McMaster University | SCHOOL OF GRADUATE STUDIES

Gilmour Hall, Room 212
1280 Main Street West
Hamilton, ON L8S 4L8

(905) 525-9140 x 23679
gs.mcmaster.ca

To   :   Members of Graduate Council

From   :   Christina Bryce
                Assistant Graduate Secretary
_____

The next meeting of Graduate Council will be held on **Tuesday April 20th 9:30 am via Zoom.**

Listed below are the agenda items for discussion.

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

A G E N D A

   I.   **Minutes of the meeting of March 16th, 2021**

  II.   **Business arising**

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

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

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

 VI.   **Faculty of Business Graduate Curriculum and Policy Committee Report**

 VII.   **Faculty of Engineering Graduate Curriculum and Policy Committee Report**

VIII.   **Faculty of Humanities Graduate Curriculum and Policy Committee Report**

 IX.   **Faculty of Social Sciences Graduate Curriculum and Policy Committee Report**

  X.   **Graduate Calendar Administrative Section Revisions**

 XI.   **New Scholarships and Scholarship Changes**

 XII.   **Final Assessment Reports**

XIII.   **Youth in Extended Society Care Bursary Program**

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Graduate Council
Tuesday March 16ᵗʰ at 9:30 am via Zoom

Present: D. Welch (Chair), J. Gillet, S. Hanna, M. Horn, K. Hassanein, M. Thompson, B. Gupta, M. Dion, S. Brophy, A. Shi, S. Raha, B. Farmer, M. Parlar, S. Madeiros, S. Bannerman, S. Raha, S.K. Dhami, C. Davidson, D. Mountain, O. Loertscher, C. Seiler, K. Tsang, E. Wright, N. Tan, S. Dickson, S. Baschiera (Associate Registrar and Graduate Secretary), C. Bryce, (Assistant Graduate Secretary)

Regrets: M. Naisani, J. Shedden, J. Kish, A. Roddick
_____

I.   **Minutes of the meeting of February 23rd, 2021**

It was duly moved and seconded, **'that Graduate Council approve the minutes of the meeting of February 23ʳᵈ as set out in the document.'**

The motion was **carried**.

II.   **Business arising**

There was no business arising.

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

Dr. Welch reported on the following items:
   • The one-year anniversary of leaving the campus, noting his gratitude to everybody at the institution and hope for the future with the vaccine rollout;
   • The plan to provide some context to external thesis examiners around Covid-related changes to the thesis. After meeting with the associate deans and the associate registrar and her team they have a plan to provide the option of an executive summary from the student to the external, explaining institutional guidance on changing direction in research when necessary to complete work. There will also be a field to discuss how research directions have changed as a result of Covid limitations;
   • Facilitated admissions committee, with an upcoming meeting to be scheduled;
   • The ongoing challenge of international arrivals, noting the mandatory hotel quarantine and funding support for it until April 30ᵗʰ;
   • The Return to McMaster task force, making recommendations in early April with an announcement to follow;
   • The microcredential committee is making progress, noting at the same time that there seems to be confusion among provincial agencies;
   • Gradflix, noting the deadline is tomorrow.

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

Dr. Hassanein (Faculty of Business) reported on the following item:
   • Mainly trying to work on a plan for the fall, with the potential for changing their planned schedule again to work within the constraints.

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

- International arrivals for the Faculty;
- Covid impacts on thesis students, noting they are reviewing them on a case-by-case basis;
- Admissions going well.

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

- Tremendous increase in number of applications, primarily in professional masters but up everywhere to some degree;
- Dr. Sarah Wojkowski has been appointed as assistant dean of Physiotherapy;
- Dr. Julie Richardson from the School of Rehabilitation Sciences is retiring and Dr. Ada Tang has been appointed as Assistant Dean for Rehabilitation Science to replace her.

Dr. Gillett (Faculty of Social Sciences) reported on the following item:

- Planning for the fall, including what courses they may be able to provide on campus and virtual options.

