line setting.

The 'tenets' articulated in this Guideline do not replace nor limit the legal or ethical standards established by the professional and regulatory bodies, or by any other applicable University standard, policy or procedure.

Should a learner engage in a behaviour or set of behaviours that constitutes a simultaneous violation of both the Master University Student Code of Conduct and the Faculty of Health Sciences Professional Behaviour Code of Conduct for Learners, the breach shall properly be addressed under the former in the first instance; however, the Faculty of Health Sciences reserves the right to proceed secondarily in applying the procedures of the Faculty of Health Sciences Professional Behaviour Code of Conduct for Learners should it reasonably decide it appropriate to do so in the circumstances.

Domains of Professional Behaviour

Guided by the tenets of the Faculty of Health Sciences and a review of the published literature assessing professional behaviour, an Inter-professional Task Force of the Faculty of Health Sciences has identified three priority domains of Professional Behaviour. For each of these domains, explanatory examples are provided; these examples may not be interpreted as defining, describing or limiting the domains themselves, but are held out merely as instructive aids. For further explanation of these domains, learners and faculty are referred to more detailed lists of expected professional behavior published by each of the Health Science Educational Programs.

Domain 1: Professional Responsibility, Integrity and Accountability

Professional responsibility, integrity and accountability will be demonstrated by the learner who fulfills responsibilities reliably and promptly; engages in ethical practice; represents information accurately and accepts responsibility for one's actions; respects confidentiality and student privileges and advocates for the patient/client and profession rather than promoting self-interest.

Domain 2: Self-improvement and Pursuit of Excellence

Self-improvement and the pursuit of excellence will be demonstrated by the learner who recognizes and acknowledges one's own limitations or difficulties; who responds reasonably and responsibly to feedback, is motivated to self-improvement; seeks the means to correct deficiencies or weaknesses; and whom adapts to changing circumstances with the goal of achieving excellence.

Domain 3: Respectful Professional Relationships and Communication

Respectful, professional relationships and communication will be demonstrated by the learner who uses respectful language; recognizes appropriate professional boundaries, is sensitive to the values, attitudes and assumptions of other cultures and how these affect practice; remains open to exploring the personal impact of self on others; listens attentively to the concerns of others; and demonstrates empathy and compassion.

If a Breach Occurs and it is Reported

Academic and Clinical Setting. The Health Science Professional Education Programs currently evaluate professional behaviour of learners in the academic and clinical setting. Breaches of the Faculty of Health Sciences Professional Behaviour Code of Conduct for Learners will be deemed to occur when the student has not met the expected professional behaviours within the three domains as defined by their respective professional programs. Learners are expected to have acquired a strong understanding of the expectations of their respective program.

Outside of the Academic and Clinical Setting. The Faculty of Health Science regards breaches of professional behaviour outside of the academic and clinical environment as a serious academic matter. Such breaches of conduct include behaviours that violate these standards, whether or not a learner **knew or ought to have known** that a breach would occur as a result of their actions, in addition to those behaviours that were breached through the negligence of a learner.

Breaches should be reported in writing to the administrative heads of the relevant program (either the Assistant Dean or their appointed agent under this Code). It is expected that faculty will apply their own professional discretion in determining whether a breach has occurred and importantly, whether the seriousness of the breach requires that it be dealt with by the application of this policy. That is to say, it is accepted that some minor breaches may be better dealt with informally, outside of this policy and at the discretion of the involved faculty. It is further acknowledged however, that while a single 'minor breach' may be dealt with outside of this policy, it is also acknowledged that a series of minor breaches similar in character, time, or context may be considered as a "single" breach and thus must necessarily fall under the jurisdiction of this policy.

In the case of a breach having been reported, the Program Assistant Dean or (or their appointed agent) shall contact both the complainant and the learner separately and confidentially. They will investigate the allegation while providing each party with a fair and equitable opportunity of sharing their perspective of the event or events that had transpired. Where the Program Assistant Dean determines, based on the evidence provided, that a breach has occurred, a Panel appointed by the Assistant Dean to adjudicate this Code shall be convened within thirty (30) calendar days to determine what remediation, remedy or outcome shall be required of the learner.

Once a Panel has been convened and adjudicated a breach, the Panel shall, within fifteen (15) business days, provide a confidential written summary of the breach and its resolution to the Chair of the Professionalism Advisory Group (PAG) for collation and tracking purposes. Such summaries shall have all identifiers removed and shall include information such as but not limited to the facts of the breach, the manner by which the breach was determined and reported, the decision of the Panel and the rationale behind the identified remediation and/or remedy. Should a Panel require additional support or guidance in the determination of (including but not limited to) whether a breach had occurred and/or the determination of a suitable remedy or remediation, the Panel shall consult the Chair of the Professionalism Working Group and refer

the issue to the identified expert working group from PAG for further consideration. In some cases, a Panel may defer to consider an allegation and refer a breach under this Code directly to the PAG expert working group for adjudication. Some indicators for such a direct referral may include a conflict of interest of a Panel member or the perceived seriousness of the breach.

Sanctions

A sanction, where appropriate, shall be administered under this Code to ensure a learner's future compliance or conformity with the Professional Behaviour Code of Conduct for Learners. It is acknowledged that all sanctions shall reflect the faculty's primary commitment to remediation in the first instance.

Consequences for breaching the Faculty of Health Sciences Professional Behaviour Code of Conduct for Learners are at the discretion of the Panel (as above) and may include but not be limited to the sanctions described in the McMaster University "Student Code of Conduct" for non-academic offences (approved April 10, 2013 and effective May 1, 2013)

Appeals

All students who are administered a sanction as a result of a finding of a breach under the Professional Behaviour Code of Conduct for Learners are entitled to a fair and equitable process. Learners who have been found to be in violation of this Code may choose to seek an amendment of the imposed remedy by way of written application within 30 business days from the date of their receipt of the written notification outlining that they have been held to have been in breach of this policy. With written permission from the Program Assistant Dean (approved at his or her own sole discretion), a learner may request informal mediation solely with respect to the remedy itself. Such mediation would only be with respect to the specific sanction imposed, not with respect to whether or not a breach had occurred.

Should mediation not be offered or not sought by the learner prior to a formal Appeal being initiated, then for all learners (aside from postgraduate medical learners), a formal appeal is to be made in accordance with the McMaster Student Appeal Procedures (approved by Senate, March 11, 2009, effective September 1, 2009) and will be governed in accordance with such policy. Postgraduate medical learners shall avail themselves of the appeal process outlined in the document "Postgraduate Medical Education Policy and Procedures for the Evaluation of Postgraduate Student Performance".

Recommended Addition to 2014/2015 Graduate Calendar following approval of Graduate Council

6.2 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://www.mcmaster.ca/policy/student.htm>.

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 at: xxxx

Complete Policy Title:
Graduate Examinations Policy

Policy Number (if applicable):
N/A

Approved by:
Senate

Date of Most Recent Approval:
March 13, 2013 (effective September 1, 2013)

- Supersedes/Amends Policy dated:
- **Keeping Records of Graduate Student Oral Examinations – Policy – last revised date: October 14, 2009**

Responsible Executive:
Associate Vice-President and Dean of
Graduate Studies

Enquiries:
[University Secretariat](#)

DISCLAIMER: If there is a Discrepancy between this electronic policy and the written copy held by the policy owner, the written copy prevails

PREAMBLE

This document is intended to communicate clearly the university's expectations with regard to examinations and mid-terms in graduate course examinations (excluding comprehensive examinations, transfer examinations and thesis defenses) and the responsibilities of both students and instructors.

SECTION A: INSTRUCTOR RESPONSIBILITIES

Except in graduate programs where examinations are scheduled centrally, instructors are responsible for scheduling and invigilating ~~final~~ examinations and communicating the date, location and any relevant details to students.

Instructors should be fair and consistent in how they manage any examination situations, e.g., students arriving late, students who are unable to write an examination at the scheduled time, etc.

Any authorized aids must be indicated on the examination paper and communicated in writing to students in advance of the examination date. If an instructor authorizes the use of a calculator it must be communicated to the students in advance of the examination. The instructor may specify the use of the McMaster Standard Calculator(s). If an instructor permits the use of a different calculator, it is the instructor's responsibility to ensure the calculator does not allow an unfair advantage or disadvantage.

It is the responsibility of the instructor to devise and use checking procedures in the grading of all examinations to ensure that every portion of the examination is marked and the totalling of the marks awarded is correct.

SECTION B: STUDENT RESPONSIBILITIES

As per the Graduate Calendar, full-time students are expected to be on-campus except during times of approved vacation. As such, students must be available for any examinations required for their classes. Any requests for an examination to be re-scheduled should be sent directly to the instructor of the course.

Students who miss an examination for compelling medical or personal reasons should contact the instructor directly as soon as possible. Evidence supporting the reason for missing the examination may be requested by the instructor and/or program. Students may be asked to sign documentation confirming academic integrity.

~~Students with disabilities who~~ require additional aids or other accommodations in their examinations must contact and receive a recommendation regarding appropriate accommodation from Student Accessibility Services (SAS) in advance of the examination. No additional aids or accommodations are allowed other than those confirmed by SAS and the course instructor. ~~A late cancellation or no show fee may be applied to any student who fails to provide at least 24 hour notice of cancellation of final examination accommodation requirements.~~

~~Students who miss an examination for compelling medical or personal reasons should contact the instructor directly as soon as possible.~~

SECTION C: EXAMINATIONS IN PROGRESS

From time to time unforeseen problems arise during examinations such as:

- A fire or other alarm leading to the evacuation of the examination location,
- A power failure, and or
- A number of examination papers being defective.

When such an irregularity occurs, the instructor decides whether or not to terminate the examination(s) and collect the papers. Such decisions are reported to the Department Chair¹.

If the University is unexpectedly closed during an examination period (e.g. inclement weather) the instructor will re-schedule the affected examinations and communicate the new schedule to students.

If academic dishonesty is suspected during an examination the instructor (and/or invigilators) will document and/or stop the behaviour. Note: Students suspected of cheating should not be prevented from finishing the examination. The Office of Academic Integrity will be informed of all suspected cases of academic dishonesty in examinations and will proceed according to the Academic Integrity Policy.

¹ In this document any reference to a Department Chair shall also include the Director of a School or Program.

SECTION D: STUDENT ACCESS TO WRITTEN ~~FINAL~~ EXAMINATIONS (if not returned by Instructor)

A student who wishes to view their written ~~final~~ examination, should contact the instructor. The instructor will either review the examination with the student, allow the student to read the examination under supervised conditions, or provide the student with a photocopy of the graded examination. The responsibility for ensuring students have access to written ~~final~~ examinations rests with the Department Chair.

SECTION E: TAKE-HOME EXAMINATIONS

When a take-home examination is part of the assessment process for a graduate student, acceptable and unacceptable collaboration expectations must be clearly communicated to the students.

The allocated time for students to complete the take-home examination must be reasonable.

SECTION F: NON-WRITTEN EXAMINATIONS

Alternate means of ~~final~~ assessment may be appropriate or necessary, such as oral examinations, assessment of practical or performance skills and clinical performance (e.g., OSCE). Evaluation criteria are determined on the basis of the course objectives. In these ~~final~~ assessments, students must be made aware of the objectives and criteria for evaluation in advance of the assessment. Suitable notes, records, marking sheets, recordings, etc. must be kept intact for at least one year after last use, and remain accessible to the Department Chair for that period.

1. Oral Examinations

When an oral examination is part of the assessment process for a graduate course, an audio or video recording must be made if there are fewer than three examiners.

The examiners are responsible for arranging the recording and for ensuring that the recording is accessible to the Department Chair (or equivalent) for at least one year from the last use of the recording.

2. Practical Skills or Performance Exams

~~Final e~~Examinations can be structured to measure practical skills or performance skills. ~~Students should be informed in advance about the format of the examination and the objectives for evaluation. Evaluation criteria are determined on the basis of course objectives.~~ Practical skills or performance examinations may be recorded or may have multiple observers evaluating the students.

3. Objective Structured Clinical Examinations (OSCE)

An OSCE is an objective evaluation measure used to assess components of clinical competence. Students should be made aware of the objectives for the evaluation in the OSCE, which is structured to sample student performance in a variety of areas relevant to these objectives. Students rotate through a series of timed stations normally each lasting 5-10 minutes. At each station students are asked to perform a specific task (such as taking a patient history, performing a treatment technique, etc.). There are two types of stations. Examiner stations involve the use of a rater who observes and scores a student's performance and may entail interaction with a standardized patient or mannequin. Marker/Written stations, where a student is asked to answer written questions, record findings or interpret patient data, do not require an observer but entail subsequent marking of written responses. ~~Evaluation criteria are determined in advance on the basis of course objectives.~~ A rating form or standardised checklist clearly specifies the evaluation criteria and the scoring system to be used by the examiners.

~~Final~~ OSCE examinations consisting of 8 or more stations can be used toward the final grade in a course. As 8 or more raters (1 per station) are involved in assessing the student's performance, a review of the documentation provided by these raters on the student's performance by an independent faculty member competent in the subject being examined would constitute a fair and adequate review of the student's performance in the case of a student appeal of the mark.

If the final OSCE examination consists of 7 or fewer stations, one of the following must be included when conducting the OSCE examination:

1. A second rater at all examination stations, or
2. Videotaping or audiotaping, depending on the nature of the task being examined of each student at all examiner stations, or
3. Using standardised patients at all examiner stations who are trained to complete a checklist regarding each student's performance.

The standardised marking sheets for each student should be kept intact for a period of 1 year after last use following the end of the academic session in which the evaluation takes place.

~~4. Thesis, Comprehensive Examinations and Supervisory Committee Reports~~

~~Master's and doctoral thesis are excluded from the re-read/re-assessment procedures in the Student Appeals Policy, as are Ph.D. comprehensive examinations and supervisory committee reports. Accordingly, recording is not required in these instances.~~

SECTION G: RETENTION OF EXAMINATION PAPERS AND OTHER GRADED MATERIAL

Department Chairs are responsible for ensuring that final examinations and all other graded material not meant to be returned to students, and the instructor's record of how the final grades in a course were determined, are retained for at least one year after last use, and remain accessible to the Department Chair for that period.

This policy applies to all instructors. Sessional instructors and those retiring or otherwise leaving the service of the University must notify their immediate supervisor of the on-campus storage location of the material.

DRAFT

1. 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.

1.1 Programs of Study

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

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, Philosophy, Political Science, Religious Studies, Sociology, and Work and Society;

Master of Business Administration;

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

Master of Communications Management;

Master of Engineering in Chemical Engineering, Civil Engineering, Computational Engineering and Science, Computer Science, ADMI Design and Manufacturing, Electrical and Biomedical Engineering, Electrical and Computer Engineering, Engineering Physics, Manufacturing Engineering, Mechatronics, Nuclear Engineering (UNENE), Software Engineering; Software Engineering and Virtual Systems Design;

Master of Engineering Design;

Master of Engineering Entrepreneurship and Innovation;

Master of Engineering and Public Policy;

Master of Finance;

Master of Health Management;

Master of Science in Biochemistry, Biology, Chemical Biology, Chemistry, Cognitive Science of Language, Computational Engineering and Science, 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 (Blood and Vasculature; Cancer and Genetics; Infection and Immunity; Metabolism and Nutrition; Neurosciences and Behavioural Sciences; Physiology/Pharmacology), Neuroscience, Nursing, Occupational Therapy, Physics and Astronomy, Physiotherapy, Psychology, Radiation Sciences, Rehabilitation Science, and Statistics;

Master of Social Work;

Master of Technology Entrepreneurship and Innovation;

MD/Ph.D. in Medicine and Biochemistry; Medicine and Medical Sciences.

Doctor of Philosophy in Anthropology, Biochemistry, Biology, Biomedical Engineering, Business Administration (Accounting; Finance; Human Resources; Information Systems; Management Science; Marketing), Chemical Biology, Chemical Engineering, Chemistry, Civil Engineering, Classics, Cognitive Science of Language, Computational Engineering and Science, Computer Science, Earth and Environmental Sciences, Economics, Electrical and Computer Engineering, Engineering Physics, English, French, Geography, Health Policy, Health Research Methodology, History, Kinesiology, Materials Engineering, Materials Science, Mathematics, Mechanical Engineering, Medical Sciences (Blood and Vasculature; Cancer and Genetics; Infection and Immunity; Metabolism and Nutrition; Physiology/Pharmacology), Neuroscience, Nursing, Philosophy, Physics and Astronomy, Political Science, Psychology, Radiation Sciences, Rehabilitation Science, Religious Studies, Social Work, Sociology, and Software Engineering.

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 Associate Vice-President & Dean and Associate Deans of Graduate Studies, the Graduate Council, and the registrarial duties associated with graduate administration.

The Associate Vice-President & Dean of Graduate Studies provides leadership in maintaining and improving the standards of graduate scholarship in the University. The responsibilities include: being the School'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's 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. This responsibility includes: registering graduate students; assessing tuition fees; maintaining records and files for applicants and new or in-course students and arranging Ph.D. oral examinations.

The Executive Director, Strategic Planning & Administration administers the financial affairs of the School of Graduate Studies. This responsibility includes: managing all graduate scholarships, administering the graduate payroll, and allocating scholarship funds for graduate programs.

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; 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 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, Program Coordinators 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 a properly constituted supervisory committee;
- reviewing annually each student's 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's progress 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 student'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

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

- planning and approving the student's program of courses and research;

- approving thesis proposals;
- 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;
- initiating appropriate action if the student's progress is unsatisfactory, including any recommendation that the student withdraw;
- deciding when the student is to write the thesis and giving advice during this process;
- acting as internal examiners for the thesis.

1.2.5 The Faculty Advisor

When a supervisory committee 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. His/her 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 and 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.

1.2.6 Guidelines for Graduate Course Instructors

For most faculty members and graduate students alike, the graduate classroom offers a unique site of intellectual development, exploration, and exchange. The following guidelines are intended to highlight best practices to help instructors plan and run successful graduate courses, and to optimize the learning experience for graduate students. These guidelines supplement the official *Policy on Graduate Course Outlines*, to which all graduate courses must adhere.

In fields that include diverse knowledge bases or skill sets, the instructor may wish to meet with prospective students before the course starts, particularly with students who are from outside the home program or department. Such a meeting might include a discussion of the overall objectives and content of the course, an explanation of the methods of assessment, and a description of the expertise and skill level expected of the student.

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. Accordingly, best practice would be for the invited instructor to receive information, preferably in writing, about evaluation criteria and expectations that are consistent with the course outline. Students also should be informed of the mechanism and mode of evaluation.

To receive credit for a course, each student is responsible for confirming on SOLAR that his/her registration status is appropriate for that course. Students are responsible for ensuring that they have formally registered for the course (including any seminar course) through their department or graduate program. Best practice suggests that the instructor should remind students of their responsibilities at the first meeting of the course. If the instructor becomes aware that a student is not listed on the grade sheet, or that the grade sheet includes the name of a student who has not been attending the class, the instructor should inform the department/graduate program.