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

- Humanities recruitment is well underway and the Faculty is turning their attention to the fall and an inventory of thesis students affected by the pandemic to determine what the Faculty can do to support the time to work that's been lost.

Dr. Thompson had no report.

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

Ms. Baschiera reported on the following items:

- The completion of a major push to get outstanding and incomplete grades in;
- The Academic Services team is reviewing processes going forward and partnering with the undergraduate service desk to look at ways to improve clarity about where students can get answers to their questions, whether it is in person or online;
- With an increase in applications there is increased attention to the systems idiosyncrasies, noting that they're well within time commitments for offers.

VI. **Faculty of Health Sciences Graduate Curriculum and Policy Committee Report**

Dr. Hanna presented the changes, noting the Biomedical Discovery and Commercialization program was providing some additional elective options for students.

It was duly moved and seconded, **'that Graduate Council approve the changes proposed by the Faculty of Health Sciences as described in the documents.'**

The motion was **carried**.

VII. **Graduate Calendar Administrative Section Update**

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Dr. Welch explained that the calendar administrative sections to improve coherence and organization of the calendar and that sections were moved around without contents significantly changing. Documents that were related to guidance rather than policy were removed and will be housed elsewhere.

It was duly moved and seconded **'that Graduate Council approve the revisions as set out in the document.'**

The motion was **carried**.

VIII.   2021-2022 Sessional Dates

Ms. Baschiera highlighted that the enrollment date was in the same timeframe as what it was changed to in the last cycle and that the dates now included a slightly later grading deadline for the fall term. Council members discussed the January start date with Ms. Baschiera noting that the date was to accommodate programs with varying start times.

It was duly moved and seconded, **'that Graduate Council approve the 2021-2022 Sessional Dates as set out in the document.'**

The motion was **carried**.

IX.   New Scholarships and Changes to Scholarships

Ms. Tsang noted that the changes to terms were to make the scholarship easier to award.

It was duly moved and seconded, **'that Graduate Council approve the scholarships as set out in the document.'**

The motion was **carried**.

To   :   Graduate Council

From   :   Christina Bryce
               Assistant Graduate Secretary
_____

At its meetings on January 27th and March 8th the Faculty of Business Graduate Curriculum and Policy Committee approved the following graduate curriculum recommendations.

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

For Approval of Graduate Council:

    a. **MBA**
        i. **Change to Specialization Requirements and Calendar Copy**

    b. **BLPT**
        i. **Change to Available Electives**

For Information of Graduate Council:
    c. **Master of Finance**
        i. **New Course**
            1. 718 Advanced Topics in Finance

    d. **eHealth ***
        i. **New Course**
            1. 702 Independent Research Project
        ii. **Change to Prerequisite**
            1. 736 Management Issues in eHealth
        iii. **Change to Course Offering**
            1. 705 Statistics for eHealth

    e. **Health Management****
        i. **Change to Prerequisite**
            1. 732 Strategic Writing in Health Management

    f. **MBA**
        i. **Change to Prerequisite**
            1. C725 Managing Communications in Healthcare
            2. K736 Management Issues in eHealth
        ii. **New Course**
            1. D729 Independent Research Project in Business Analytics

2. F703 The History of Finance
3. K740 Business Applications of Data Analytics and Artificial Intelligence
4. O712 Data Analytics with Python

iii. **Change to Course Title and Description**
1. O701 Modeling and Analytics using Spreadsheets

*Also approved by the Faculty of Health Sciences and Faculty of Engineering
**Also approved by the Faculty of Health Sciences

McMaster University

SCHOOL OF GRADUATE STUDIES

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

IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:
1. This form must be completed for **ALL** changes involving degree program requirements/procedures. **All** sections of this form **must** be completed. 2. An electronic version of this form (must be in MS WORD **not** PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca). 3. A representative from the department is **required to attend** the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.

DEPARTMENT	DeGroote School of Business
NAME OF PROGRAM and PLAN	MBA Program, Analytics Specialization

DEGREE	MBA

NATURE OF RECOMMENDATION *(PLEASE CHECK APPROPRIATE BOX)*
Is this change a result of an IQAP review? ☐ Yes ☒ No

CREATION OF NEW MILESTONE ☐

CHANGE IN ADMISSION REQUIREMENTS		CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS	x

CHANGE IN THE DESCRIPTION OF A **SECTION** IN THE GRADUATE CALENDAR	x	EXPLAIN: Program change will require changes to calendar explanation and listing of courses

OTHER CHANGES		EXPLAIN:

DESCRIBE THE <u>EXISTING</u> REQUIREMENT/PROCEDURE:

The existing Analytics Specialization requires students to take seven courses specific to the specialization, four are required analytics courses, three are analytics electives. The electives are divided into four fields. Each student must take their three electives from a single field. Since each student must also take two non-analytics required courses, it leaves only one completely free elective for students taking the analytics specialization.

PROVIDE A DETAILED DESCRIPTION OF THE RECOMMENDED CHANGE *(Attach additional pages if space is not sufficient.)* Shorten the specialization to 5 courses, to include three required analytics courses and two analytics electives. One of the required courses, O715, is moved to the electives list to accomplish this. The analytics electives are divided into two groups, "Highly Recommended Electives" and "Other Electives", to help guide students to the courses most central to the analytics field. The formerly required selection of electives from one of four fields has been removed. This leaves analytics students with three completely free electives outside of the specialization, but they can choose all three from the analytics list, if they wish. Some courses have been removed from the electives list because they do not have a central focus on analytics. Three new courses have been added to the electives list to improve the offerings and are being presented for approval in parallel with this proposal. A statement of the revised specialization is attached to this form.

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review?):
The current specialization is being found by many students to be too restrictive in the opportunity it offers to take completely free electives. The logistics of scheduling the many required courses and the field-centric electives lists have proved challenging in terms of resource constraints and complicated for students formulating course plans. These issues have discouraged students from taking the specialization. The changes will make the specialization more feasible for interested students permitting more access to learning in this newly critical field. It also allows students to choose between extremely high specialization in analytics, or a specialization combined with other MBA courses which can broaden their perspectives. In this solution, the flexibility for students is combined with a more efficient use of School resources. This is consistent with the MBA Program Learning Outcomes which received approval in the last IQAP review.

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

 September, 2021

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

No

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

See attached document.

CONTACT INFORMATION FOR THE RECOMMENDED CHANGE: Name: John Medcof

Email: medcofj@mcmaster.ca   Extension: Date submitted: 2020 12 15

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

SGS/2013

Business Analytics

Business Analytics is a cross-discipline specialization that incorporates descriptive, predictive, and prescriptive analytics courses as well as application courses. The courses make use of relevant analytics software to equip the students with the necessary analytics platforms.

Data analytics has been touted by many industry leaders as the next frontier for innovation and productivity. The employment growth in data analytics is predicted to be the largest among all occupations in Canada. This specialization provides students with a wide variety of career options in analytics with application tracks in Finance, Information Systems, Marketing and Operations.

The Business Analytics specialization serves as a gateway to valuable professional designations such as the INFORMS Certified Analytics Professional (CAP) designation and the SAP Business Integration Certification program.

Business Analytics

- Required:

- BUSINESS K723 / Data Mining and Business Intelligence
- BUSINESS O701 / Modeling and Analytics using Spreadsheets
- BUSINESS O711 / Predictive Modelling and Analytics
- BUSINESS P700 / Business, Government and the Global Environment
- BUSINESS P720 / Strategic Management

And any two courses from the following two electives lists:

- Highly Recommended Electives:
- BUSINESS E714 / Business and Economic Forecasting
- BUSINESS F741 / Introduction to FinTech
- BUSINESS F743 / Big Data in Finance
- BUSINESS K735 / Managing the Implementation of Enterprise Systems
- BUSINESS KXXX / Business Applications of Data Analytics/AI [**NEW COURSE**]
- EHEALTH 746 / Healthcare Analytics
- BUSINESS M731 / Marketing Research
- BUSINESS M733 / Marketing Analytics
- BUSINESS M734 / Strategic Marketing Analysis
- BUSINESS O715 / Simulation for Business Analytics
- BUSINESS O7XX / Data Analytics using Python [**NEW COURSE**]