As noted in the *Policy on Graduate Course Outlines*, the course instructor is responsible for providing each student with evaluations of the student's academic performance at various stages during the course, and, whenever possible, a list of due dates. It is best practice in graduate courses for each student to receive at least one written evaluation prior to the 'drop' date so that students can have the chance to withdraw from the course without academic penalty. Such an evaluation could take any of a number of forms (e.g., evaluations of a seminar presentation, a written assignment, or a collaborative work).

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. Participation marks typically amount to a relatively minor proportion (e.g., 5-20%) of the final grade. Some students, particularly those whose first language is not English, may be reluctant to participate in a discussion in class. Best practice suggests that these students should be recognized early and, whenever possible, tactfully drawn into the discussion by the instructor. 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.

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's 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.

Best practice suggests that instructors should calculate and provide final grades to the School of Graduate Studies for *all students* by the date stipulated in the Graduate Calendar. Final marks also should 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's transcript.

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:

- registering annually until graduation, withdrawal, or withdrawal in good standing due to time limit;
- paying fees as required;
- complying with the regulations of the School of Graduate Studies as set out in this Calendar.

Where applicable, students are responsible for complying with such conditions as may be laid out in an accepted letter of offer. 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) and, in particular, for informing the School of Graduate Studies of any change in employment status. 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.

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. The provisions for changing a supervisor are outlined in Section 2.7.

Students who undertake to write master's or doctoral theses assume responsibility both for creating drafts of the thesis 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.

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.

Since registration 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 his/her academic obligations, the student will be required to withdraw involuntarily

from his/her academic program. (see also Section 6.2)

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 2.5.6. Any absence of one week or longer from campus, which is not part of the student's vacation entitlement requires the supervisor's approval [in writing](#). If the absence 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 absent from campus for more than four weeks in any one term require not only permission from the Department but also that of the appropriate Associate Dean of Graduate Studies [and must submit a petition for special consideration](#). Note that this permission is needed even for field work or study 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. 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.

2. GENERAL REGULATIONS OF THE GRADUATE SCHOOL

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.

It is the student's responsibility to:

- Maintain current contact information with the University, including address, phone numbers, and emergency contact information.
- Use the University provided e-mail address or maintain a valid forwarding e-mail address.
- Regularly check 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's designated primary e-mail account via their @mcmaster.ca alias.
- Accept that forwarded e-mails may be lost and that e-mail is considered received if sent via the student's @mcmaster.ca alias.

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. 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. The admission decision is not subject to appeal.

2.1.1 Admission Requirements for Master's Degree

The University requires, as the major indicator of ability to complete a Master's program successfully, the holding of an Honours bachelor's degree 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. 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.

Degrees and grades from foreign universities are evaluated for their equivalency to McMaster's. 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. The equivalent of at least a B+ average (B- in Engineering) will still be required. 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.

Prospective applicants who did not attain the required standing in their undergraduate degree, but who have several years of work experience that is relevant to the program they wish to undertake, should discuss their situation with the department of interest. Evidence of ability to do graduate work will still be required.

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. First, entry after completion of a Master's program. Second, admission to Ph.D. studies from a Master's program at McMaster without completing the Master's degree. 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. And third, in exceptional cases, admission may be directly from a bachelor's degree.

1. 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;
 - (c) admission to Ph.D. studies but with concurrent completion of all requirements for a Master's degree within two months from the date of reclassification;
 - (d) refusal of 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 two months will lose their status as a Ph.D. candidate and be returned to Master's status.

3. In certain programs, applicants with a first 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.

[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 before the fall term.](#)

2.1.3 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.

2.1.4 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 is a unique way to promote and structure research collaborations, and allows students access to a broader range of research supervision than would be available at a single institution.

Students interested in a cotutelle Ph.D. degree must have finalized arrangements completed within

the first 12 months of their Ph.D. study. 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 on the McMaster Senate Secretariat's website: <http://www.mcmaster.ca/policy/index.html>

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

As noted in Section 2.1 of the Graduate Calendar, "Admission to a graduate program is based on a judgement by the University that the applicant can successfully complete the graduate degree program". Some potential applicants may not satisfy our admission requirement for a 4-year honours degree with a B+ average in the final year. 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:

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

2.1.6 Admission Requirements for Graduate Diploma Programs

See Section 12 for descriptions of McMaster's approved diplomas. The admission requirements for a graduate diploma are the same as are identified in Section 2.1.1 for admission to a Master's program.

Graduate Diploma students with at least a B+ average in their diploma course work may be eligible to transfer to a Master's degree in a related program, subject to the recommendation of the department or program to the relevant Faculty Graduate Admissions and Study Committee. If the diploma has not been completed, credit may be given toward the degree requirements for all graduate courses completed successfully. Approval of the department is required for any such credit to be applied toward a degree; it is not automatic. Departmental or program approval is normally based on an assessment of the amount of additional coursework that will be required for the degree.

If a student wishes to enter a related Master's program after the diploma has been completed, credit may be granted towards the subsequent degree program for those courses completed

successfully, with a limit of one full course or half of the course requirements for the degree, whichever is less.

2.1.7 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.

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 under current standards, but who is currently in (or has had) full-time employment in the intended area of study may be admitted as a post-degree student. In such cases, any courses taken as a post-degree student will not be available for credit in a subsequent graduate program, because they will have been necessary to demonstrate admissibility.

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

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

2.1.8 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 2.1.4) may attend a graduate course. This requires the written permission of the course instructor, the Department Chair, and the School of Graduate Studies. Upon completion of the course, and subject to confirmation from the instructor that his/her expectations regarding the student's participation were met (i.e. that the student attended at least 80% of the instruction), a transcript notation "Audit" will be recorded. No other grade will be assigned. Enquiries should be directed to the instructor or the Chair of the Department offering the course.

A fee is charged for each course taken as a non-credit participant (by persons who are not registered graduate students). See Section 5.1, *Fees for Graduate Students*, for the fee schedule.

2.1.9 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. 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 registered as full time students for a maximum of one year. Acceptance is on the recommendation of the department or program at McMaster. Details about these options are available in Section 11 of the Graduate Calendar.

The student is expected to pay the incidental fees (see Section 5.1 – Fees for Graduate Students) and the appropriate Canadian or international equivalent per course fee for the time that they are registered here. It may also be necessary for them to enrol in the UHIP program to ensure adequate health insurance coverage during their stay.

2.1.10 Exchange Students

Exchange students are individuals who much like visiting students, are registered 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://oisa.mcmaster.ca>).

Students participating in a formal exchange program are not assessed incidentals, 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 may be necessary for them to enrol in the UHIP program to ensure adequate health insurance coverage during their stay.

2.1.11 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 native 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. 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.

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 requirements may vary across programs.

- 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, some programs require a minimum score of 80. Please check with the program to see specific requirements

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://gradapplication.mcmaster.ca/account/instructions.asp>.

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 obtaining the necessary visa.

Application Fee

Applications must be accompanied by the required \$100 application fee. This fee is non-refundable and must be paid in Canadian dollars by means of a credit card payment or a cheque drawn on a Canadian bank made payable to McMaster University. Cheques drawn on Canadian banks should also include a \$15 processing fee for a total of \$115.

Required Documents

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. Please note 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 2.1.9 – *English Language Requirements*
- (d) Statement of interest in pursuing graduate studies.

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.

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's 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.

2.3 Advance Credit and Determination of Course Equivalency

Application for advance credit is normally done through the admissions process or as a petition and 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 advance credit. Approved advance credit appears as a sentence on the student's transcript with no grade.

Credits from other institutions can be used to substitute a specific McMaster University course requirement; however, the student may be required to take alternate courses. Students wishing to apply for advance credit or course requirement equivalency should fill out the Petition for Advance Credit or Course Requirement Equivalency form and submit it to the School of Graduate Studies (GH 212).

~~McMaster students enrolled in a program wishing to take a course at another institution need to fill out the OVGS form (see section 6.10).~~

2.4 Acceptance

Initial assessment of completed applications is the responsibility of departments. If that assessment is favourable, the department will recommend to the School of Graduate Studies Office of a favourable decision, or by the department of a negative decision. Applicants may be accepted conditionally before completing their present degree programs. Such conditions must be cleared at the time of registration.

Official letters of admission 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 in writing to the offer of admission within the interval identified in the offer letter. Some programs require a deposit fee when accepting the offer of admission. 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 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 Registration

2.5.1 Procedures

All graduate students, in both the regular and part-time programs, are required to register and pay fees annually in September until they graduate or withdraw. If they fail to do so they do not retain the status of graduate student and must apply for re-admission if they wish at a later date to continue their studies. If the department approves, 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 register in September.

It is the joint responsibility of the student and program to determine the appropriate program of study.

2.5.2 Provincial Definition of Full- and Part-time Status

Under the regulations of the Government of Ontario, A full-time graduate student must:

- (a) be pursuing his or her studies as a full-time occupation;
- (b) identify himself or herself as a full-time graduate student;
- (c) be designated by the university as a full-time graduate student;
- (d) be geographically available and visit the campus regularly. Without forfeiting full-time status, a graduate student, while still under supervision, may be absent from the university (e.g. visiting libraries, doing field work, attending a graduate course at another institution, etc.) provided that, if any such period of absence exceeds four weeks in any one term, written evidence shall be available in the Graduate Studies Office to the effect that the absence has the approval of the ~~Chairman (sic) of the Department and the Associate Vice-President & Dean of Graduate Studies;~~department or program Chair and Graduate Associate Dean.
- (e) be considered to be a full-time graduate student by his/her supervisor or equivalent (designated by the university).

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. University-related employment should be limited to an average of ten hours per week for full-time students, and full-time students are expected to limit time spent on employment both inside and outside the University.

Exceptions to this rule are possible with the approval of the School of Graduate Studies. A full-time student seeking an exception must provide a study plan that has been approved by the departmental graduate studies committee or its equivalent, along with a written statement from the student's supervisor. Ph.D. students who seek an exemption from the rule must arrange for a

supervisory committee meeting, with a report of that meeting submitted to the Graduate School, every four months during the time they are employed beyond ten hours per week. No exceptions totalling 505 hours or more in a single academic year will be approved.

All active graduate students other than full-time graduate students as defined above are part-time graduate students.

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 2.4.3 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 work as a Teaching Assistant at McMaster.

If the student is to be employed at the University other than as a TA, the School of Graduate Studies should be informed in writing of the nature of the employment, and the approval of the supervisor and the chair of the department is required. The approval of the School of Graduate Studies is required if the student is to be hired for University teaching.

2.5.5 Leaves of Absence

General Regulations

Leaves of absence are normally granted on a term-by-term basis. Whenever possible the leave should start and end at the beginning of a term (i.e., January 1, May 1, or September 1). During the period of a Leave the student cannot expect to be given supervision or be entitled to use the University's facilities. During a Leave of Absence, no tuition will be charged, nor will the student be eligible for any scholarship support. The length of time for completing the degree, and for scholarship support eligibility (see qualifier below), will be extended by the duration of the Leave on the resumption of studies. If a leave begins or ends in the middle of a term, term count will be determined upon return in consultation with the Associate Dean.

Leaves of absence affecting Teaching Assistantship duties are covered by the Collective Agreement with Local 3906 (Unit 1) of the Canadian Union of Public Employees.

Students should be aware that in the event of Leaves of Absence, continuation of the same research project and/or supervisor cannot be guaranteed. Students applying for a leave of absence for personal reasons must normally have completed at least one year of full time graduate studies. Students who have not completed a minimum of 16 weeks of graduate studies at McMaster will not be eligible for parenting leave scholarship funding as noted below. For additional information related to parental and maternity leaves, please refer to the next section.

Reasons for Leaves of Absence

A Leave of Absence for up to one year is permitted for reasons of illness, provided that the request is supported by adequate medical documentation. Students who have successfully completed at least one full year in a graduate program may apply for a Leave of Absence once for up to one year for other personal circumstances, provided that the student's supervisor and the department support the request. Alternatively, the student may request withdrawal (Withdrawal at the Request of the Student). Should the student opt to withdraw, he/she may be eligible for reinstatement upon reapplication.

A Leave of Absence to obtain externally paid relevant work experience may be granted for one term for a Master's student and for two terms for a Ph.D. student. No two Leaves taken to obtain relevant work experience may be consecutive.

A Leave of Absence will not be granted to pursue another program of study.

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

Parenting Leave Policy

Intent

The Parenting Leave Policy (the "Policy") 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. The Policy applies only to full time graduate students as defined by the School of Graduate Studies.

Definitions

"McMaster Graduate Scholarship Funds"- The sum total of departmental and graduate scholarships as well as research account support committed to the student. It does not include funding from external sources; funding from employment such as Teaching Assistantships or Research Assistantships, or; most scholarships held in trust.

"Parent"- Includes the birth mother of a child; 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 intend to treat the child as his or her own.

"Parenting Leave"- An unpaid leave of absence from studies of up to 52 weeks' duration for a birth mother of a child or up to 37 weeks' for the parent of child who is not the birth mother.

Leave of Absence from Studies

Eligibility

A leave of absence for up to 52 weeks is permitted for Parenting Leave. 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.

Parameters

A Parenting leave for the birth mother may consist of two parts – a pregnancy leave and parental leave. The pregnancy leave must begin, at the earliest, up to 17 weeks before the anticipated due date or on the date the child comes into the care and control of the parent for the first time and lasts for 17 weeks. The parental leave must begin right after the pregnancy leave and lasts for up to 35 weeks. Alternatively, the birthing mother may only take the parental leave. In this case the leave can be a maximum of 37 weeks in length and must begin at latest within 52 weeks after the birth of the child or the date on which the child comes into the care and control of the parent for the first time.

The Parenting leave for a non-birth mother can be a maximum of 37 weeks in length and must begin at latest within 52 weeks after the birth of the child or the date on which the child comes into the care and control of the parent for the first time.

It is understood that when a student takes a Parenting leave, 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.

In order that the student's supervisor and/or program can make suitable arrangements to cover ongoing responsibilities during the student's absence, students are expected to provide as much notice as possible of the intention to take a Parenting Leave under this Policy.

A student is normally expected to give at least four weeks' notice of the date on which he/she intends to take his/her leave(s) and at least four weeks' notice of the date on which he/she intends to return from leave, should this date be different from the date agreed upon at the time the leave was granted.

A Parenting Leave or a portion thereof *may* be taken simultaneously with a Pregnancy and/or Parental leave from employment, in accordance with the Employment Standards Act, should the student also be an employee of McMaster University.

If both parents of a child are McMaster Graduate Students, only one parent is eligible to access Parenting Leave under this Policy at any one time. This Policy does not preclude the other parent from applying for a leave of absence under another policy or program and the approval or denial of that leave application will be determined on the basis of the parameters of that leave policy or program.

Combination with Other Leaves

If a student is also an employee, it is incumbent upon the student to review their terms and conditions of employment and/or Collective Agreement (if any) and apply for the appropriate leave of absence from employment there under.

Financial Support from the School of Graduate Studies for Parenting Leave

Eligibility

Students who have not completed a minimum of 16 weeks of graduate studies at McMaster will not be eligible for Financial Support under This Policy. They will remain eligible for a leave of absence from studies, in accordance with the above.

Parameters

A student in receipt of McMaster Graduate Scholarship Funds who has a child (or children) by birth or adoption may receive the financial support available under the Policy for a minimum period of 4 months and a maximum period of 8 months.

A student electing not to take the maximum amount of time available will not have the option of taking any unused leave at a later date.

A student in receipt of McMaster Graduate Scholarship Funds who takes a Parenting Leave under the Policy will be entitled to continue to receive graduate scholarship funds at the normal monthly rate, to a maximum of \$750 per month and to a maximum total of \$3,000, provided that a "Leave of Absence Information Form" has been submitted to and approved by the School of Graduate Studies.

The formula used to determine the "normal monthly rate" when a student is not currently in receipt of scholarship funds is the total of their McMaster Graduate Scholarship Funds averaged over the previous or current academic year depending on the start date of the parenting leave.

Combination with Other Forms of Financial Support

To maximize flexibility, the financial support available under the Policy can be combined with stipends from sources, excluding those from the Tri-Agencies (noted below) and can be spread over a period of between 4 and 8 months at the discretion of the student. However, in no case will funding for Parenting Leave from the School of Graduate Studies exceed a total of \$3000 (and \$750.00/month).

If the parent of the child for whom the Parenting Leave is being taken is eligible to receive parental support from CIHR, NSERC, ~~or~~ SSHRC, or another agency that provides parental support for the leave at any time during the Parenting leave, the parent is not eligible for financial support under McMaster's Parenting Leave Policy.

When two McMaster graduate students are the parents of a child, only one of those students will be entitled to claim the financial support under the Policy.

Financial support during Parenting Leave for students who are also employees of the University, provided as part of their terms and conditions of employment, are distinct and separate from the financial support available under this Policy. Other financial benefits, except as specifically excluded herein, can be taken concurrently with the financial support provided under this Policy provided that the individual meets the eligibility requirements for those plans for the duration for which they are accessing financial support under those plans.

The financial support provided under this Policy is not considered an approved Supplemental Unemployment Benefit Plan for the purposes of receiving Employment Insurance. Therefore, students wishing to access financial support under this Policy in addition to Employment Insurance (“EI”) benefits should be aware that Human Resources and Skills Development Canada (“HRSDC”) may consider financial support under this Policy to be earnings and could therefore require repayment of some of all EI benefits received. It is incumbent upon the student accessing financial support under this Policy to contact HRSDC if they have questions in this regard.

For questions on the administration of the Policy, contact the School of Graduate Studies.

2.5.6 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 weeklong closing of the University from late December until early January, normal vacation entitlement is two weeks of vacation during the year, to be scheduled by mutual agreement with the research supervisor and the employment supervisor. Exception to this allotment requires approval from the supervisory committee.

2.5.7 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. Students may submit, in a prompt and timely manner, a *Petition for Special Consideration* to the office of the Associate Dean of the School of Graduate Studies 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 appropriate form may be found 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. However, if a student

believes that a decision is a violation of his/her human rights, he or she must contact the office of Human Rights and Equity Services in room 212 of the McMaster University Student Centre, to initiate a complaint.

2.6 Graduate Course Work

2.6.1 Averaging of Letter Grades

Grades in graduate courses are reported as letter grades. However, instructors may record grades for individual components of the course either as letter or numerical grades. The averaging of letter grades assigned to individual components of a course must be done by using the McMaster 12-point scale, as follows: A+ = 12, A = 11, A- = 10, B+ = 9, B = 8, B- = 7, C+ = 6, C = 5, C- = 4, D+ = 3, D = 2, D- = 1, F = 0. Further, all .5 marks should be rounded up. The passing grades for courses at the graduate level are A+, A, A-, B+, B, and B-. Graduate students enrolled in undergraduate courses will be subject to the same set of passing grades as courses at the graduate level.