- Other Electives:
- BUSINESS F715 / Portfolio Theory and Management
- BUSINESS F735 / Financial Modelling
- BUSINESS K725 / Business Process Management
- BUSINESS O721 / Inventory Management and Production Planning
- BUSINESS O734 / Supply Chain Management
- BUSINESS O735 / Strategic Procurement
- BUSINESS D719 / Independent Research Project in Business Analytics **[NEW COURSE]**

plus any 3 700 level elective courses.

Business Administration

The DeGroote School of Business offers programs leading to the M.B.A. and Ph.D. in Business Administration. In collaboration with other faculties, the School offers an M.Sc. in eHealth, and a Master of Health Management. For more information on these collaborative programs, see the degree programs under those names. The DeGroote School also offers a Master of Finance Program (MFin). See the Master of Finance section of the calendar for more information. The DeGroote School also offers a Graduate Diploma in Professional Accountancy. See the Diploma section of the calendar for more information.

M.B.A.
Phone: 905-525-9140, Ext. 27024
Fax: 905-634-4985
E-mail: mbainfo@mcmaster.ca
Website: http://mba.degroote.mcmaster.ca/
Location: Ron Joyce Centre, DeGroote School of Business, McMaster University, 4350 South Service Road, Burlington, ON, L7L 5R8

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MBA Program

 The MBA program at McMaster University was created in 1962, and boasts more than 8300 alumni around the world. The DeGroote School of Business is also AACSB accredited - less than 5% of business schools worldwide earn this distinction in management education.

Canada's largest co-op MBA program was established at McMaster in 1973, and today is a premier choice for students who want to gain work experience while studying, and for employers who want to hire future business leaders.

The DeGroote School of Business offers two full-time programs - The DeGroote MBA and the DeGroote MBA with Co-op. In addition we offer a Blended Learning Part-Time program and an Accelerated program (which can be taken as a full-time or a part-time offering) to give students the flexibility they need to continue their education and become leaders in the business world and the community. Classes are held at the Ron Joyce Centre in Burlington, Ontario in a state-of-the-art building designed to enrich the student learning experience.

Admission Prior to September 2016

The MBA program consisted of 20 courses; ten in year one and ten in year two. Twelve of the 20 courses are core courses, which all students are required to take.

Admission Post September 2016

The DeGroote School of Business offers two full-time programs - the DeGroote MBA and the DeGroote MBA with Co-op. Students admitted in or after September 2016 will complete a redesigned Year 1 curriculum. This MBA program begins with Foundations 1 which provides students, regardless of undergraduate degree fundamental business knowledge and professional skills. In addition there are 5 required courses in Term I which integrate knowledge across disciplines. Term 2 begins with Foundations 2, focusing on professional competencies and the application of learning from the previous term. Students are required to complete A650 and F650 followed by a choice of 3 out of 5 core electives. The final 3 weeks of Term 2 ~~stuents~~ students will complete an Integrating Project Course. In year two, students may pursue a General MBA or select from one of the available specializations.

Topics covered in the Selected Topics courses will vary depending on recent developments in the subject area and the research interests of the instructor(s).

There is no thesis requirement for graduation in the MBA program. However, a student in the second year may, with the prior approval of the appropriate instructor, Area Chair, and the Director of the MBA Program, undertake an original paper, research study or project in an area directly associated with his/her program of study. Credit for one second-year course will be granted upon satisfactory completion of the project.

General MBA Admission requirements/Required Documentation

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

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

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

Specializations:

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

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

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

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

Non-Degree Applicants

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

Programs

Master
- [Business Administration Accelerated, M.B.A.](#)
- [Business Administration Co-op, M.B.A.](#)
- [Business Administration Part-Time, M.B.A.](#)
- [Business Administration, Full-time, M.B.A.](#)
- [Business Administration, M.B.A.](#)

Course Offerings
- [MBA Courses](#)

Business Administration Accelerated, M.B.A.

Accelerated MBA

If you have already completed a recognized undergraduate business degree within the last 10 years, or are a graduate of McMaster University's Engineering and Management program, you may be eligible for admission directly into year two. You can earn your MBA degree in as little as 8 months of full-time study. The Accelerated program may also be taken on a part-time basis (6 units or less per term). The Accelerated Program is intended for those with at least one year of managerial, professional, or technical work experience.

Length: 8 months full-time or generally not longer than 8-10 terms part-time

Admission Requirements

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

Program Requirements

- [BUSINESS P700 / Business, Government and the Global Environment](#)
- [BUSINESS P720 / Strategic Management](#)
- Plus eight 700-level courses

Business Administration Co-op, M.B.A.

DeGroote MBA with Co-op (4 academic terms alternating with 3 paid work terms)

The DeGroote MBA with Co-op combines theoretical business education with the opportunity to complete three paid work terms. An emphasis on both the learning of business fundamentals, and the development of practical skills helps students advance their careers.

Admission Requirements

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

Program Requirements

Level 1 (36 units)

- [BUSINESS L611 / Foundations 1](#)
- [BUSINESS I601 / Managing Financial Resources](#)
- [BUSINESS I602 / Economics & Business Statistics](#)
- [BUSINESS I603 / Competing Through Digital Transformation & Analytics](#)
- [BUSINESS I604 / Creating Customer Value](#)
- [BUSINESS I605 / Managing Organizations](#)
- [BUSINESS L625 / Foundations 2: Review & Relaunch](#)
- [BUSINESS A650 / Accounting for Decision Makers](#)
- [BUSINESS F650 / Firms and Markets](#)
- [BUSINESS L626 / Integrating Project](#)

-
  Students choose from 3 out of the 5 from the following:
- [BUSINESS B650 / Managing People in Organizations](#)
- [BUSINESS C650 / Introduction to Health Management](#)
- [BUSINESS K650 / Information Systems in Business](#)
- [BUSINESS M650 / Strategic Marketing Management](#)
- [BUSINESS O650 / Operations Management](#)
- WT01 - Co-op Work Term

Level 2 (30 units)

- [BUSINESS P700 / Business, Government and the Global Environment](#)
- [BUSINESS P720 / Strategic Management](#)
- WT02 - Co-op Work Term
  WT03 - Co-op Work Term
  Plus eight 700-level courses (see MBA Course List)

Business Administration, Full-time, M.B.A.

DeGroote MBA (Full-Time, 4 academic terms)

The DeGroote Full-time MBA is a carefully blended combination of practical and theoretical business education. During 4 academic terms there is an emphasis on both the learning of business
fundamentals, and the development of practical skills required for you to advance your career. It is intended for those with at least one year of managerial, professional, or technical work experience.

Admission Requirements

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

Program Requirements

Level 1 (36 units)

- BUSINESS L611 / Foundations 1
- BUSINESS I601 / Managing Financial Resources
- BUSINESS I602 / Economics & Business Statistics
- BUSINESS I603 / Competing Through Digital Transformation & Analytics
- BUSINESS I604 / Creating Customer Value
- BUSINESS I605 / Managing Organizations
- BUSINESS L624 / Foundations 2: Advanced Professional Skills
- BUSINESS A650 / Accounting for Decision Makers
- BUSINESS F650 / Firms and Markets

- [BUSINESS L626 / Integrating Project](#)
-

  Students choose from 3 out of 5 of the following:
- [BUSINESS B650 / Managing People in Organizations](#)
- [BUSINESS C650 / Introduction to Health Management](#)
- [BUSINESS K650 / Information Systems in Business](#)
- [BUSINESS M650 / Strategic Marketing Management](#)
- [BUSINESS O650 / Operations Management](#)

Level 2 (30 units)

- [BUSINESS P700 / Business, Government and the Global Environment](#)
- [BUSINESS P720 / Strategic Management](#)
- Plus eight 700-level courses (see MBA Course List)

Business Administration, M.B.A.