Graduate Student Grading Scale:

Grade	Points	Pass/Fail
A+	12	P+
A	11	P
A-	10	F
B+	9	
B	8	
B-	7	
F	0	

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

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
B	8	x	6	= 48
B+	9	X	3	= 27
F	0	X	3	= 0
Total			18	135
				To calculate Average: $135 \div 18 = 7.5$

Note: 6-unit course is equivalent to a full course
 3-unit course is equivalent to a half course

Note: McMaster University's Policy on Graduate Course Outlines is available at:
<http://www.mcmaster.ca/policy/faculty/Conduct/GraduateCourseOutlines.pdf>

2.6.2 Course Levels and Types

Courses available for graduate credit are numbered either at the 700- or 600-level (e.g. 771 or 6D06). Courses are restricted in enrolment to graduate students, with the exception of those undergraduate students registered in approved, accelerated M.Eng. programs and with written permission of their department (or program) chair, director, or designate. (Departments may have restrictions on the number of 600-level courses allowed for graduate credit). Graduate students taking 600-level courses are regularly required to do extra course work beyond that required of undergraduates in the corresponding 400-level course. Each department offers only a selection of its courses in any given year.

For 700-level courses, there are three types of courses. Full-year (i.e. two-term) courses do not have a prefix. One-term courses (half courses) are indicated by an asterisk (*) sign preceding the course number. Half-term (quarter courses or modules) are indicated by a pound (#) sign preceding the course number. In all cases, the expectation is that the course will meet at least three hours per week (on average). For 600-level courses, the first character represents the level of the course (combined graduate-undergraduate), the second character is a letter identifying the specific course within a department, the third character is a letter identifying the area of study within a program or simply a zero, and the fourth character indicates the number of units of course credit. Generally, 3-unit and 4-unit courses are one-term courses; 6-unit courses are full-year courses.

2.6.3 Course Categories

Courses can be designated as being in one of the six categories:

M (Count towards the Master's degree requirements)

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). The passing grades for an M course are A+, A, A-, B+, B, and B- ~~(except in the M.B.A. program, which uses a different scale).~~

D (Count towards the Doctoral degree requirements)

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). The passing grades for a D course are A+, A, A-, B+, B, and B-.

EC (Extra Course)

This category identifies courses that the student is taking with the approval of the supervisor but that are not necessary to the student's current degree program. If a failing grade (i.e. less than B-) is received in a course taken as Extra, the courses (and grade) will not appear on the student's transcript unless because of academic dishonesty. Students may petition to change the designation of an EC course to an M or D course prior to the deadline to drop a course provided that this change

is supported by the supervisor and program. Changes of designation after the drop date will not be approved. Courses designated as EC may subsequently be counted towards graduate degree requirements and the course designation changed to M or D, if approved by the Faculty Admissions and Study Committee or the Associate Dean acting on its behalf. The passing grades for an ~~EC~~ course are A+, A, A-, B+, B, and B-.

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 M or D.

DIP (Diploma Course)

This category identifies courses that are to count towards the requirements for a diploma. The passing grades for a DIP course are A+, A, A-, B+, B, and B-.

CER (Certificate Course)

This category identifies courses that the student is taking as individual courses not counting towards the requirements for a diploma. The passing grades for a CER course are A+, A, A-, B+, B, and B-.

AUD (Audit Course)

Graduate courses are not normally open to “auditors” who attend a course without seeking academic credit. Under some circumstances, however, graduate students may audit a graduate course. This requires the written permission of the course instructor and the student’s supervisor (or graduate advisor if no supervisor exists) on the form entitled ‘Audit Add Form’. Permission must be obtained prior to the deadline for adding courses. Upon completion of the course, and subject to confirmation from the instructor that his/her expectations regarding the student’s participation were met (usually that the student attended at least 80% of the course), a transcript notation of “Audit” for that course will be recorded. No other grade will be assigned. Enquiries should be directed to the instructor or the Chair of the Department offering the course.

A fee may be charged for a course taken for audit if the graduate student is in a part-time program. See Section 5.1 - Fees for Graduate Students, for the fee schedule.

[McMaster students enrolled in a program wishing to take a course at another institution need to fill out the OVGS form \(see section 6.10\).](#)

2.6.4 Failing Grades and Incomplete Grades

All instances of failures are reviewed by the appropriate Faculty Committee on Graduate Admissions and Study or the Associate Dean acting on its behalf. 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. A failing grade in a CER, DIP, M or D course remains on the transcript. [Students](#)

who fail a second course will not normally be allowed to continue in the programme.

Under exceptional circumstances a course instructor may approve an extension for the student for the completion of work in a course and assign an Incomplete grade (INC). Normally this extension is in the range of a few weeks. A student who receives this permission must complete the work as soon as possible, and in any case early enough to allow the instructor to report the grade to the School of Graduate Studies by the date specified in the Sessional Dates near the beginning of this Calendar. If the INC grade is not cleared by the deadline, a failing grade will automatically be recorded.

2.6.5 Required Course and Training for All Graduate Students

All graduate students, including part-time students, must complete and pass the course *SGS #101- Academic Research Integrity and Ethics* within the first twelve months after their admission to graduate studies at McMaster. The purpose of this course is to ensure that the standards and expectations of academic integrity and research ethics are communicated early and are understood by incoming students. All students are required to take and pass SGS #101. Students may not graduate or register in subsequent academic year without having successfully completed this course. The course description for *SGS #101* may be found in Section 11.

All graduate students are required to complete appropriate training required to complete their research and studies (health and safety training, ethics training, biosafety training, etc.), as determined by their home Department or Program. All graduate students also are required to complete and pass *SGS #201 - Accessibility for Ontarians with Disabilities Act (AODA)*, which can be completed on-line [www.mcmaster.ca/accessibility]. Having an understanding of how we can identify and reduce attitudinal, structural, information, technological, and systemic barriers to persons with disabilities is core to McMaster University's commitment to supporting an inclusive community in which all persons are treated with dignity and equality, and completion of AODA training is critical as McMaster's graduates move forward in their varied, chosen professions.

Students may not graduate or register for subsequent years in their program until they have completed their required training.

2.7 Supervision

It is the responsibility of the department/program to ensure that every graduate student has, at all times, a faculty advisor or a properly constituted supervisory committee. 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.

While the supervisor and student have a mutual obligation to meet on a regular basis, the department/program shall ensure there is a formal regular meeting of each Ph.D. supervisory committee at least once within the academic year (September-August), and possibly more often, to discuss the student's progress. Each Ph.D. supervisory committee must report annually on the student's progress and the department/program chair must forward such reports to the School of Graduate Studies. The report formally documents the supervisory committee's assessment of the progress of the student's program.

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 she/he is receiving unsatisfactory supervision, he/she 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 (see Section 4.5 – Supervision).

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 <http://graduate.mcmaster.ca/current-students/student-responsibilities>.

2.7.1 Graduate Work Supervision Guidelines for Faculty and Students

Preamble

The relationship between the graduate student and supervisor/advisor is unique and provides a remarkable opportunity to guide and mentor the student engaged in advanced academic learning. What is considered 'good' supervision will vary from discipline to discipline, and it naturally evolves as the student advances through a graduate program. This document provides suggestions to initiate, promote, and sustain successful student-supervisor/advisor relationships.

Guidelines for the Graduate Student

- 1) Commitment to scholarly activity is a pre-requisite for graduate success.

- 2) To support mentorship and guidance, the student must engage in effective, timely and on-going communication with the supervisor/advisor regarding the status of their project.
- 3) The student should discuss expectations with the supervisor/advisor to ensure that there is a mutual understanding of research goals and related activities, coursework, timelines and deadlines.
- 4) The student must manage their time, meet deadlines, and prepare for regularly scheduled meetings (e.g., with the supervisor/advisor and supervisory committee). Students should recognize that graduate program academic expectations will not be modified if they choose to engage in other activities, such as working outside of his/her graduate studies, studying for professional program entrance exams or applying for jobs or postdoctoral fellowships. Student-supervisor meetings for thesis work typically occur at least monthly, although meeting regularity will vary amongst disciplines and at various stages. Students are encouraged to discuss concerns about the type and amount of supervision needed for their work with their supervisor. Students are expected to inform the academic head of the graduate program if they are concerned about inadequate or inappropriate supervision.
- 5) The student is expected to develop effective communication and collaborative skills and to demonstrate respect for others. The student should carefully and earnestly consider advice, suggestions, comments and criticisms received from the graduate supervisor/advisor. The student should expect timely, but not immediate, responses (regarding meetings, feedback on written work, etc.) from the supervisor/advisor and supervisory committee.
- 6) The student is obliged to act ethically in conducting graduate work. This includes, but is not limited to, following McMaster University policies on the ethical conduct of research and academic integrity. The student is required to document and honestly report research data, to conscientiously cite information and data sources, and to seek guidance on any data exclusions. He/she must acknowledge contributions of the supervisor/advisor, committee members and others, in accordance with the norms of their academic discipline.
- 7) It is the student's responsibility to carry out all work safely and in accordance with standard operating procedures. Potentially dangerous tasks should not be done while impaired and should not be done until properly trained. It is the student's duty to learn about safe practices, ask questions, and seek appropriate help and guidance on safety matters.
- 8) It is the student's responsibility to be aware of all the requirements, regulations, and guidelines outlined in the Graduate Calendar as well as all University policies pertaining to graduate work.
See [http://graduate.mcmaster.ca/images/files/graduate/forms/Graduate Work Supervision Guidelines.pdf](http://graduate.mcmaster.ca/images/files/graduate/forms/Graduate%20Work%20Supervision%20Guidelines.pdf) (see Appendix).

Guidelines for Supervisors and Advisors of Graduate Students

- 1) The supervisor/advisor must be aware of the inherent power imbalance in the relationship with students, behave professionally, and communicate appropriately. He/she must provide a safe, healthy environment that fosters productive scholarly work, curiosity, and freedom of expression. The environment must be free from harassment, discrimination, and intimidation.
- 2) The supervisor/advisor is expected to have sufficient time and resources (as appropriate for the field) to support the student's work effectively. It is the supervisor's responsibility to ensure that students have appropriate safety training, and that they carry out all work safely, and in accordance with standard operating procedures, once properly trained.
- 3) The supervisor/advisor should help the student develop a realistic thesis/research plan with reasonable plans, that balance exploration with achievable, manageable and focused goals, and allow completion of scholarly work "in time."
- 4) The supervisory committee must approve thesis project plans, including those that are part of a larger collaborative project led by others (e.g. research team members or collaborators).
- 5) The supervisor/advisor may encourage the student to undertake some research that is not formally part of their scholarly paper project or thesis project, provided that it will not negatively impact the student's academic progress. If appropriate, the additional work can be supported by a research assistant stipend.
- 6) The supervisor/advisor should be aware that a student might experience changes in motivation and productivity. The supervisor/advisor should be prepared to adapt his/her mentorship approach to promote success in a range of different situations.
- 7) The supervisor/advisor is expected to be aware of accommodation policies, procedures and support services, and to support students with disabilities in designing and organizing accommodations. They are expected to be respectful of graduate students who are dealing with stressful situations and personal difficulties. When appropriate, the supervisor/advisor should direct the student to campus resources and other supports. The supervisor/advisor is responsible for promoting a culture of respect and collaboration and encouraging timely conflict resolution when disputes arise, which may require consultation with the supervisory committee or others (e.g. head of the graduate program).
- 8) The supervisor must regularly communicate and have face-to-face meetings with the student to provide feedback on the student's progress, strengths, weaknesses, gaps in knowledge, and how well the student is addressing deficiencies. Written summaries of feedback should be prepared when there are significant deficiencies. When a student is

struggling with meeting graduate program/thesis work expectations, a supervisory committee meeting should be scheduled early to assess progress and plans, and to provide a clear statement of requirements to meet expectations.

- 9) The supervisor/advisor and supervisory committee are required to provide students with timely, but not instantaneous, feedback. As an example, corrections to a thesis chapter, major research project, or a manuscript optimally should occur within a few weeks. Faculty should be aware that they must respond to a draft of the thesis within the timelines outlined in the graduate calendar.
- 10) Supervisors/advisors who undertake a research leave or other leaves must communicate to their graduate students, and graduate student applicants, the plans to provide supervision during the leave. Supervisors/advisors who will be away from campus for extended periods of time must name an alternate faculty member, with graduate supervisory privileges, who will have day-to-day responsibility and signing-authority for students.
- 11) The supervisor/advisor is expected to encourage increasing independence as the student progresses through graduate work. Although the supervisor/advisor is not expected to be a copy editor for the student's written work, he/she should review and provide feedback on materials that the student produces prior to external review or defence.
- 12) Students' contributions to research must be acknowledged in accordance with the University policies and the norms of the academic discipline.
- 13) When feasible and appropriate, supervisors/advisors are expected to encourage students to submit their graduate work for presentation at conferences and workshops, and for publication.
- 14) The supervisor/advisor should recognize that there are multiple career paths available to different students, and should be respectful of the student's choice of career path, providing advice, where appropriate, on the best way for the student to reach his/her career goals. The supervisor also should be aware of professional development opportunities for the student offered through the Department/Program, Faculty, or University, and should encourage the student to take advantage of such opportunities.
- 15) It is the supervisor/advisor's responsibility to be aware of all the requirements, regulations, and guidelines outlined in the Graduate Calendar and University policies. See [http://graduate.mcmaster.ca/images/files/graduate/forms/Graduate Work Supervision Guidelines.pdf](http://graduate.mcmaster.ca/images/files/graduate/forms/Graduate%20Work%20Supervision%20Guidelines.pdf) (see Appendix).

2.8 Theses

2.8.1 General

The thesis will be a coherent work prepared as an electronic document (an e-thesis) that provides a complete and systematic account of the research accomplished by the writer. A printed paper version is no longer acceptable for thesis defense or for storage in the university library after a successful defense. A Doctoral student may prepare and defend either a standard e-thesis (see 'GUIDE FOR THE PREPARATION OF MASTER'S AND DOCTORAL THESES', May 2011; http://graduate.mcmaster.ca/images/files/graduate/ThesisGuide_Final_May2011.pdf) or a "sandwich" e-thesis at oral examination (also known as the 'thesis defense'). Normally, a Master's student may submit only a standard e-thesis (see 'Thesis Guide' section 5.2). Each department or program offering graduate work is wholly responsible for setting up oral examinations for Master's candidates (see 'Thesis Guide' Sections 6.1 and 6.2). The School of Graduate Studies is wholly responsible for arranging all Ph.D. oral examinations (see 'Thesis Guide' Sections 6.3, 6.4, and Appendix 1).

Starting on May 1, 2011, 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 e-thesis to 'Digital Commons' (<http://digitalcommons.mcmaster.ca>; see section 2.7.3 below). The e-thesis must be presented in a format acceptable to the School of Graduate Studies. Having filed the e-thesis to Digital commons, the student may choose to purchase printed and bound copies for their personal use or for presentation. Details of selected companies who are organized to print and bind the thesis are listed on the School of Graduate Studies website (<http://www.mcmaster.ca/graduate>). The cost of printing and binding will be borne by the student.

No research for the Master's or Ph.D. degrees at McMaster may be secret or classified. All e-theses will be available to readers through Digital Commons.

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. Accepted forms of bibliographical reference in the particular discipline and other matters of format should be discussed with the thesis supervisor. Students may also refer to the instructions set forth in Kate L. Turabian's A Manual for Writers of Term Papers, Theses, and Dissertations (7th ed., 2007). 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. Doctoral students and their supervisors should keep in mind that theses of extraordinary length are to be discouraged. The preparation of a lengthy Ph.D. thesis almost certainly extends the time that the student takes to complete his or her degree. 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). 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.

2.8.2 Response Times for Theses

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.

2.8.3 Publication of Electronic Theses at McMaster University

Every successfully-defended thesis for a Master's or a Ph.D. degree shall be published substantially as it was approved at the thesis defense, including any changes mandated by the defense committee, through the University Library's Digital Commons and the Library and Archives of Canada. To this end, as a final requirement of the degree, each student must sign a license enabling such digital publication, and must upload the thesis to the Digital Commons in electronic form. Note that the student may request postponement of digital publication for up to one year at the time of uploading the thesis to Digital Commons, and all such requests will be automatically granted. E-publication delays normally would be requested for the shortest amount of time required to facilitate publication with external organizations, to protect any right to immediate commercial gain, or to permit a patent application to be completed. Students wishing extensions of their initial postponement must apply directly to the Associate Vice-President & Dean of Graduate Studies, at least 4 weeks before the termination of the initial e-publication postponement, with a full description of why an additional delay is requested and what steps have been taken to address the issues that required the initial delay. The Associate Vice-President & Dean of Graduate Studies will determine whether further publication postponement is warranted, and, in no case will a publication delay of more than 2 years be permitted.

3. REGULATIONS FOR MASTER'S DEGREES

Master of Applied Science, Master of Arts, Master of Communications Management, Master of Engineering, Master of Engineering Design, Master of Engineering Entrepreneurship and Innovation, Master of Engineering and Public Policy, Master of Health Management, Master of Finance, Master of Science, Master of Social Work, Master of Technology Entrepreneurship and Innovation. Regulations for the M.B.A. program may be found in the M.B.A. Calendar, available from the DeGroot School of Business.

3.1 General

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 project rather than a thesis, as well as course work. In some departments a course work-only program is available. Consult the departmental listings to see what types 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.

The regular 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 to see whether or not a part-time program is available in a particular department.

Prior to the 2001-2002 academic year, all Master's degrees awarded within the Faculty of Engineering were designated as Master of Engineering (M. Eng.) degrees. On April 11, 2001, the University Senate approved the use of the Master of Applied Science (M.A.Sc.) designation for thesis-based degrees in the Faculty of Engineering. Non-thesis Master's degrees in the Faculty of Engineering retain the M. Eng. designation.

3.2 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.

The student who is presenting a thesis as part of a program is required to complete, with at least B-standing, at least one full graduate course (or equivalent). Certain programs regularly prescribe additional graduate courses. In accordance with OCGS requirements, no more than one-third of the departmental minimum course requirements may be at the 600-level. The student may be required or permitted by the department to take courses in addition to those prescribed for graduate credit. In consultation with the programs concerned, one or more graduate courses in a related subject may be taken outside of the program.

Students will be required to meet any additional requirements of the program, including special seminars or colloquia. Such requirements are subject to approval by the appropriate Graduate Curriculum and Policy Committee.

3.3 Thesis

A pre-defence thesis may be submitted at any time. 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. The Associate Vice-President & Dean of Graduate Studies may appoint members to these committees. The time of the defense 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 above) has been submitted to the department for examination.

After a successful examination and all requested changes have been made, the student will upload the final e-thesis to Digital Commons (see section 2.8). **Students must submit their final thesis within four weeks of a successful defence.** The student may wish to have printed copies of the final thesis suitably bound for personal use or for presentation. The student will be responsible for the cost and distribution of any bound copies.

Tuition fees continue to be assessed until all degree requirements are met, including the successful submission of the final approved thesis to Digital Commons.

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, the rules governing Master's theses must be followed.