Master of Business Administration (MBA) Degree

The MBA program at McMaster University was created in 1962, and boasts more than 8300 alumni around the world. The DeGroote School of Business is also AACSB accredited - less than 5% of business schools worldwide earn this distinction in management education.

Canada's first Co-op MBA program was established at McMaster in 1973, and today is a premier choice for students who want to gain work experience while studying, and for employers who want to hire future business leaders.

Full-time, part-time and accelerated programs are also offered to give students the flexibility they need to continue their education and become leaders in the business world and the community. Classes are held at the Ron Joyce Centre in Burlington, Ontario in a state-of-the-art building designed to enrich the student learning experience.

MBA Program Information

The MBA Program offers a number of program options:
DeGroote MBA (full-time status, 4 academic terms)
DeGroote MBA with Co-op (full-time status, 4 academic terms alternating with 3 paid work terms)
DeGroote Accelerated MBA (10 courses, available full-time or part-time)
DeGroote Blended Learning Part-time Program (9 academic terms, part-time study only)

Students in Year 2 who wish to take graduate courses in other departments of the University as part of their MBA program may do so provided they secure approval from the particular
department concerned and the Manager, Academic (MBA), DeGroote School of Business. Graduate students not registered in the Faculty of Business may enroll in MBA courses only with
the prior approval of the Faculty of Business and their home department. Enquiries should be directed to the Manager, Academic (MBA).

Specializations

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Business Analytics

Business Analytics is a cross-discipline specialization that incorporates descriptive, predictive, and prescriptive analytics courses as well as application courses. The courses make use of relevant analytics software to equip the students with the necessary analytics platforms.

Data analytics has been touted by many industry leaders as the next frontier for innovation and productivity. The employment growth in data analytics is predicted to be the largest among all occupations in Canada. This specialization provides students with a wide variety of career options in analytics with application tracks in Finance, Information Systems, Marketing and Operations.

The Business Analytics specialization serves as a gateway to valuable professional designations such as the INFORMS Certified Analytics Professional (CAP) designation and the SAP Business Integration Certification program.

Business Analytics

- Required:

- BUSINESS K723 / Data Mining and Business Intelligence
- BUSINESS O701 / Modeling and Prescriptive Analytics ~~using Spreadsheets~~
- BUSINESS O711 / Predictive Modelling and Analytics
- BUSINESS P700 / Business, Government and the Global Environment
- BUSINESS P720 / Strategic Management

    And any two courses from the following two electives lists:

- Highly Recommended Electives:
- BUSINESS E714 / Business and Economic Forecasting
- BUSINESS F741 / Introduction to FinTech
- BUSINESS F743 / Big Data in Finance
- BUSINESS K735 / Managing the Implementation of Enterprise Systems
- BUSINESS K740 / Business Applications of Data Analytics/AI
- EHEALTH 746 / Healthcare Analytics
- BUSINESS M731 / Marketing Research
- BUSINESS M733 / Marketing Analytics
- BUSINESS M734 / Strategic Marketing Analysis
- BUSINESS O712 / Data Analytics using Python
- BUSINESS O715 / Simulation for Business Analytics

- Other Electives:
- BUSINESS F715 / Portfolio Theory and Management
- BUSINESS F735 / Financial Modelling
- BUSINESS K725 / Business Process Management
- BUSINESS O721 / Inventory Management and Production Planning

Commented [BL2]: Pending name change approval.

Commented [BL3]: New Course pending approval.

Commented [BL4]: New Course pending approval.

- BUSINESS O734 / Supply Chain Management
- BUSINESS O735 / Strategic Procurement
- BUSINESS D729 / Independent Research Project in Business Analytics

plus any 3 700 level elective courses.

The Business Analytics is a cross-discipline specialization that incorporates descriptive, predictive and prescriptive analytics courses as well as application courses. In addition to the required Year 1 foundational functional areas of business courses, the specialization offers foundational courses in predictive and prescriptive courses in Year 2. Most of the courses will make use of relevant analytics software to equip the students with the necessary analytics platforms.