3.5 Supervision

The general regulations regarding supervision, described earlier (Section 2.7, “Supervision”), apply to Master’s students. If the student is registered in a thesis degree program, the thesis supervisor will have been identified by mutual consent, based on the nature of the thesis research. If the student is registering in a degree program without a thesis, a faculty advisor will be assigned. In either case, the advisor may be changed with the approval of the Department, as described in Section 2.7.

3.6 Program Duration

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. Twelve-month non-thesis programs occur in Anthropology, Classics, Cultural Studies and Critical Theory, Economics, Economic Policy, English, Finance, French, History, Physics, Political Science, and Sociology.

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 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 5.1 - Fees for Graduate Students.](#)

Each student’s progress is reviewed annually by the department and on a more frequent basis by the supervisor. A student whose work is unsatisfactory 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 in a thesis program, if a completed thesis is submitted, and is acceptable to the department, the student can be readmitted in order to 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 defense 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.

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.

At the time of readmission, 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 5.1) to compensate for the costs of the defense and subsequent processing of the thesis.

4. REGULATIONS FOR THE DOCTOR OF PHILOSOPHY DEGREE

4.1 General

The regular doctoral programs at McMaster have been designed for students who can devote full time to their studies. Academically, full-time Ph.D. study is the best and most efficient way to undertake the degree. However, some departments at McMaster University will consider individual applicants holding a Master's degree whose circumstances preclude uninterrupted full-time graduate work to undertake Ph.D. studies. Because of the divergent nature of academic disciplines, part-time Ph.D. work is not feasible in some areas.

Accordingly, 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.

4.2 Program Requirements

McMaster University does not have a minimum course requirement for the Ph.D. Instead, it is left to each graduate program to establish its own minimum requirement, subject to the approval of the appropriate Graduate Curriculum and Policy Committee, and Graduate Council. In accordance with OCGS requirements, no more than one-third of the program's minimum course requirements may be at the 600-level.

Students should consult that section of the Calendar applicable to the graduate program in which they are interested.

The supervisory committee 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. The student who is required to take undergraduate courses may register for a maximum of 12 units of such work.

Students will be required to meet any additional requirements of the program, including special seminars or colloquia. Such requirements are subject to approval by the appropriate Committee on Graduate Curriculum and Policy.

4.3 Examinations

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 Comprehensive Examination is designed to test students for this breadth of knowledge and the ability to integrate ideas. The form of the exam and its administration are the responsibility of the department in which the student is registered, not of the student's supervisory committee. The outcome will be reported to the School of Graduate Studies as "pass with distinction", "pass", or "fail."

If the Comprehensive Examination consists of multiple components, a second failure of the same single component will constitute a second failure of the Comprehensive Examination.

If the result of the Comprehensive Examination is "fail", the student must be given a second opportunity to take the examination, or those portions on which the failure occurred. This second opportunity is given in place of any 're-read' of a comprehensive exam, which is explicitly excluded from the Student Appeal Procedures, and in recognition of the fact that the failure may occur on the oral part of the examination. If a student chooses to withdraw from the program prior to that second opportunity, the result "fail" will remain on the student's record. A second failure will result in the student being withdrawn by the beginning of the following month.

The Comprehensive Examination for full-time students will normally take place between 12 and 20 months after the student has begun Ph.D. work at McMaster, with an upper limit of 24 months. Individual exceptions require the approval of the appropriate Faculty Committee on Graduate Admissions and Study. Programs which offer part-time Ph.D. programs must require such students to take the Comprehensive Examination by the end of the 36th month.

Departments may hold qualifying or entrance examinations at the beginning of a student's doctoral studies.

There is no University-wide foreign language requirement for Ph.D. students. Many departments, however, do have such a requirement (see departmental regulations).

All departmental examination rules and practices are subject to approval by the Faculty Committee on Graduate Curriculum and Policy, which may refer questions to Graduate Council.

4.4 Thesis

A candidate must present a thesis which embodies the results of original research and mature scholarship. In the case of sandwich theses, mature scholarship specifically includes substantial and significant contributions to the composition of text in papers with multiple authors. The student must be authorised by a majority of the supervisory committee before producing the final version of the thesis for oral defense. Normally the thesis will be distributed to committee members and examiners in an electronic format (see Section 2.8 - Theses).

When a majority of the supervisory committee have approved the final version of the thesis, it may

be submitted to the School of Graduate Studies for examination. The oral defense will not be arranged by the Thesis Coordinator until a majority of the supervisory committee has submitted a report approving the thesis for defense and an agreed date of defense has been received.

Selection of the Examining Committee

Selection of an external examiner is the responsibility of the Associate Vice-President & Dean of Graduate Studies. To aid in that selection, the supervisory committee is required to provide, through the Chair of the Department (or equivalent), the names and contact information for three potential examiners, at least one month prior to the submission of the thesis. The nominees must not have primary appointments at McMaster University, and they must be at arm's length* from all members of the supervisory committee and the student. To maintain this distance, all communication with a potential or selected external examiner that is related to the examination and defense of the student must originate only from the School of Graduate Studies. The external examiner will provide a written report to the Associate Vice-President & Dean of Graduate Studies judging whether the written thesis is satisfactory for defense or not. The external examiner will provide this assessment regardless of their ability to be present at the defense.

The examining body will consist of the following members: the student's supervisor, two representatives of the department selected by the chair (normally from the supervisory committee), and an external examiner. If the external examiner cannot attend the oral defense, either in person or through tele- or video-conferencing, one additional representative of the faculty at large will be selected as an attending external examiner. In unusual situations where the supervisor is not available to participate in the defense for an extended period, the program Chair may designate a different faculty member to serve on the examining committee in place of the supervisor.

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). External examiners should not have been employed by or affiliated with the student's or supervisors' Department within the past 6 years, nor expect to become employed in the Department in the immediate future.

Scheduling and Conducting the Oral Examination (Oral Defense)

If the external examiner approves the thesis for oral examination, an oral defense will be convened by the Associate Vice-President & Dean of Graduate Studies, chaired by herself or her delegate and conducted by all members of the examining committee. Quorum for the examination will be the Chair of the examining committee ~~plus four examiners and the supervisory committee plus one additional examiner.~~ 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. At the discretion of the student, the oral defense will be open

~~to members of the university community and the public who wish to attend as observers.~~ 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. Observers will withdraw prior to the committee's deliberations on the student's performance at the defense. Normally, examination of the candidate will not take more than two hours. In no case should it take more than three.

If the external examiner does not approve the thesis for an oral defense, the appropriate Associate Dean will convene a meeting with the student's supervisory committee to discuss the external examiner's report. The supervisory committee and student will make every effort to address the concerns of the examiner, and the revised thesis may be re-assessed again by the external examiner. In rare cases, a new external examiner may be appointed by the Associate Vice-President and Dean of Graduate Studies.

After a discussion of the examination, the Chair will ask for a vote on each of the two questions, the acceptance or rejection of the **written document** and the success or failure of the **defense**. If the examiners approve both the written thesis and the defense, the Chair will ask the examiners to complete the Examination Report by initialling appropriately. The student will be invited back to the examination room for congratulations by the committee. In the event the written thesis is approved conditionally, the Chair of the examination committee is responsible for ensuring that (1) the candidate is advised of the conditions in writing, (2) the candidate receives and understands the 'Final Thesis Submission form' to be used by the Supervisor to confirm that the conditions have been met, 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 on either question, with at least one of these votes being from a member of the supervisory committee, the candidate will be deemed to have failed the defense, and a reconvened oral defense 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 written thesis and/or the defense of it. The reconvened defense 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 defense. If the written thesis, or the defense of it, fails a second time, that decision is final, and is not open to appeal.

After a successful defense, the candidate must correct any errors detected by the readers to the satisfaction of the Supervisor and then submit an electronic copy to the School of Graduate Studies via Digital Commons (see Section 2.8.3 - Publication of Electronic Theses at McMaster University). The fee for archiving the thesis is paid by the student. Students must 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 Digital Commons.

4.5 Supervision

The general regulations in regard to supervision, described earlier (Section 2.7), apply to doctoral students.

Students will be expected to confer with the Chair of the Department/Program and others in choosing a supervisor for their entire doctoral program, including the proposed research. As soon as possible, and in any case not later than six months following their arrival, a supervisory committee will be appointed by the department/program, on the recommendation of the students and their possible supervisors. 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 Associate Vice-President & Dean of Graduate Studies. If the need arises, the membership of a supervisory committee will be subject to change by the same procedures involved in its appointment (see Section 2.7 - Supervision). Supervisory committee members, including supervisors, may not resign without the department's/program's approval. The duties of the Ph.D. supervisory committee will be as follows:

- 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 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, usually through the student's supervisor;
- to provide the student with regular appraisals or 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;
- to initiate appropriate action if the student'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 give advice during this process;
- to act as internal examiners for the student's thesis;

- to act as members of the examination committee for the final oral defense when so appointed.

The supervisory duties of the department/program will be as follows: to provide all Ph.D. students in its doctoral program with copies of the complete departmental regulations of the program (such regulations are subject to approval by the Faculty Committee on Graduate Curriculum and Policy); to approve the membership and work of the supervisory committee; and, when necessary, to make changes in the membership; to report this membership to the Faculty Committee on Graduate Admissions and Study; at least once a year to review each student's course grades and research progress, as reported by the supervisory committee; to conduct comprehensive examinations; to conduct or arrange for language examinations when these are required; to attest to the Faculty Committee on Graduate Admissions and Study that all departmental and University requirements for the degree have been satisfied; to name any departmental representatives to the examination committee for the final oral defense of the thesis; to replace any members of the supervisory committee, including the supervisor when on leave of absence or, if necessary, when on research leave.

Part-time students must have their course grades and research progress reviewed at least once a year by the supervisory committee.

4.6 Program Duration

The minimum time in which to complete a Ph.D. program at McMaster is three calendar years beyond the bachelor's level or two calendar years 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.

Completion of the Ph.D. degree is normally limited to six years 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 eight years 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. A student whose work is unsatisfactory 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 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".

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 defense 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.

At the time of readmission, 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 5.1) to compensate for the costs of the defense and subsequent processing of the thesis.

5. FINANCIAL MATTERS

5.1 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 student fees. They cover the various charges which would be incurred for reasons of late payment or late registration. The 2013-2014 fees schedule is in effect for a period of September 1, 2013 to August 31, 2014 and applies to all graduate students whether registered in regular or part-time degree programs.

2013-2014 Schedule of Fees (Canadian Fees)

New Students (Term 1)	Fall	Winter	Spring	Total
Regular Tuition Fees	2,336.00	2,336.00	2,336.00	7,008.00
Part-time Fees	1,168.00	1,168.00	1,168.00	3,504.00
Returning Students (Terms 2-4 in September 2013)	Fall	Winter	Spring	Total
Regular Tuition Fees	2,336.00	2,336.00	2,336.00	7,008.00
Part-time Fees	1,168.00	1,168.00	1,168.00	3,504.00
Returning Students (Terms 5-7 in September 2013)	Fall	Winter	Spring	Total
Regular Tuition Fees	2,249.00	2,249.00	2,249.00	6,747.00
Part-time Fees	1,125.00	1,125.00	1,125.00	3,375.00
Returning Students (Terms 8-10 in September 2013)	Fall	Winter	Spring	Total
Regular Tuition Fees	2,166.00	2,166.00	2,166.00	6,498.00
Part-time Fees	1,083.00	1,083.00	1,083.00	3,249.00

Returning Students (Terms 11 or greater in September 2013)	Fall	Winter	Spring	Total
Regular Tuition Fees	2,086.00	2,086.00	2,086.00	6,258.00
Part-time Fees	1,043.00	1,043.00	1,043.00	3,129.00
Discounted Fees (Ph.D. only) (Terms 13 or greater in September 2013)	1,043.00	1,043.00	1,043.00	3,129.00
Readmission to Defend Thesis				
1,043.00				

**2013-2014 Schedule of Fees
(International Fees)**

All Levels	Fall	Winter	Spring	Total
Regular Tuition Fees	5,587.00	5,587.00	5,587.00	16,761.00
Part-time Fees	2,867.00	2,867.00	2,867.00	8,601.00
Discounted Fees (Ph.D. only)	1,043.00	1,043.00	1,043.00	3,129.00

Mandatory Supplemental Fees (Full time)	Sept. 2013	Jan. 2014	May 2014
Administrative Services	21.57	14.38	7.19
Student Services	115.68	77.12	38.56
GSA Fee	54.76	54.76	27.38
GSA Health Insurance Plan	182.00	121.34	0.00
GSA Dental Insurance Plan	170.00	133.34	0.00
HSR (Bus Pass)	182.70	182.70	0.00
Sports Complex Building Fee	34.95	23.30	11.65
GSA Capital Building Fee	60.00	40.00	20.00
Total	821.66	646.94	104.78

Mandatory Supplemental Fees (Part time)	Sept. 2013	Jan. 2014	May 2014
Administrative Services	10.80	7.20	3.60
Student Services	57.84	38.56	19.28
GSA Fee	33.14	33.14	16.57
GSA Health Insurance Plan	182.00	121.34	0.00
GSA Dental Insurance Plan	170.00	133.34	0.00
HSR (Bus Pass)	0.00	0.00	0.00
Sports Complex Building Fee	34.95	23.30	11.65
GSA Capital Building Fee	40.00	26.67	13.33
Total	528.73	383.55	64.43

2013-2014 Post Degree (Canadian)	up to 1 Half course	up to 2 Half courses	up to 3 Half courses
Tuition	1,168.00	2,336.00	3,504.00
Administrative Services	3.60	7.20	10.80
Student Services	19.25	38.50	57.75
GSA Fee	11.04	22.08	33.12
Sports Complex Building Fee	11.65	23.30	34.95
GSA Capital Building Fee	13.33	26.67	39.99
Total	1,226.87	2,453.75	3,680.61

	up to 1 Half course	up to 2 Half courses	up to 3 Half courses
2013-2014 Post Degree (International)			
Tuition	2,867.00	5,734.00	8,601.00
Administrative Services	3.60	7.20	10.80
Student Services	19.25	38.50	57.75
GSA Fee	11.04	22.08	33.12
Sports Complex Building Fee	11.65	23.30	34.95
GSA Capital Building Fee	13.33	26.67	39.99
Total	2,925.87	5,851.75	8,777.61

2013-2014 Special Program Fees

DEGREES:

Advanced Design and Manufacturing Institute

2,700.00 per half course

Health Research Methodology (HRM) – On-line courses

International 2,867.00 per half course plus mandatory part-time supplementary fees

Master of Business Administration (MBA) *

Canadian

Level 1 Full-time 7,996.00 per term (23,988.00 annually) plus mandatory supplemental fees (please see MBA in-course website for mandatory supplemental fees)

Part-time (per course) 1,999.00 (5,997.00 annually) plus mandatory supplemental fees

Level 2 Full-time 7,852.00 per term (23,556.00 annually) plus mandatory supplemental fees

Part-time (per course) 1,963.00 (5,889.00 annually) plus mandatory supplemental fees

Co-op Placement Fee (if applicable) 1,750.00

International

All Levels Full-time 15,145.00 per term (45,435.00 annually) plus mandatory supplemental fees

Part-time (per course) 3,786.00 (11,358.00 annually) plus mandatory supplemental fees

Co-op Placement Fee (if applicable) 1,750.00

*** MBA Mandatory Supplemental Fees**

Canadian and International Full-Time All Levels:

Athletics & Recreation Activity Fee	37.42	
MBA Association Fee	152.50	
Business Employment Services Fee	265.00	
Educational Trading Centre Fee		15.00
GSA Health Plan Fee	192.00	

Canadian and International Part-Time All Levels:

Athletics and Recreation Activity Fee (per term)	18.70
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Master of Communications Management

Canadian 3,507.00 per course plus PT mandatory supplemental fees

International 3,786.00 per course plus PT mandatory supplemental fees

Master of Engineering & Master of Engineering in Manufacturing Engineering*

New Students (Term 1)	Fall	Winter	Spring	Total
Regular Tuition Fees	2,452.00	2,452.00	2,452.00	7,356.00
Part-time Fees	1,226.00	1,226.00	1,226.00	3,678.00
Returning Students				
(Terms 2-4 in September 2013)	Fall	Winter	Spring	Total
Regular Tuition Fees	2,408.00	2,408.00	2,408.00	7,224.00
Part-time Fees	1,204.00	1,204.00	1,204.00	3,612.00
Returning Students				
(Terms 5-7 in September 2013)	Fall	Winter	Spring	Total
Regular Tuition Fees	2,318.00	2,318.00	2,318.00	6,954.00
Part-time Fees	1,159.00	1,159.00	1,159.00	3,477.00
Returning Students				
(Terms 8-10 in September 2013)	Fall	Winter	Spring	Total
Regular Tuition Fees	2,233.00	2,233.00	2,233.00	6,699.00
Part-time Fees	1,116.00	1,116.00	1,116.00	3,348.00
Returning Students				
(Terms 11 or greater in September 2013)	Fall	Winter	Spring	Total
Regular Tuition Fees	2,150.00	2,150.00	2,150.00	6,450.00
Part-time Fees	1,075.00	1,075.00	1,075.00	3,225.00

* Plus mandatory supplemental fees

Master of Engineering Design

Canadian

Level 1 Full-time 5,530.00 per term (16,590.00 annually) plus mandatory supplemental fees

Part-time 2,838.00 per term (8,514.00 annually) plus mandatory supplemental fees

Level 2 Full-time 5,430.00 per term (16,290.00 annually) plus mandatory supplemental fees

Part-time 2,786.00 per term (8,358.00 annually) plus mandatory supplemental fees

International

All Levels Full-time 6,243.00 per term (18,729.00 annually) plus mandatory supplemental fees

Part-time 3,203.00 per term (9,609.00 annually) plus mandatory supplemental fees

**Master of Engineering Entrepreneurship and Innovation / Master of Technology
Entrepreneurship and Innovation**

Canadian

Level 1 Full-time 6,357.00 per term (19,071.00 annually) plus mandatory supplemental fees

Part-time 3,178.00 per term (9,534.00 annually) plus mandatory supplemental fees
Level 2 Full-time 6,242.00 per term (18,726.00 annually) plus mandatory supplemental fees

Part-time 3,120.00 per term (9,360.00 annually) plus mandatory supplemental fees

International

All Levels Full-time 9,634.00 per term (28,902.00 annually) plus mandatory supplemental fees

Part-time 4,816.00 per term (14,448.00 annually) plus mandatory supplemental fees

Master of Engineering and Public Policy

Canadian

Level 1 Full-time 5,530.00 per term (16,590.00 annually) plus mandatory supplemental fees

Part-time 2,838.00 per term (8,514.00 annually) plus mandatory supplemental fees

Level 2 Full-time 5,430.00 per term (16,290.00 annually) plus mandatory supplemental fees

Part-time 2,786.00 per term (8,358.00 annually) plus mandatory supplemental fees

International

All Levels Full-time 6,243.00 per term (18,729.00 annually) plus mandatory supplemental fees

Part-time 3,203.00 per term (9,609.00 annually) plus mandatory supplemental fees

Master of Finance

All Levels Full-time 12,000 per term (36,000 annually) plus mandatory supplemental fees

Master of Health Management

Canadian 2,600.00 per 1/2 course plus PT mandatory supplemental fees

International 5,200 per 1/2 course plus PT mandatory supplemental fees

Master of Science – Health Science Education

Canadian

Level 1 Full-time 7,560.00 annually plus mandatory supplemental fees

Part-time 5,040.00 annually plus mandatory supplemental fees

Level 2 Full-time 7,423.00 annually plus mandatory supplemental fees

Part-time 4,948.00 annually plus mandatory supplemental fees

Per course 1,855.00

International

Full-time 17,213.00 annually plus mandatory supplemental fees

Part-time 8,833.00 annually plus mandatory supplemental fees

Per course 2,968.00

MD/Ph.D. Program

This program covers both the MD and Ph.D. curriculum over a period of seven years. During the MD years, students will be assessed tuition fees based on tuition for the MD programs. During the Ph.D. years, students will be assessed tuition fees based on tuition for full time Ph.D. students as shown on the schedule above. Mandatory supplemental fees are based on full time rates. During the MD

portion of curriculum, extra fees will be assessed for the Learning Resource fee, Medical Society fee, Health Screening fee, and Respiratory Mask Fitting fee.

Occupational Therapy/Physiotherapy Fees

Canadian Fees	M.Sc. (OT)	M.Sc. (PT)
Tuition Fees	9,044.00	9,044.00
Administrative Services	21.57	21.57
Student Services	115.68	115.68
GSA Fee	54.76	54.76
GSA Health Insurance Plan	182.00	182.00
GSA Dental Insurance Plan	170.00	170.00
HSR (Bus Pass)	182.70	182.70
Sports Complex Building Fee	34.95	34.95
GSA Capital Building Fee	60.00	60.00
Learning Resource Fee	163.40	251.92
Communicable Disease Screening Fee	26.79	26.79
Respiratory Mask Fitting Fee	21.92	21.92
Total	10,077.77	10,166.29

International Fees	M.Sc. (OT)	M.Sc. (PT)
Tuition Fees	31,558.00	31,558.00
Administrative Services	21.57	21.57
Student Services	115.68	115.68
GSA Fee	54.76	54.76
GSA Health Insurance Plan	182.00	182.00
GSA Dental Insurance Plan	170.00	170.00
HSR (Bus Pass)	182.70	182.70
Sports Complex Building Fee	34.95	34.95
GSA Capital Building Fee	60.00	60.00
Learning Resource Fee	163.40	251.92
Health Screening Fee	26.79	26.79
Respiratory Mask Fitting Fee	21.92	21.92
Total	32,591.77	32,680.29

Rehabilitation Science - On-line

Canadian 1,449.00 per 1/2 course plus PT mandatory supplemental fees

International 2,523.00 per 1/2 course plus PT mandatory supplemental fees

UNENE

2,700.00 per 1/2 course plus PT mandatory supplemental fees

DIPLOMAS:

Advanced Neonatal Nursing Diploma

12,651.00 per year

Post-master degree students also pay PT supplemental fees

Gender Studies and Feminist Research Diploma

Canadian 1,168 per half course

International 2,705 per half course

Post-master degree students also pay PT supplemental fees

Management of Innovation and New Technology (MINT)

1,470.00 per half course plus PT mandatory supplemental fees

Nuclear Technology Diploma

1,285.00 per 1/2 course plus post-degree supplementary fees

POST DEGREE Special Program Fees

Tuition is equivalent to the Domestic or International (whichever applies) per course fee plus:

Administrative Services	3.60	7.20	10.80
Student Services	19.25	38.50	57.75
GSA Fee	11.04	22.08	33.12
Sports Complex Building Fee	11.65	23.30	34.95
GSA Capital Building Fee	13.33	26.67	39.99

Visiting students (Research Only)

Zero tuition plus post degree mandatory supplemental fees on a per term basis

Visiting students (Course-based)

Course fee or program fee as appropriate

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. International students in Term 7 or greater of a Master’s program or Term 13 or greater of a Ph.D. program will pay Canadian fees.

Most students will pay regular fees. Part-time fees apply only to those students originally offered admission to a part-time program. If students change status from full time to part time, they will still be required to pay regular fees. The part-time fees will allow registration in up to 3 half courses per academic year. Students registering in more than 3 half courses will be assessed full-time fees (not students in the UNENE, ADMI, Health Management, Rehabilitation Science (on-line), and Communications Management programs). 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 to full time at a ratio of 2:1.

Ph.D. students who have been registered as full-time for longer than the normal period of funding eligibility (as defined in Section 5.2.1) will be assessed discounted fees.

A fee is charged for each course taken on the basis of Section 2.1.5 by persons who are not registered graduate students. The fee for certain courses may be higher.

Students on leave of absence do not pay tuition fees but do pay mandatory supplemental fees. Students who are on leave for a complete academic year do not pay mandatory supplemental fees. Students who have “withdrawn in good standing due to time limit” do not pay fees until readmission. See Section 5.1.4 (Readmission Tuition Charges). Students admitted in January or May, will have a slightly different schedule of fees.

Enquiries should be referred to the School of Graduate Studies, 905 525-9140 Ext. 23679.
E-mail: askgrad@mcmaster.ca

5.1.1 Payment of Fees

In order to register a student must either:

- (a) pay by cash or cheque, full tuition and all additional fees for the full year;
or
- b) have been offered and accepted a teaching assistantship and/or scholarship whose sum less appropriate taxes and deductions exceeds the amount of tuition and all other mandatory supplemental fees. Fees will be deducted from the student’s monthly pay;
or
- (c) have made special arrangements with Financial Services.

5.1.2 Non-payment of Fees or Charges

Students with outstanding accounts at the end of the academic year will:

- (a) not receive academic results; and
- (b) not be permitted to register for the next academic year until the account is settled.

5.1.3 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. The discounted tuition rate is normally equal to 1/2 of the Canadian tuition rate.

5.1.4 Readmission Tuition Charges

Students who do not register and pay tuition 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. Ph.D. students who were withdrawn in good standing due to time limit and are successful in gaining readmission will be assessed a full year's fees at the discounted rate and the existing application fee, and will not be eligible for a refund. The readmission fee covers registration until the next academic session.

Students who withdrew voluntarily or did not register for an academic session and wish to apply for readmission must pay a full year's fees at the current rate of the last category (regular or part-time) in which they were registered and the existing application fee and will not be eligible for a refund. 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.

5.1.5 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. (Note: This does not apply to students who are readmitted.) The refund is based on the number of full months remaining in the academic year. Mandatory supplemental fees are not refundable.

5.2 Financial Assistance

5.2.1 Financial Support for Full-time Students

The University normally provides four types of financial support to full-time students. They are employment income, graduate/department or research scholarships, internal scholarships and bursaries, and external awards tenable at the university. A student's letter of offer or award letter from the University will include all details of financial support. Students with questions regarding financial support should contact their department or graduate program directly for assistance.

The University provides graduate scholarship awards to most regular graduate students in Ph.D. programs and in many Master's programs. These students must be full-time as defined in section 2.5.2. Such scholarships are awarded annually. A Ph.D. student is normally eligible for his/her first four years. Students in Master's programs are usually supported for their first three to six terms depending on the department. Subsequent support is at the department or graduate program's discretion, unless the offer of admission guarantees otherwise.

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 totalling 505 hours or more in a single academic year will be approved. Employment is paid as earned over the period in which the work is performed. Note that employee number and student number are different.

5.2.2 Financial Payments to Graduate Students

International students must provide a clear demonstration of their means of financial support in order to obtain a student visa. The Faculties may provide tuition bursary funds to visa students to assist with tuition fees. These monies are paid over the same time period that the tuition is deducted.

For students receiving scholarship support and/or employment income, graduate pay is distributed on the last Thursday of each month, except in December when wages shall be paid by the 15th of the month. The direct deposit method of payment is mandatory. A Statement of Earnings, showing details of payment, will be mailed to the student at the department's general address.

The University is required by law to deduct Canada Pension Plan and Employment Insurance premiums on all employment income. Income Tax will be assessed on employment income only.

Payment of employment or scholarships and bursaries may be distributed unevenly during the academic year in order to provide approximate equal payments throughout the year. Generally, this approach will result in a graduate student receiving a greater percentage of his/her scholarship funding during the summer than during the first eight months of the year. Students should consult with their program or department about the schedule of payments.

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 monies owing to McMaster, such as taxes or award repayments to an external agency, will be deducted from the student's financial support as necessary.

6. ADDITIONAL UNIVERSITY REGULATIONS AFFECTING GRADUATE STUDENTS

6.1 Academic Integrity

The following brief statement is excerpted in part from the McMaster University Academic Integrity Policy. For guidance on how to proceed in the case of suspected academic dishonesty, please consult the Office of Academic Integrity and the complete policy at <http://www.mcmaster.ca/academicintegrity>. The Associate Deans of Graduate Studies are available for confidential consultations on matters related to academic 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 (Undergraduate and Graduate)

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

- (a) following the expectations articulated by instructors for referencing sources of information and for group work;
- (b) asking for clarification of expectations as necessary;
- (c) identifying testing situations that may allow copying;
- (d) preventing their work from being used by others, e.g., protecting access to computer

- files; and
- (e) adhering to the principles of academic integrity when conducting and reporting research.

Students are responsible for their behaviour and may face penalties under this policy, if they commit academic dishonesty.

Graduate Students

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. 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."

6.2 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://www.mcmaster.ca/policy/student.htm>.

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 at: xxxx

6.3 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 Student Appeal Procedures 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 communicate informally with their instructors, the Chair of his/her Supervisory Committee (or the Department Graduate Advisor where no committee exists), the Department Chair and/or the Associate Dean of Graduate Studies, the University Ombud, 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 is specifically excluded from the re-read procedures identified in the Student Appeal Procedures, as is a Ph.D. comprehensive exam. 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 further "re-read" of the examination is permitted.

The Student Appeal Procedures may be found at:

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

6.4 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.

6.4.1 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.

6.4.2 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 above. 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, 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.)

6.4.3 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 his/her 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.

6.4.4 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.

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.

6.4.5 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.

6.5 McMaster University Policy for Academic Accommodation of Students with Disabilities

McMaster University is committed to ensuring that each 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. To this end, the University has a Centre for Student Development and is continuously making improvements to its facilities to maximize access for all students. The School of Graduate Studies, along with the relevant academic department(s) and the Centre for Student Development, encourages academically qualified students to investigate the full range of possibilities at McMaster.

As with all applicants, those with disabilities are expected to select graduate programs that are appropriate for their skills and abilities. Materials provided to applicants by departments should describe specific program requirements, including the nature of research and/or course work, to ensure that the applicant is aware of the expectations for successful completion of the program. Students with pre-existing disabilities, as well as students who become disabled after their admissions to graduate studies, may require special support services and accommodations in order to complete their programs successfully. The University will take reasonable steps to provide such services and accommodations that do not compromise the quality and integrity of the student's academic program. Self-identification is voluntary and confidential, and access to information must be approved by the applicant. To facilitate accommodation, however, McMaster University urges applicants to declare any disabilities, as well as to provide details concerning accommodations provided by their previous educational institutions, at the time of application. Such declaration is encouraged particularly in cases where it is felt that the disability may have affected past academic performance, and/or where accommodation may be required in order for the student to complete his/her graduate program. Applicants who have been identified and who are offered admission will need to consult with their Department/Program Chair and the Centre for Student Development as early as possible, and preferably prior to enrolment, to identify and implement an appropriate accommodation plan. At all times, concern for maintaining the dignity of the individuals involved will be paramount. Failure to disclose a disability at the time of admission, however, may delay or otherwise compromise the accommodation process.

Special services and accommodations are provided on an individual basis, are disability specific, and are consistent with the academic objectives of the course and program. McMaster University's *Policy for Academic Accommodation of Students with Disabilities* outlines the steps that must be taken in order to arrange for such services and accommodations (see Sections 31-34 inclusive). The full policy is available from the Centre for Student Development.

6.6 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, even those signed only by the faculty member but referring to student involvement, can restrict conditions for a number of matters important to students, such as their wish to publish research results, the thesis defense, and the deposit of the thesis with libraries. In many cases, the restrictions are reasonable and do not clash with academic principles that require the presentation of research findings for peer assessment.

In those instances where a Non-disclosure Agreement has been signed, a supervisor must notify the Associate Vice-President & Dean of Graduate Studies in writing of the Agreement, giving a brief description of its contents and assessing the impact on the thesis defense or dissemination of the thesis.

Students are advised to discuss any non-disclosure waivers or comparable agreements with the department chair, graduate advisor, or the School of Graduate Studies, before signing.

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 defense, 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 Associate Vice-President & Dean of Graduate Studies.

6.7 Conflict of Interest Guidelines, School of Graduate Studies

6.7.1 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.

6.7.2 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 defense 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 Associate Vice-President & Dean of Graduate Studies for a decision.

6.8 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 her or his file, but documents received from a third party in confidence will not be disclosed.

Transcripts are issued only with the consent of the student.

6.9 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.

6.10 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 complete the form for an Ontario Visiting Graduate Student (available from the School of Graduate Studies website) 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.

7. GENERAL INFORMATION

Counselling Services

Human Rights and Equity Services - <http://www.mcmaster.ca/hres>

International Student Services – Tel. 905-525-9140 ext.24700; iss@mcmaster.ca ext.

Ombuds Office – <http://www.mcmaster.ca/ombuds>

Student Accessibility Services - <http://sas.mcmaster.ca/>

Student Financial Aid and Scholarships – <http://sfas.mcmaster.ca>

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) - <http://www.workingatmcmaster.ca>

Housing and Conference Services and Hospital Services

Conference and Event Services – <http://conference.mcmaster.ca>

Hospitality Services – <http://hospitality.mcmaster.ca>

McMaster Community Homes Corporation – Tel. 905-578-3833;

E-mail: receptionist@communityhomes.ca

Off-Campus Housing – <http://macoffcampus.ca> (Off-Campus Resource Centre)

On-Campus Housing – <http://housing.mcmaster.ca> (Housing and Conference Services)

Student Associations

Graduate Students Association (GSA) – <http://www.mcmaster.ca/gsa>

McMaster University Alumni Association – <http://www.mcmaster.ca/ua/alumni>

Other University Services/Facilities

Athletics and Recreation – <http://www.marauders.ca>

Bookstore and Post Office – <http://www.bookstore.mcmaster.ca> (Titles Bookstore)

Day Care Facilities at McMaster

- McMaster Children’s Centre Incorporated – <http://www.mcmaster.ca/mcmcc>

- McMaster Students’ Union Child Care Centre – Tel. 905-526-1544

E-mail: dthomson@msu.mcmaster.ca

Parking Services – <http://parking.mcmaster.ca>

Security Services – <http://security.mcmaster.ca>

University Chaplain Centre – <http://www.mcmaster.ca/chaplain>

Special Resource Services/Facilities

Centre for Continuing Education – <http://www.mcmastercce.com>

Centre for Leadership in Learning – <http://cll.mcmaster.ca>

McMaster Media Production Services – <http://www.media.mcmaster.ca>

McMaster Museum of Art – <http://www.mcmaster.ca/museum>

Office of International Affairs – <http://www.mcmaster.ca/oia>

Office of Sustainability - <http://www.mcmaster.ca/sustainability/index.html>

University Library – <http://library.mcmaster.ca>

University Technology Services (UTS) – <http://www.mcmaster.ca/uts>

8. GRADUATE SCHOLARSHIPS, BURSARIES AND OTHER AWARDS

(<http://graduate.mcmaster.ca/graduate-scholarships>)

8.1 Overview

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.

8.1.1 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) and bursaries may be cancelled without notice if the conditions under which they are granted are violated. 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;
- 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 publishes the names of recipients of most scholarships and awards, in the University's convocation program and other award publications.

8.1.2 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.

8.2 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. Continued funding for graduate students from the University or from individual programs will be based on satisfactory progress of the student in 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, 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, he/she should realize that it is for the first term of study only and is not renewable.

8.2.1 Internal Scholarships and Bursaries

Internal scholarships (including fellowships, prizes, medals and awards) and bursaries (hereafter referred to as awards) 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, research excellence and potential or financial need. Adjudication for internal awards normally occurs at the department level. Departments forward their recommendations to the School of Graduate Studies for final approval. 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. Deadlines for the various internal awards vary and are

explained in more detail on the School of Graduate Studies website, which are listed alphabetically by their complete official names.

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. Where the terms of such awards become impossible to fulfill, the University may amend the terms of an award to carry out the nearest possible intent of the donor, while still ensuring that the benefit of such award continues. The University also reserves the right to withdraw and/or to suspend granting of an award, or to adjust the stated value and/or number of awards in years in which insufficient income is available due to fluctuations in investment markets.

Additional bursaries or financial assistance may be available through the Office of Student Financial Aid & Scholarships (Gilmour Hall, Room 120).

8.2.2 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). Applicants must be invited by their department to submit an application to these competitions and verify eligibility requirements with the external agencies.

Awards from external agencies are sometimes renewable. 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 subsequent year). Applications and eligibility requirements are usually indicated on respective government agency web sites by late August. Deadlines vary but can occur in early October 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 the department. If the student changes his/her 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.

8.3 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.

9.0 GOVERNING BODIES

9.1 Senate

The University Senate consists of approximately 65 members, including the Chancellor, the President (Chair), the Vice-Presidents, the Associate Vice President & 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>

9.2 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 Associate Vice President & 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 Student Life and Research Training, the Executive Director (Strategic Planning & Administration), 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 By-laws 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.

9.2.1 Executive Committee of Graduate Council

The Executive Committee of Graduate Council is composed of the Associate Vice President & 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 Associate Vice-President & 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).

9.2.2 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 fourteen 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. Many of the scholarships listed in section 8 refer to the Scholarships Committee in its capacity as a selection committee.

9.3 Standing Committees

9.3.1 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.

9.3.2 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 acting as a hearings committee for student appeals and cases of alleged academic dishonesty. The Secretary of all Committees, to whom business items may be addressed, is the Associate Graduate Registrar and Secretary of Graduate Studies.

10. DEGREE PROGRAMS

Approved degree programs of instruction and research are described in Section 10. The majority of these programs are described under the titles of the departments or schools offering them. However, there are some programs listed, notably those in Health Research Methodology, Nursing, Medical Sciences, and Statistics which cut across departmental lines. Section 11 lists the various interdisciplinary/collaborative areas of research, which provide opportunities for graduate study but which are not formally approved degree programs.

Section 12 describes the various graduate diploma programs offered by McMaster. These diplomas consist of course work only in a minimum of four half courses from a predefined list. The diplomas are usually a subset of a larger program and are therefore highly specialized.

The title “Distinguished University Professor”, which appears under several program headings, is bestowed upon those faculty who have made a distinguished contribution to the University through research, scholarship, and education.

The courses listed in this Calendar represent the graduate teaching and research interests of each department. Not all courses, however, will be offered each year. Students should check with the department concerned.

Anthropology	72
Biochemistry	78
Biology	86
Biomedical Engineering	94
Business Administration	103
Chemical Biology	163
Chemical Engineering	169
Chemistry	178
Civil Engineering	186
Classics	200
Cognitive Science of Language	205
Communications Management	214
Communication and New Media	222

Computational Science and Engineering	227
Computer Science	237
Cultural Studies and Critical Theory	251
Earth and Environmental Sciences	377
Economic Policy	262
Economics	262
eHealth	272
Electrical and Biomedical Engineering	279
Electrical and Computer Engineering	279
Engineering Design	298
Engineering Entrepreneurship and Innovation	308
Engineering Physics	314
Engineering and Public Policy	331
English	337
Finance	354
French	360
Gender Studies and Feminist Research	371
Geography	377
Global Health	390
Globalization	400
Health and Aging	408
Health Management	412
Health Policy	417
Health and Radiation Physics	509
Health Research Methodology	424
Health Science Education	444
History	450
Kinesiology	463
Manufacturing Engineering	469
Materials Engineering	473
Materials Science	473

Mathematics	483
Mechanical Engineering	493
Mechatronics	237
Medical Sciences	516
Neuroscience	531
Nursing	540
Occupational Therapy	552
Philosophy	560
Physics and Astronomy	564
Physiotherapy	575
Political Science	581
Psychology	591
Radiation Sciences (Medical Physics/Radiation Biology)	509
Rehabilitation Science	596
Religious Studies	609
Social Work	617
Sociology	624
Software Engineering	237
Software Engineering and Virtual Systems Design	237
Statistics	634
Technology Entrepreneurship and Innovation	643
Work and Society	650



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 Secretary and SynApps Systems Administrator

At its meeting on March 5th, 2014 the Faculty of Health Sciences Policy and Curriculum Council approved the following graduate curriculum recommendations.

Please note that these recommendations are being sent for approval to the March 26th, 2014 Faculty of Health Sciences Executive Meeting.

For approval of Grad Council

Rehabilitation Science

- Comprehensive Exam Procedure Change
- Transfer Exam Procedure Change
- Program Specializations Change

For information of Grad Council

Rehabilitation Science

- Course Evaluation Change– *717 Special Topics in Statistical Methods for Rehabilitation Science



SCHOOL OF GRADUATE STUDIES

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

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 emailed to the Assistant Secretary and SynApps System Administrator (Email: *espiritu@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		School of Rehabilitation Science						
NAME OF PROGRAM		Rehabilitation Science (RS) Graduate Program						
PROGRAM DEGREE	Ph.D. (X)	M.A. ()	M.A.Sc. ()	M.B.A. ()	M. Eng. ()	M.Sc. ()	Diploma Program ()	Other (Specify)
NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)								
CHANGE IN ADMISSION REQUIREMENTS		<input type="checkbox"/>	CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE		<input checked="" type="checkbox"/>	CHANGE IN COURSE REQUIREMENTS		
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR			EXPLAIN:					
OTHER	EXPLAIN:							
DESCRIBE THE <u>EXISTING</u> REQUIREMENT/PROCEDURE:								
<p>In the previously version of our Comprehensive Exam, the following were present:</p> <ol style="list-style-type: none"> 1. External examiners came from outside the school. 2. There were there (3) tasks including a KT component to the portfolio. 3. It was unclear how a failed examination was handled. 								

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

We have made the following revisions and had them approved by our RS Curriculum Committee:

1. The external should be independent from the Supervisor and student, but need not be external to the school
2. The KT component can be either a KT or an educational component
3. The procedure for a failed Comprehensive Exam is that the Examining Committee decides, which elements need repeating and a second closed defence is scheduled where a majority decision determines pass/fail

RATIONALE FOR THE RECOMMENDED CHANGE:

1. People external to the school are difficult to recruit for a Comprehensive Exam, and often do not understand the process or level of expectation.
2. The IQAP review suggested students want more opportunities to develop as educators and the addition of a education option in the portfolio is part of a multi-pronged strategy to meet these needs.
3. The procedure for a repeat examination needed clarification.
4. The policy was also streamlined where wordy or unclear, and the timeline was removed as this is "procedural support" and not policy. Documents in the Rehabilitation Science Handbook to support students in their Comprehensive Examination will include:
 1. Proposal form
 2. List of acceptable and unacceptable component examples (from past decisions)
 3. Timeline recommendations – removed from policy
 4. Strategies for success on your Comprehensive Portfolio
 5. Guidelines for examiners

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

Upon approval

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:

The revised policy is attached

CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: JOY MACDERMID Email: macderj@mcmaster.ca Extension: 22524 Date: February 5, 2014

If you have any questions regarding this form, please contact the Assistant Secretary and SynApps System Administrator, School of Graduate Studies, extension 24204.

SGS/medy

Rehabilitation Science (RS) Graduate Program COMPREHENSIVE EXAMINATION

OVERVIEW

Students are expected to successfully complete the Comprehensive Examination process **within 18 months** (by 5th term) for full-time students and **within 28 months** (by 7th term) for part-time students, starting from the date of admission to the PhD program. The Comprehensive Examination process will include the submission and oral defence of a Portfolio as described below.

PURPOSE OF THE COMPREHENSIVE EXAMINATION

The purpose of the Comprehensive Examination is for students to gain competency and demonstrate a breadth of knowledge and skills that are required to fulfill future roles as Rehabilitation Scientists. Students are expected to demonstrate their competency in areas that extend beyond their thesis work, including the ability to:

- Critically appraise and synthesize concepts and research literature in areas that are distinct from their thesis topic.
- Produce written and oral communications that meet scientific standards for peer-reviewed publication and presentation.
- Produce a funding application that meets scientific standards for peer-reviewed grant funding.
- Develop effective strategies to move rehabilitation research into practice through knowledge translation or educational initiatives.

CONTENT OF PORTFOLIO

The Portfolio must include the following scholarly materials:

1. **A Scholarly Paper Ready for Submission to a Peer Reviewed Journal:** This paper may consist of a theoretical/conceptual paper; or a primary/secondary research study. The scholarly paper must demonstrate that the student has extended their knowledge base beyond their thesis work. This paper must be distinct from the thesis with respect to content/topic area, but may also utilize different methods. Students will explain how their proposed paper is distinct from their thesis research in their comprehensive proposal. The standard that will be applied by the Comprehensive Examination Oversight Committee when approving the proposed work is that if a proposed paper could be a viable manuscript within the thesis, then it does not meet the independence requirements.
2. **An operating grant proposal** of 10 single-spaced pages ready for submission to an appropriate agency that conducts peer review. The research grant may request funding for the thesis research, or may request operating funds for a different project. Personnel awards do not fulfill this criterion. The grant should follow grant agency guidelines, but must include:
 - A review of the literature and rationale for the study.
 - A detailed description of the research questions, methods and analysis.
 - The roles and qualifications of the research team.
 - A budget explaining how funds will be used, including a justification.
 - Key outcome measures as appendices.
 - It does NOT need to include appendices like support letters, pilot data, publications etc.
3. **A Knowledge Translation (KT) or Educational Module:** Students may choose one of

two different approaches to demonstrate skills in moving rehabilitation knowledge into practice: either a KT approach or an educational approach.

- 3a. A KT Module:** Students will implement one component of a KT strategy and evaluate its success. A component of a KT strategy can consist of development of a resource, tool or intervention. Target audiences may include clinicians, policymakers or patients/public. Examples include any of the following:
- a. Assessment of context (e.g., practice patterns/beliefs, knowledge gaps or facilitators/barriers to implementation).
 - b. Informational resources (e.g., databases, knowledge refineries, evidence support systems).
 - c. Knowledge products (e.g., lay or policy evidence summaries, interactive workshops, brochures).
 - d. Application tools (e.g., computer/CD/app/web-based implementation tools, instruction manuals).
 - e. Decision support tools (e.g., practice guidelines, decision rules, decision support tools).
 - f. Behavior change interventions (e.g., audit and feedback, reminders, knowledge brokering, opinion leaders, interactive sessions).

The description of the KT strategy must include the following:

- a. Statement of the problem (evidence to practice gap) being addressed and a rationale for the KT strategy selected.
- b. Description of the KT (who, what, how).
- c. A description of how the KT will be evaluated.

Note: Students are not expected to implement a full KT plan, but are expected to gain experience in execution of a small component of KT. Students are expected to evaluate the experience of conducting KT and the perceived/potential usefulness of the work. Potential changes to the strategy may be discussed; but there is no expectation that these would be conducted or evaluated.

- 3b. Educational Intervention:** The educational intervention approach is designed to allow students to obtain experiential learning in RS pedagogy. Students will develop a substantial component of an educational strategy. This can include any of the following:
- a. Design of a typical university level half credit course (36 hours) in a rehabilitation relevant topic as reflected by a course outline. This outline would include: course objectives and an outline of individual sessions, including session objectives, the assigned readings and planned learning activities; and all evaluation tools.
 - b. Develop a substantial stand-alone learning module/instructional session that would include learning objectives, a session schedule and detailed presentations or learning resources required to execute the module. This educational intervention would be designed to be an execution ready level component of a university level rehabilitation course (minimum of six (6) contact hours).
 - c. Development of an innovative educational intervention strategy. Implementation of a novel approach of delivering existing information (minimum of six (6) contact hours).
 - d. A curriculum review conducted using a formalized structured review of existing curriculum that meets specific targeted objectives and makes recommendations for revisions to existing curriculum.

The description of the educational strategy must include the following:

1. Statement of the educational need (target learners, knowledge and competency

- required) and a pedagogical rationale for the approach undertaken.
2. Definition of the components of the educational strategy and how it meets the needs of the target learners. This must include a brief description of how rehabilitation research will be used to inform the content of the educational strategy.
 3. A specific description of the educational component that will be developed.
 4. A description of how the educational component will be evaluated.

Students are not expected to implement a full course, but are expected to design a substantial component and understand how it might fit within a rehabilitation curriculum.

Distinction of the portfolio from other academic activities and products

The Comprehensive Proposal meets the learning needs of the student and supplements the knowledge and skills obtained through thesis research. It is important that work presented for credit in the Comprehensive Portfolio does not duplicate work that has, or will provide academic credit including from previous academic endeavors, current thesis research or coursework. Comprehensive components, including the scholarly paper, can extend or build on course assignments; but this distinction must be clarified in the portfolio. For example, enhancement and substantial revision of a course paper may be proposed for the comprehensive scholarly paper. The scholarly paper is the opportunity to extend beyond the thesis. The Comprehensive Examination Oversight Committee adjudicates whether it is sufficiently distinct. A paper that uses a different target population, topic and methods is clearly distinct from thesis work. Where there is overlap on any of these, the student must explain the distinction between their scholarly paper and thesis research for this adjudication to be completed.

Students can base their KT portfolio component on conducting and evaluating a plan developed in the knowledge translation course or on any other topic of relevance to RS. The funding application and knowledge translation components of the Comprehensive Portfolio can be related to the thesis as neither grant-writing or KT are required thesis activities. The grant proposal component may propose part, or all, of the thesis work; but must comply with the restrictions/format of the granting agency. To maintain consistency across examinations, students are required to submit a minimum 10-page single-spaced grant application. Where students choose to apply for a grant that has requirements for a short proposal, they should submit an extended 10-page version of their grant proposal to meet requirements for the comprehensive examination.

PORTFOLIO PROPOSAL PLANNING

The Portfolio Proposal will be developed by the student in consultation with the Supervisory Committee. It is expected that the students, with support and guidance from their Supervisor and Supervisory Committee, will begin working on the Portfolio upon admission to the program. Students should discuss their Comprehensive Plan with their Supervisory Committee within the first eight (8) months in the program, usually at the first committee meeting. Students may work with a mentor other than their Supervisor or Supervisory Committee members during any of the elements of the comprehensive components. However, the comprehensive plan and how it will be mentored and completed must be discussed with the Supervisory Committee. If a mentor is recruited to help with a component of the Comprehensive work who is not appointed within RS, then the student must keep their Supervisor involved to insure departmental standards are met.

Students are expected to obtain approval for their Comprehensive Portfolio Plan from the Comprehensive Examination Oversight Committee within the first **12 months** in the program. Students have up to six (6) months to complete their comprehensive components if it is

approved within the 1st year of the program, but it is the final completion date that is considered the important milestone.

The Portfolio Plan **must be** single-spaced pages (total length excluding references and appendices). Plans over eight (8) pages will be returned to students for editing. Students who submit brief proposals with insufficient detail have their portfolio plans returned for further development. The plan **must include** the following:

- a. A brief overview of the intended doctoral thesis research (including chapter titles if known) and a brief summary of the three components of the proposed portfolio.
- b. A list of completed or ongoing courses including titles of the assignments.
- c. An explanation that addresses any potential overlap between proposed portfolio components and thesis or coursework. (Two (2) page maximum for a to c).
- d. A description of each component of the proposed portfolio (Two (2) pages for each component). Suggested guidelines for each component description include:
 - **Topic:** Provide a title and list of the Purpose(s) or Research Question(s) that will be addressed by the component.
 - **Learning Objective:** A brief description expected learning outcomes.
 - **Plan:** A description of the proposed approach/methods.
 - **Outcomes:** State the product to be delivered when the task is completed.
 - For the scholarly paper this will require identification of a target Journal.
 - For the grant application the target agency, type of funding call, and research design/approach will need to be specified.
 - For the knowledge translation project the specific KT deliverable will need to be identified; and the portfolio must outline how this deliverable will be evaluated.
 - **Feasibility issues:** Potential feasibility concerns that might be barriers to successful, timely completion of the comprehensive portfolio and management of these concerns should be briefly addressed.

Required appendices:

- For paper: A copy of the target journal's instruction to authors.
- For the grant: The posted grant call and grant guidelines.
- For the KT: A copy of any tools to be evaluated (if developed); or where educational materials are being revised a copy of the existing materials.

Committee Responsibilities Related to the Proposal Development

The student's Supervisor and Supervisory Committee are responsible for facilitating the student's development of their Portfolio Plan. The Supervisory Committee provides feedback to the student during completion of the tasks and may facilitate additional mentorship on specific tasks- if needed.

The Comprehensive Examination Oversight Committee has the main responsibility for insuring the work proposed and conducted complies with program and university policies around the comprehensive process. The Comprehensive Examination Oversight Committee reviews the proposed scope of work and provides feedback to the student about whether they have defined an appropriate scope of work that meets the expected requirements of the comprehensive examination. The Comprehensive Examination Oversight Committee makes decisions about the two (2) criteria listed below. If these two (2) criteria are not met, the student will be required to submit a revised plan.

1. The scope of the work proposed is consistent with objectives of the Comprehensive Process to demonstrate breadth of knowledge and skills.
 - a. The tasks outlined are distinct from other work for which the student is receiving academic credit.
 - b. The scholarly paper topic is distinct from the thesis.
2. There are no apparent critical flaws in the proposed work (e.g., ethical violations).

The Comprehensive Examination Oversight Committee does not judge whether optimal methods have been selected based on the Comprehensive Plan. The Comprehensive Examination Oversight Committee may make suggestions with respect to feasibility or quality in an advisory capacity. If these are provided, but students may choose submit a revised Comprehensive Portfolio Plan since this document outlines the expectations of what must be completed for the Comprehensive Examination. Where a revised portfolio is submitted, it is reviewed by the Chair of the Comprehensive Examination Oversight Committee who will finalize the revised proposal. The final approved Comprehensive Portfolio Plan contains the tasks that the student must complete and defend at the comprehensive examination.

Student Responsibilities in Completion of the Comprehensive Portfolio

The Student is responsible for:

- Adhering to this and all other McMaster policies; and consulting procedural supporting documents in the RS Graduate Handbook.
- Developing a Comprehensive Plan and obtaining Comprehensive Examination Oversight Committee approval by 12 months.
- Conducting independent work and seeking feedback during task completion.
- Notifying the Comprehensive Examination Oversight Committee if a need arises for substantive changes to the approved plan
 - It is anticipated that as the work is executed decisions will need to be made to refine the work, or accommodate for unexpected occurrences (like poor recruitment, data issues, equipment failures etc.). These do not require contact with the Comprehensive Examination Oversight Committee, but can be explained when writing the portfolio. Major changes, such as changing the topic of a component or substantial changes in the scope of work, do require an updated approval from the Comprehensive Examination Oversight Committee.
- Maintaining regular communication with their supervisory committee on progress on the approved tasks including at least one committee meeting to discuss the comprehensive components; and providing draft documents to the committee and or mentors for feedback.
- Completion of the tasks on time and as approved.
- Providing a final complete version of the Comprehensive Portfolio to their Supervisory Committee.
- Submitting a completed portfolio to the Comprehensive Examination Oversight Committee according to criteria described in this policy.
- Defending the Comprehensive Portfolio on time.

Approval Process of the Completed Portfolio for Examination

It is expected that at least two (2) members of the Supervisory Committee will provide feedback on each component of the Comprehensive Portfolio as they are developed. Upon completion of all components, the student provides their completed portfolio to their Supervisory Committee. The student informs the Supervisory Committee that any final suggestions on the completed portfolio must be received within two (2) weeks. Since the portfolio is a student examination with time limitations, the Supervisory Committee provides guidance but does not make

decisions about acceptability of the work or prevent the student from submitting the work for evaluation (by the Comprehensive Examination Oversight Committee). Students then forward the portfolio to the Chair of the Comprehensive Examination Oversight Committee when they are ready for examination and within the timelines outlined. The thesis Supervisor and Committee work with the student and the Comprehensive Examination Oversight Committee to set the date for the Comprehensive Portfolio Defence once all tasks are complete.

Within two (2) weeks of receiving a completed portfolio, the Chair of the Comprehensive Examination Oversight Committee will review the Portfolio to ensure that the content is complete and congruent with the plan submitted and grant approval to move forward to defence. Portfolios that failed to follow the guidelines will be returned for proper formatting. Where students have completed tasks that differ from the plan submitted they will be required to submit a one-page description of deviations from the initial plan. Upon granting approval for defence, the Comprehensive Examination Oversight Committee Chair will work with the Supervisor and the Comprehensive Examination Oversight Committee to appoint the members of the Comprehensive Examination Committee (as below) and set dates. The program will contact examiners and set the Comprehensive Examination.

The student must provide all members of the Comprehensive Examination Committee with a copy of the portfolio at least two (2) weeks prior to the examination date. In addition to the three (3) comprehensive components described above, the student must submit the following as part of their completed portfolio:

- a. The approved Comprehensive Plan including the appendices.
- b. A description of deviations from the original Comprehensive Plan - with an explanation for the change (one (1) page maximum).
- c. A one (1) page reflective summary on how the comprehensive tasks contributed to their development as a Rehabilitation Scientist/Educator; and, if indicated, next steps in development.
- d. Curriculum vitae.

THE COMPREHENSIVE PORTFOLIO EXAMINATION PROCESS

The Comprehensive Examination is an open defence. The presentation and questioning are open to observers; but only the Examining Committee can ask questions. The deliberations of the Examination Committee will be confidential (the Thesis Supervisor and the Assistant Dean are invited to attend the deliberations). The feedback to the candidate will be performed by the examiners with only the candidate, the candidate's Thesis Supervisor, the Assistant Dean of Rehabilitation Science, and the Examining Committee present.

The examination should be completed within two (2) hours. The student will outline the content of the three (3) components of the Portfolio in an oral presentation, and indicate how these projects have contributed to his or her development as a Rehabilitation Scientist. In addition, the student will describe the potential impact of their work on rehabilitation practice/policy/research. The presentation will be 15 - 20 minutes (students will be stopped by the Chair after 20 minutes). Following the presentation, the student will respond to questions from the three (3) examiners. The Comprehensive Examination Oversight Committee will consist of two (2) members from the student's Supervisory Committee, a member from the Comprehensive Examination Oversight Committee (who Chairs the examination), and an external examiner. The external examiner is expected to have knowledge about RS and be independent from the work being conducted by the student. This examiner may be drawn from faculty within School of Rehabilitation Science (SRS) or external to it, as long as they are independent from Supervisor and student being examined. Examiners will evaluate the student on the criteria outlined below. The Thesis Supervisor will not be a member of the

Comprehensive Examination Committee but can attend as a silent observer. This will allow the Supervisor to provide appropriate feedback to the student about their performance and future development.

After the examiners complete their questioning and the student and audience have left the room, members of the Comprehensive Examination Committee (except for the Chair) will vote on the performance of the student (first on the written Portfolio and then the oral defence). All three (3) components of the portfolio are equally important in evaluation. If the Portfolio and its defence are considered acceptable to all of the Committee members, the student will receive a "pass". To pass, no negative vote is permitted. If all Committee members agree that at least two (2) of the components are "excellent" and the third component is either good or excellent then the Committee can assign an excellent overall rating to the Comprehensive Examination. Excellent quality for each written component is judged based on standard for a publishable manuscript, a fundable grant application and an effective KT product or educational intervention. An excellent examination rating refers both the quality of the submitted written work and how it was defended. If the result of the examination is "fail" (any of members vote "fail"), then the Comprehensive Examining Committee must define whether the written or oral components were unsatisfactory for each of the three (3) components of the portfolio.

The student must be given a second opportunity to take either the entire examination, or those portions on which the failure occurred. The Comprehensive Examination Committee will determine the requirements for the second opportunity including which written components must be re-submitted and which components must be orally defended. The second Comprehensive Examination will preferably be conducted with the same Comprehensive Examining Committee. The same procedures are followed in a repeat examination, with the exception that proceedings are not open and the student only presents or responds to areas identified by the Comprehensive Examining Committee. Only the student, the Supervisor, the Assistant Dean of RS (or the assigned alternate if a conflict arises) and the examiners are present for the 2nd examination. The second examination is decided as a pass/fail based on majority vote. **The repeat examination must be completed within two (2) months following the failure.**

Students are provided with feedback from the Comprehensive Examination Committee at the completion of the examination. Usually this will take place by each member of the Committee providing verbal feedback to the student at the end of the defence. The student's Supervisor may take notes to ensure that they are able to clarify or reinforce the feedback with the student at a later date. Supervisors do not respond to the feedback provided during the examination or advocate for the student.

Criteria for Evaluation of the Examination

The purpose of the Comprehensive Examination is for students to demonstrate their ability to synthesize, integrate and apply information. The following are criteria students are expected to demonstrate through in their portfolio and/or its oral examination:

- a. The Portfolio document is well-written and organized.
- b. The Portfolio content is of appropriate depth and breadth for the doctoral level and demonstrates the student's advancing knowledge of the chosen topics.
- c. The student is able to critically appraise the literature, synthesize and integrate information, interpret concepts and theories and apply these to their work.
- d. The student can pose a sound research question and design methods to answer it; recognize limitations; and defend his/her decisions.
- e. The student understands knowledge translation and/or educational theory and is able to apply these.

- f. The student is effective with written and oral scientific communication.
- g. The student conveys an understanding of how their work fits within the field of RS.

Revised March 2014

Approved: _____ by GPCC



SCHOOL OF GRADUATE STUDIES

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

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 emailed to the Assistant Secretary and SynApps System Administrator (Email: *espiritu@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		School of Rehabilitation Science							
NAME OF PROGRAM		Rehabilitation Science Graduate Program							
PROGRAM DEGREE	Ph.D. (<input checked="" type="checkbox"/>)	M.A. ()	M.A.Sc. ()	M.B.A. ()	M. Eng. ()	M.Sc. ()	Diploma Program ()	Other (Specify)	
NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)									
CHANGE IN ADMISSION REQUIREMENTS		<input checked="" type="checkbox"/>	CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE			<input type="checkbox"/>	CHANGE IN COURSE REQUIREMENTS		<input type="checkbox"/>
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR			EXPLAIN:						
OTHER	<input checked="" type="checkbox"/>	EXPLAIN: Change in the transition process for going from a MSc to a PhD in Rehabilitation Science							
DESCRIBE THE <u>EXISTING</u> REQUIREMENT/PROCEDURE:									
<p>The old process required completion of all courses and submission of a document outlining progress on Master's research and a proposed plan for PhD thesis research. The old process required a formal defence of the thesis research plan to a committee that was mostly external to the Supervisory Committee. This process was onerous and few students attempted. Further, the students were so far along in their work when they became eligible, that it offered little savings in time.</p>									

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

A revised policy (attached) is proposed that allows students to transfer if they have completed three (3) courses (including a course in Research Methods or Statistics) with at least an A-, have a Supervisor and area of research identified and can justify their plan at a transfer meeting. The Transfer Committee now contains the Supervisor, one other member who is preferably a potential advisor, a member from the RS Admissions Committee and a Chair (usually the Assistant Dean of the RS Graduate Program)

The Graduate Calender currently says: Transfer Process (from a M.Sc. to Ph.D.program)

Exceptional students enrolled in the McMaster M.Sc. Thesis option in the Rehabilitation Science Program can apply to transfer to the Ph.D. after meeting all the course requirements of the M.Sc. and establishing a thesis plan consistent with a PhD. The application must first be approved by the student's Committee. Then, a written application is submitted to the SRS Admissions Committee, followed by an oral presentation at which time a decision on transfer is made.

RATIONALE FOR THE RECOMMENDED CHANGE:

The old process required students to complete much of their Master's degree before they were eligible for transition. Hence, few applied. Requirements to have made substantial progress on their research meant 50% of students who applied were not transitioned into the PhD program. The old process did not sufficiently engage those who would be involved in supervision of the trainee.

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

Change will apply as soon as approved

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:

Remove old policy and insert new in RS Handbook and insert one (1) attached AND change Graduate Calendar to :

Transfer Process (from a M.Sc. to Ph.D. Program). Students enrolled in a Master's program in the Rehabilitation Science Program can apply to transfer to the Ph.D. after completing three (3) courses with a minimum A- average (must include a Research Methods or Statistics Course), acquiring a PhD Supervisor and defending their training plan at a Transfer Committee Meeting.

CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: JOY MACDERMID Email: macderj@mcmaster.ca Extension: 22524 Date: February 5, 2014

If you have any questions regarding this form, please contact the Assistant Secretary and SynApps System Administrator, School of Graduate Studies, extension 24204.

SGS/medy

Rehabilitation Science (RS) Graduate Program TRANSFER PROCEDURE FROM MSc TO PhD

The following procedure is to be used by the Supervisor and Supervisory Committee of a RS MSc student enrolled in the RS Graduate Program when recommending review for transfer to the PhD program without completion of the MSc degree.

The objectives of the transfer procedure are:

- a. To assess the potential of the candidate to complete the degree level expectations of a PhD in Rehabilitation Science; and,
- b. To make a recommendation on the suitability of the candidate for direct admission to the PhD program.

PROCEDURE FOR TRANSFER

Students in the thesis-based or course-based options may apply to transfer to the PhD program. The course requirements to transfer are the same in both options. Students are required to have a PhD Supervisor before they can transfer. Students in the thesis-based option may continue with their Master's Supervisor, or transfer to a new Supervisor. Students in the Course-based option must identify an appropriate PhD Supervisor and complete the transfer process under their guidance.

The process is initiated by the planned PhD Supervisor, at the request of the student. Students may consider transferring after they have successfully completed a minimum of three (3) RS Masters level courses, one of which must include a research methods or statistics course. The student must have a minimum of an A- average on courses from their MSc curriculum to transfer. Normally, these courses should be completed in the first year in the MSc curriculum and the transfer process is normally initiated after eight (8) months (2 terms) and before 18 months of study. In the case of part-time students, the transfer window will be extended to 16 and 36 months respectively.

The official process begins with a ***Transfer from MSc to PhD*** form (<http://www.srs-mcmaster.ca/CurrentStudents/RehabilitationScienceMScPhD/RSForms/tabid/3578/Default.aspx>) sent from the student and Supervisor to the Office of the Associate Dean (FHS), stating that the student wishes to transfer from the MSc to the PhD program. This notification normally takes place **two (2) months prior** to the date of the expected transfer. Normally, the student and Supervisor will also meet with the RS Assistant Dean at this time to discuss the transfer procedure. **Transfers become effective only on the following dates: September 1st, January 1st and May 1st.** To be considered for transfer, the student must complete a *Transfer Report* and submit it to each member of the Transfer Committee within two (2) weeks prior to the scheduled date of the Transfer meeting. The transfer report will consist of a brief description of the reasons for the request to transfer from the MSc to the PhD program including a brief statement of the area PhD research.

The student's proposed PhD Supervisor must complete the ***Request to Transfer*** form stating the preliminary plans for supporting the student in terms of conduct of the research and trainee support, if required. At this stage a meeting with the Assistant Dean is required to discuss the program's ability to accept an additional PhD student. A more detailed letter describing the student's suitability for PhD level study, the Supervisor's ability to support the student and his/her research, and the planned area of research should be provided to the Transfer Committee for the Transfer Meeting.

The Transfer Committee is composed of:

- a. The student's proposed PhD Supervisor;
- b. One (1) RS graduate faculty member, appointed by the RS Assistant Dean in consultation with the Supervisor (preferably a proposed Advisory Committee member, if known);
- c. One (1) member of the RS Admissions Committee who is independent from the students committee; and,
- d. The RS Program Assistant Dean or his/her delegate, who will chair the meeting but not have a vote.

In the event that the RS Assistant Dean is also the proposed Supervisor of the student requesting the transfer, the RS Assistant Dean will delegate the chair role of the student's Transfer Committee to one of the following:

1. Chair of the MSc and PhD Thesis-based Admissions Committee;
2. Chair of the Comprehensive Examination Oversight Committee; or,
3. Another RS Faculty Member.

The Transfer Committee, after independent consideration of the Supervisor's letter of recommendation and the **Transfer Report**, will meet at the Transfer meeting. The student will be expected to attend the committee and discuss their proposed training plan. A maximum of one (1) hour will be allowed for the Transfer Meeting. The time, date, and place of the Transfer Meeting will be arranged by the Office of the Assistant Dean of the RS Graduate Program. After the transfer meeting, the Chair will invite the Committee to adjudicate the proposed transfer to recommend one (1) of the following options to the Associate Dean of Graduate Studies (FHS):

1. The candidate is allowed to proceed directly to the PhD program, without completion of the MSc degree. (This recommendation will require a unanimous committee vote).
2. The candidate is allowed to proceed to the PhD program, but only after completing the MSc degree (This decision may be made by a majority committee vote).
3. The candidate is invited to complete the MSc only, at this time (This decision may be made by a majority committee vote).

The Chair of the Transfer Committee will convey the Committee's decision to the student orally and in writing with a brief explanation of the reason, if the transfer is not approved. The Assistant Dean will complete the **Request for Change in a Graduate Student's Status** form (<http://graduate.mcmaster.ca/current-students/forms/student-forms>), which will be forwarded to the Office of the Associate Dean of Graduate Studies (FHS). The final copy of the transfer documents will be also provided to the RS Administrative Assistant to be kept in the student's RS file.

Rehabilitation Science (RS) Graduate Program Areas of Specialization

OLD FIELDS

1. Participation across the life course
2. Evidence-based rehabilitation and knowledge transfer

RATIONALE FOR CHANGE:

1. Themes are too broad and students and faculty do not identify with them.
2. The themes do not attract new trainees who want to work in a field that represents key areas in rehabilitation.
3. The development of a “clinical specialty” that meets international criteria and a specific curriculum that students must follow (OMPT) means we have a stream with a specified curriculum.
4. The themes are unlikely to be specific enough to excite donors.
5. The Institutional Quality Assessment Process (IQAP) review confirmed that neither students nor faculty were aware of or used themes.

NEW: AREAS OF SPECIALIZATION

1. Best practice and knowledge translation
2. Childhood Disability and Participation
3. Functional health with aging or chronic disease
4. Neuromusculoskeletal function and mobility
5. Work Ability and Participation
6. Orthopedics Manipulative Physical Therapy (OMPT)

DESCRIPTIONS FOR CALENDAR AND WEBSITE

Rehabilitation Science Areas of Specialization

1. **Best practice and knowledge translation:** Developing, evaluating and applying skills in evidence-based practice and strategies to implement best practices.
2. **Childhood Disability (and Participation):** *CanChild* Centre for Childhood Disability Research is a research and educational centre whose research is focused on improving the lives of children and youth with disabilities and their families. Founded in 1989, *CanChild* is a world leader in the field of childhood disability.
3. **Functional health with aging or chronic disease:** Research that focuses on keeping people healthy and functionally independent despite increasing age or chronic disease.
4. **Neuromusculoskeletal function and mobility:** Research that focuses on understanding and optimizing neuromusculoskeletal function and mobility as a vital aspect of overall health.
5. **Work Ability and Participation:** Research that focuses on creating and maintaining safe, healthy, productive work, and participation in valued life roles.

6. **Orthopaedic Manipulative Physical Therapy (OMPT):** Specialty training that advances knowledge, clinical reasoning, manual therapy skills, evidence-based practice and research experience in keeping with national and international standards for clinical specialization.

The following information is detailed justification for proposed fields.

Fields and Rationale	Primary Student Audience	Primary Faculty Associated
<p>1. Best practice and knowledge translation This field embodies McMaster strength in evidence-based practice and knowledge translation-an area of particular focus for the school of Rehabilitation Science</p>	<p>This area of specialization will include our MSc Course-based option where students take foundational courses that support best practice and apply the content knowledge skills that fall under to their areas of clinical expertise. In addition, some trainees in our thesis-based program specialize in KT research or research on professional training (KT and educational research).</p>	<p>1. Online instructors for courses in knowledge translation, evidence-based practice, clinical measurement, clinical reasoning; and decision making. 2. Thesis-based faculty involved in research on best-practice and knowledge translation:</p> <ul style="list-style-type: none"> • Joyce Tryssenaar • Cheryl Missiuna • Joy MacDermid • Michelle Kho • Sandra Moll • Mary Law • Patty Solomon • Sue Baptiste • Bonny Jung • Lorie Shimmell • Sara Wojkowski
<p>2. Childhood Disability (and Participation) <i>CanChild</i> is a major research centre within SRS.</p>	<p>Trainees interested in research on childhood disability; potentially an area to develop a clinical specialty within the MSc Course-based option.</p>	<p>Cheryl Missiuna Mary Law Peter Rosenbaum Carol DeMatteo Nancy Pollock Debra Stewart Peter Rosenbaum Jan Willem Gorter</p>
<p>3. Functional health, Aging and Chronic Disease Optimizing physical and cognitive function with age and in the presence of chronic disease and multi-morbidity is major focus in rehabilitation.</p>	<p>Trainees interested in research on aging, chronic conditions, primary care, and the contribution of rehabilitation.</p>	<p>Julie Richardson Lori Letts Ada Tang Monica Maly Jocelyn Harris Brenda Vrkljan</p>

Fields and Rationale	Primary Student Audience	Primary Faculty Associated
<p>4. Neuromusculoskeletal function and mobility Musculoskeletal disorders are the second-highest burden in Canada and a major focus of rehabilitation.</p>	Students interested in research focused on understanding neuromusculoskeletal structure/function, interventions, and outcomes.	Vicki Galea Michael Pierrynowski Paul Stratford Monica Maly Joy MacDermid Norma McIntyre
<p>5. Work Ability and Participation Work rehabilitation and participation in valued life roles is a major focus of rehabilitation.</p>	<ol style="list-style-type: none"> 1. Students interested in research focused on work and participation. 2. A target area for future development of a specialty in the MSc Course-based option. Currently the Course-based option offers one (1) course on Work Organization and Health. 	Joy MacDermid Sandra Moll Rebecca Gewurtz Mary Law Sue Baptiste
<p>6. Orthopaedic Manipulative Physical Therapy (OMPT) This is a subspecialty practice area within physical therapy where specific curriculum has been approved by The International Federation of Manual Therapists (IFOMT) and specific curriculum affiliated through an approved academic institution are needed for achieving IFOMT accreditation of specialty education</p>	Students with Level III certification in manual therapy achieved through an approved international organization.	Anita Gross Laurie McLachlan Greg Spadoni Lisa Carlesso Jack Miller Ashley Smith

Cross-cutting themes within the SRS are Clinical Measurement and Knowledge Translation. This is not identified in fields but can be included in program descriptions.



SCHOOL OF GRADUATE STUDIES

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

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 emailed to the Assistant Secretary and SynApps System Administrator (Email: *espiritu@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		School of Rehabilitation Science						
NAME OF PROGRAM		Rehabilitation Science Graduate Program						
PROGRAM DEGREE	Ph.D. (X)	M.A. ()	M.A.Sc. ()	M.B.A. ()	M. Eng. ()	M.Sc. (X)	Diploma Program ()	Other (Specify)
NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)								
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	X	EXPLAIN: PROGRAM FIELDS: Delete current two (2) fields and replace with RS AREAS OF SPECIALIZATION (6)						
DESCRIBE THE <u>EXISTING</u> REQUIREMENT/PROCEDURE:								
<p>OLD FIELDS</p> <ol style="list-style-type: none"> 1. Participation across the life course 2. Evidence-based rehabilitation and knowledge transfer <p>In calendar as:</p> <p>Research in Rehabilitation Science</p> <p>The focus of the research in Rehabilitation Science includes the following fields: Participation across the life course – within this field, research focuses on the study of participation in everyday life when a disability or change in health occurs. We examine the impact of activity performance and environmental factors, as well as, study interventions to enhance participation. We research the impact of changes in a person’s body function and structure on activity and participation. Primary populations within this field include children/youth with special needs, workers, and older adults.</p> <p>Evidence-based rehabilitation and knowledge transfer– within this field, our research focuses on development and validation of outcome measures, systematic reviews of rehabilitation evidence, and utilization of research knowledge by clients, families, rehabilitation practitioners, students and policymakers.</p>								

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

NEW: REHABILITATION SCIENCE AREAS OF SPECIALIZATION

1. Best practice and knowledge translation
2. Childhood Disability and Participation
3. Functional health with aging or chronic disease
4. Neuromusculoskeletal function and mobility
5. Work Ability and Participation
6. Orthopedics Manipulative Physical Therapy (OMPT)

RATIONALE FOR THE RECOMMENDED CHANGE:

RATIONALE FOR CHANGE:

1. Themes are too broad and students and faculty do not identify with them.
2. The themes do not attract new trainees who want to work in a field that represents key areas in rehabilitation.
3. The development of a "clinical specialty" that meets international criteria and a specific curriculum that students must follow (OMPT) means we have a stream with a specified curriculum.
4. The themes are unlikely to be specific enough to excite donors.
5. The Institutional Quality Assessment Process (IQAP) review confirmed that neither students nor faculty were aware of or used themes.

Please see attached.

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

Since there is no impact on students, expect to change as soon as approved

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:

Remove old field names and descriptor and insert new AREAS OF SPECIALIZATION, as below

Rehabilitation Science Areas of Specialization

1. Best practice and knowledge translation: Developing, evaluating and applying skills in evidence-based practice and strategies to implement best practices.
2. Childhood Disability (and Participation): CanChild Centre for Childhood Disability Research is a research and educational centre whose research is focused on improving the lives of children and youth with disabilities and their families. Founded in 1989, CanChild is a world leader in the field of childhood disability.
3. Functional health with aging or chronic disease: Research that focuses on keeping people healthy and functionally independent despite increasing age or chronic disease.
4. Neuromusculoskeletal function and mobility: Research that focuses on understanding and optimizing neuromusculoskeletal function and mobility as a vital aspect of overall health.
5. Work Ability and Participation: Research that focuses on creating and maintaining safe, healthy, productive work, and participation in valued life roles.
6. Orthopaedic Manipulative Physical Therapy (OMPT): Specialty training that advances knowledge, clinical reasoning, manual therapy skills, evidence-based practice and research experience in keeping with national and international standards for clinical specialization.

CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: JOY MACDERMID Email: macderj@mcmaster.ca Extension: 22524 Date: February 5, 2014

If you have any questions regarding this form, please contact the Assistant Secretary and SynApps System Administrator, School of Graduate Studies, extension 24204.

SGS/medy



SCHOOL OF GRADUATE STUDIES

RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING COURSES

IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING 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.
3. A representative from the department/program is **required to attend** the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.

DEPARTMENT/PROGRAM		SCHOOL OF REHABILITATION SCIENCE		
COURSE TITLE		SPECIAL TOPICS IN STATISTICAL METHODS FOR REHABILITATION SCIENCE		
COURSE NUMBER	717	COURSE CREDIT		
		FULL COURSE ()	HALF COURSE (X)	QUARTER (MODULE) ()
INSTRUCTOR(S)		Paul Stratford		
PREREQUISITE(S)		RS 714* or equivalent, or permission from instructor. Anti-requisite: HRM731*		
NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)				
NEW COURSE	<input checked="" type="checkbox"/>	DATE TO BE OFFERED (FOR NEW COURSES ONLY):	WAS THE PROPOSED COURSE OFFERED ON DEAN'S APPROVAL? X If YES, PROVIDE THE DATE:	
<p>WILL THE COURSE BE CROSS-LISTED WITH ANOTHER DEPARTMENT? NO IF YES, 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.</p>				
CHANGE IN COURSE TITLE		PROVIDE THE NEW COURSE TITLE:		
CHANGE IN COURSE DESCRIPTION		600-LEVEL COURSE (Undergraduate course for graduate credit) Please see #4 on page 2 of this form		
CHANGE TO FULL COURSE		CHANGE TO HALF COURSE		CHANGE TO QUARTER COURSE
COURSE CANCELLATION		PROVIDE THE REASON FOR COURSE CANCELLATION:		
OTHER CHANGES		EXPLAIN: Minor changes to evaluation and content. Instructor change		
BRIEF DESCRIPTION FOR CALENDAR - Provide a brief description (maximum 6 lines) to be included in the Graduate Calendar. RS717* will provide an overview and application of Regression and ANOVA that are applied in rehabilitation research. Topics will include Regression Analysis, Analysis of Variance (ANOVA), Analysis of Covariance (ANCOVA), and analyses for correlated data (e.g., Hierarchical Linear Modelling). Statistical analyses using rehabilitation specific data will be used to guide learning. In addition, discussion of how to effectively report statistical findings in publications will be discussed and practiced.				
CONTENT/RATIONALE - Provide a brief description, i.e., outline the topics or major sub-topics, and indicate the principal texts to be used. See attached file.				

<p>1. STATEMENT OF PURPOSE (How does the course fit into the department's program?)</p> <p>The maturation of the Rehabilitation Science graduate program has seen an increase in the number of PhD students. These students' projects frequently require the use of more demanding statistical tools. This course will attempt to fill the gap between current course offerings and anticipate needs.</p>						
<p>2. EXPECTED ENROLMENT:</p> <p>12</p>						
<p>3. DESCRIBE IN DETAIL THE METHOD OF PRESENTATION OF COURSE MATERIAL (i.e., lectures, seminars):</p> <p>Classes will be in the form of small group seminars that combine lecture, data analysis and interpretation, discussion and feedback. Each class will be three hours in length. The course coordinator will actively lead the sessions. Students will be expected to lead aspects of some session by presenting information and facilitating interaction with the other students. There will be readings and homework problems for each session. The students will be expected to come to class prepared to discuss the readings in the context of the session topics.</p>						
<p>4. DESCRIBE IN DETAIL THE METHOD OF EVALUATION (percentage breakdown, if possible): (For 600-level course, indicate the <u>Extra Work</u> to be required of graduate students, i.e., exams, essays, etc.)</p> <table> <tr> <td>Participation</td> <td>15%</td> </tr> <tr> <td>Assignments (2)</td> <td>40%</td> </tr> <tr> <td>Presentation and write-up of major of data analysis (students' data)</td> <td>45%</td> </tr> </table> <p>see attached page for further details</p>	Participation	15%	Assignments (2)	40%	Presentation and write-up of major of data analysis (students' data)	45%
Participation	15%					
Assignments (2)	40%					
Presentation and write-up of major of data analysis (students' data)	45%					
<p>5. TO PREVENT OVERLAP, IS A COURSE IN THE SAME OR A RELATED AREA OFFERED IN ANOTHER DEPARTMENT? IF YES, PLEASE ATTACH TO THIS FORM ANY RELEVANT CORRESPONDENCE WITH THE OTHER DEPARTMENT(S).</p> <p>see attached page</p>						
<p>6. IF THE COURSE IS INTENDED PRIMARILY FOR STUDENTS OUTSIDE YOUR DEPARTMENT, DO YOU HAVE THE SUPPORT OF THE DEPARTMENT/PROGRAM CONCERNED?</p> <p>NA</p>						
<p>PLEASE PROVIDE THE CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:</p> <p>Name: P. Stratford Email: stratfor@mcmaster.ca Extension: 22523 Date submitted: Feb 5. 2014</p>						

If you have any questions regarding this form, please contact the Assistant Secretary, School of Graduate Studies, extension 24204.

SGS/Medy/2013

**Rehabilitation Science (RS) Graduate Course Outline
RS717* SPECIAL TOPICS IN STATISTICAL METHODS
FOR REHABILITATION SCIENCE**

Course Instructor: Paul Stratford, stratfor@mcmaster.ca

Pre-requisite: Enrolment in RS Program or permission of instructor, and RS714* (Statistical Methods in Rehabilitation Science) or equivalent.

Anti-requisite: HRM731*

Schedule: Tuesday February 4, 2014 to Tuesday April 29, 2014 (13 weeks), IAHS, Room 364, from 1:00 pm to 4:00 pm (unless otherwise notified).

COURSE DESCRIPTION:

This course will provide an overview and application of Regression and ANOVA that are applied in rehabilitation research. Topics will include Regression Analysis, Analysis of Variance (ANOVA), Analysis of Covariance (ANCOVA), and analyses for correlated data (e.g., Hierarchical Linear Modelling). Statistical analyses using rehabilitation specific data will be used to guide learning. In addition, discussion of how to effectively report statistical findings in publications will be discussed and practiced.

COURSE OBJECTIVES:

At the conclusion, successful students will be able to:

1. Describe the assumptions inherent within the statistical tests covered in this course.
2. Define the most appropriate statistical model and statistical test based on the research question and data characteristics.
3. Perform applied statistical analyses using data that have a rehabilitation science focus.
4. Interpret findings from the applied statistical analyses.
5. Effectively summarize statistical findings suitable for publication.

COURSE OUTLINE:

Learning Methods

Classes will be in the form of small group seminars that combine lecture, data analysis and interpretation, discussion and feedback. Each class will be three (3) hours in length. The Course Coordinator will actively lead the sessions. Students will be expected to lead aspects of some session components by presenting information and facilitating interaction with the other students. There will be readings for each session. The students will be expected to come to class prepared to discuss the readings in the context of the session topics.

Course Outline by Week

WEEK	MODULE	The learner will discuss/explore...
1	Introduction	<ul style="list-style-type: none"> • Chapters 4, 5, 7 • Fitting a straight line model • Confidence and prediction bands • Regression ANOVA table output interpretation • Introduction to multiple regression model specification in STATA
2	Multiple Regression	<ul style="list-style-type: none"> • Chapters 8, 9 • Multiple regression models • Partial F-test • Transformations • Errors in variables regression

WEEK	MODULE	The learner will discuss/explore...
		<ul style="list-style-type: none"> • Sample Size for multiple regression
3	Regression Diagnostics	<ul style="list-style-type: none"> • Chapter 14 • Heterogeneity of variance test • Normality test • Collinearity • Outlier identification: leverage, residuals, fit, diagnostic plots
4	Selecting Best Regression Equation	<ul style="list-style-type: none"> • Chapters 15, 16 • Stepwise regression • Selecting the best regression equation
5	Oneway ANOVA	<ul style="list-style-type: none"> • Chapter 17 • Choosing a multiple comparison technique • Orthogonal contrasts • Polynomial contrasts
6	Factorial ANOVA	<ul style="list-style-type: none"> • Chapters 19, 20 • Factorial ANOVA • SS Types • Equal and unequal cell sizes
7	Covariates: Confounding and interactions	<ul style="list-style-type: none"> • Chapter 11, 13 • Considerations for including covariates • ANCOVA • Adjusted values
8	Analysis of Correlated Data: Part 1	<ul style="list-style-type: none"> • Chapters 18, 25 • Randomized Block design • Repeated measures ANOVA • GEE
9	Analysis of Correlated Data: Part 2	<ul style="list-style-type: none"> • Chapter 26 • Mixed Effects Modeling (HLM) • Fixed occasion design • Variable occasion design
10	Analysis of Correlated Data: Part 2 continued	<ul style="list-style-type: none"> • Chapter 26 • Mixed Effects Modeling (HLM) • Fixed occasion design • Variable occasion design
11	Review	<ul style="list-style-type: none"> • Student generated topics
12	Student presentations	
13	Student presentations	

COURSE EVALUATION:

Assessed Activities	The learner...	Value	Due/Timing
Student Participation	Contributions to weekly discussions and over the term of the course students will provide a 2-3 page synopsis (approximate) of the key learning issues from the previous week. The synopsis	15%	Weeks 1-13

Assessed Activities	The learner...	Value	Due/Timing
	<p>should include:</p> <ol style="list-style-type: none"> 1. A summary of the learning objectives; 2. Summary of key content; 3. An annotated analysis output from one of the previous week's homework questions; and, 4. At least two additional learning resources (e.g., references or websites). <p>In addition to the prepared handout, the student will present an approximately 15-minute summary of the key material. During the course each student will be responsible for three (3) summaries.</p>		
Assignments	The course will include two (2) assignments (20% each). These assignments will require each student to select appropriate statistical tools to analyze, interpret, and present their findings in a format suitable for publication.	40%	<ul style="list-style-type: none"> • Assignment 1 is due on Week 6 (beginning of class) • Assignment 2 is due on Week 11 (beginning of class)
Presentation of Research Question, Data, and Analysis	<p>There are two (2) components to this assignment: written document and oral/slide presentation.</p> <p>Using either real (preferred) or synthetic data, each student will form a research question, which will be answered using one of the analytic techniques discussed in this course. The following topics should be addressed:</p> <ol style="list-style-type: none"> 1. Formal research question with relevant hypotheses; 2. Methods: a brief description of the study design; 3. Methods: a description of the analysis; 4. Methods: a description of the sample size calculation; 5. Results: presentation of results including tables and figures; and, 	45%	Week 12-13

Assessed Activities	The learner...	Value	Due/Timing
	<p>6. Discussion: a brief synthesis of the findings.</p> <p>Presentation (15%): The 20-minute oral presentation should be similar to that given at a profession conference; however, the emphasis will be on <u>analytic techniques</u> and <u>interpretation of results</u>. There will be a 10-minute discussion/question period at the end of each presentation.</p> <p>Written document (30%): The written document should be double-spaced and printed in 12-point font on 1-side of the paper. The submission should not exceed 8-pages including tables and figures.</p>		

STATISTICAL SOFTWARE:

STATA IC/13 (version 12 is also acceptable)

STATA Statistical Software Acquisition:

Order STATA from the following website:

<http://www.stata.com/products/>

Go to Educational pricing and identify McMaster University.

Recommended Version: STATA/IC 13 perpetual licenses (about \$190).

RESOURCES:

The course will use a textbook and assigned notes and readings. Some notes and readings will change year to year based on the needs of the class.

READINGS:

Required Textbook:

Kleinbaum DG, Kupper LL, Nizam A, et al. Applied Regression Analysis and Other Multivariable Methods. 4th or 5th ed. Boston, MA: Duxbury; 2008+.

STATA PDF Manuals

Additional Readings

Albright JJ, Marinova DM. Estimating multilevel models using SPSS, Stata, SAS, and R. (2010) <http://rt.uits.iu.edu/visualization/analytics/docs/hlm-docs/hlm.pdf>

Dijkers MP. Chasing change: Repeated-measures analysis of variance is so yesterday! Archives of Physical Medicine and Rehabilitation. 2013; 94: 597-599.

Dupont WD. Statistical modeling for biomedical researchers: a simple introduction to the analysis of complex data. 2nd ED. Cambridge UK: Cambridge University Press, 2009.

Fitzmaurice GM, Ravichandran C. A primer in longitudinal data analysis. *Circulation* 2008;118:2005-2010.

Green SB. How many subjects does it take to do a regression analysis? *Multivariate Behavioral Research* 1991; 26:499-510.

Kachman SD. An introduction to generalized linear mixed models.
<http://statistics.unl.edu/faculty/steve/glmm/paper.pdf>

Kennedy DM, Stratford PW, Hanna SE, Wessel J, Gollish JD. Modeling early recovery of physical function following hip and knee arthroplasty. *BMC Musculoskelet Disord* 2006; 7:100.

Kozlowski AJ, Pretz CR, Dams-O'Connor K, Kreider S, Whiteneck G. An Introduction to Applying Individual Growth Curve Models to Evaluate Change in Rehabilitation: A National Institute on Disability and Rehabilitation Research Traumatic Brain Injury Model Systems Report. *Archives of Physical Medicine and Rehabilitation* 2013; 94: 589-596.

Hanna SE, Bartlett DJ, Rivard LM, Russell DJ. Reference curves for the Gross Motor Function Measure: percentiles for clinical description and tracking over time among children with cerebral palsy. *Phys Ther* 2008; 88:596-607.

Norman GR. Issues in the use of change scores in randomized trials. *J Clin Epidemiol.* 1989;42:1097-105: <http://www.ncbi.nlm.nih.gov/pubmed/2809664>.

Snijders T, Bosker R. *Multilevel analysis: an introduction to basic and advanced multilevel modeling*. London: Sage; 1999.

Stratford PW, Hanna SE, Kennedy DM, Alcock GK. Hierarchical linear modelling: an effective analytic technique for examining change in clinical longitudinal data. *Physiother Can* 2003; 55:145-52.

POTENTIAL MODIFICATIONS TO THE COURSE:

The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes.

ACADEMIC INTEGRITY POLICY:

The following quotes the McMaster Academic Integrity Policy.

“Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences, e.g., the grade of zero on assignment, loss of credit with a notation on the transcript (notation reads: “grade of F assigned for academic dishonesty”), and/or suspension or expulsion from the university.”

It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy located at:

<http://www.mcmaster.ca/policy/Students-AcademicStudies/AcademicIntegrity.pdf>

The following illustrates four examples of academic dishonesty:

1. Plagiarism, e.g., the submission of work that is not one's own or for which other credit has been obtained.
2. Improper collaboration in group work.
3. Copying or using unauthorized aids in tests and examinations.
4. Re-submission of an assignment that has been graded as part of a previous course.



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 Secretary and SynApps Systems Administrator

Through an electronic ballot conducted on February 24th, the Faculty of Science Graduate Curriculum, Policy, Admissions and Study Committee approved the following graduate curriculum recommendations.

Please note that these recommendations are being forwarded for approval at the March 27th, 2014 Faculty of Science Meeting.

FOR APPROVAL OF GRADUATE COUNCIL:

School of Geography and Earth Sciences

- Cancellation of Diploma in Spatial Analysis and GIS



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

IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:								
<p>1. This form must be completed for ALL changes involving degree program requirements/procedures. All sections of this form must be completed.</p> <p>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.</p> <p>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.</p>								
DEPARTMENT		School of Geography & Earth Sciences						
NAME OF PROGRAM		Diploma in Spatial Analysis and GIS						
PROGRAM DEGREE	Ph.D. ()	M.A. ()	M.A.Sc. ()	M.B.A. ()	M. Eng. ()	M.Sc. ()	Diploma Program (X)	Other (Specify)
NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)								
CHANGE IN ADMISSION REQUIREMENTS		<input type="checkbox"/>	CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE		<input type="checkbox"/>	CHANGE IN COURSE REQUIREMENTS		<input type="checkbox"/>
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR			<input type="checkbox"/>	EXPLAIN:				
OTHER CHANGES	X	EXPLAIN: Removal of Diploma program .						
DESCRIBE THE EXISTING REQUIREMENT/PROCEDURE:								

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

The Diploma in GIS and Spatial Analysis should be removed from McMaster's graduate program offerings given lack of enrollment or interest.

RATIONALE FOR THE RECOMMENDED CHANGE:

Students have not enrolled in this program for the past several years. If students are interested in our GIS offerings, they have applied directly into the Masters or PhD program within the School, and have taken related programs. Enrollment within the program was never large.

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

July 1, 2014

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

Graduate students will continue to have access to the courses that were offered through the Diploma program.

PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR:

NA

CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Bruce Newbold Email: newbold@mcmaster.ca Extension: 27948 Date submitted: Feb 7, 2014

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

SGS/2013

The Dr. Colin Webber Graduate Scholarship

Established in 2013 to honour the memory of Dr. Colin Webber, McMaster University Professor, Physicist, Radiation Safety Expert, Teacher, Mentor, and Leader in the field of bone research. To be awarded by the School of Graduate Studies to master's or doctoral students. Preference will be given to students who demonstrate interest in bone research.