Data analytics has been touted by many industry leaders as the next frontier for innovation and productivity. The employment growth in data analytics is predicted to be the largest among all occupations in Canada. This specialization provides students with a wide variety of career options in the area of business analytics with three application tracks in finance, marketing and operations

The Business Analytics specialization serves as a gateway to valuable professional designations such as INFORMS Certified Analytics Professional (CAP) designation as well as the SAP Business Integration Certification program.

Business Analytics

- Required:
- BUSINESS K723 / Data Mining and Business Intelligence
- BUSINESS O701 / Modeling and Analytics using Spreadsheets
- BUSINESS O711 / Predictive Modelling and Analytics
- BUSINESS O715 / Simulation for Business Analytics
- BUSINESS P700 / Business, Government and the Global Environment
- BUSINESS P720 / Strategic Management
-
   And three courses from one of the following application tracks:

Finance Track

- Required:
- BUSINESS F741 / Introduction to FinTech
- BUSINESS F743 / Big Data in Finance
- Electives:

Commented [BL5]: New Course pending approval

- BUSINESS F713 / Security Analysis
- BUSINESS F714 / Options and Futures: Theory and Applications
- BUSINESS F715 / Portfolio Theory and Management
- BUSINESS F719 / Independent Research Project in Finance
- BUSINESS F722 / Market Trading and Risk Management
- BUSINESS F723 / Fixed Income Analysis
- BUSINESS F733 / Financial Risk Management
- BUSINESS F735 / Financial Modelling

Information Systems Track

- EHEALTH 746 / Healthcare Analytics
- BUSINESS K724 / eBusiness Strategies
- BUSINESS K725 / Business Process Management
- BUSINESS K735 / Managing the Implementation of Enterprise Systems
- BUSINESS K737 / Cases in eBusiness, Innovation and Entrepreneurship

Marketing Track

- BUSINESS M719 / Independent Research Project in Marketing
- BUSINESS M731 / Marketing Research
- BUSINESS M733 / Marketing Analytics
- BUSINESS M734 / Strategic Marketing Analysis

Operations and Supply Chain Management Track

- BUSINESS O719 / Independent Research Project in Operations Management
- BUSINESS O721 / Inventory Management and Production Planning
- BUSINESS O725 / Business Logistics
- BUSINESS O726 / Methods for Quality Mangement
- BUSINESS O734 / Supply Chain Management
- BUSINESS O735 / Strategic Procurement
-

plus 1 700 level elective course.

Accounting and Financial Management Services

The Accounting and Financial Management Services Specialization emphasizes the fundamental areas and current issues in financial reporting, including the problems of measurement and reporting to both internal and external users of financial information. Course work is required in the various functional areas of business in Year 1 and the election of further work in finance, economics, information systems, and quantitative methods is strongly encouraged in Year 2.

This specialization provides students with a wide variety of career options. Graduates may pursue careers in financial reporting, public accounting (specializing in auditing and assurance, forensic accounting, taxation), business valuations, or bankruptcy trusteeship. Other career opportunities include management accounting positions in for-profit and not-for-profit business environments as Chief Financial Officers, controllers, financial analysts, and treasury officers responsible for developing reporting and control systems as well as decision support systems within organizations. A specialization in Accounting and Financial Management Services also provides opportunities for access to positions in financial institutions as credit officers and financial specialists as well as opportunities in management consulting in areas requiring financial expertise.

The Accounting and Financial Management Services specialization serves as a gateway to valuable professional financial designations and contains maximal embedded career options. Choosing this specialization enables one to be in a position to qualify for a financial designation such as Chartered Professional Accountant (CPA), Certified Public Accountant (CPA), and Chartered Financial Analyst (CFA).

- Required:
- BUSINESS P700 / Business, Government and the Global Environment
- BUSINESS P720 / Strategic Management
-
  and five of the following:
- BUSINESS A701 / Intermediate Financial Accounting I
- BUSINESS A702 / Intermediate Financial Accounting II
- BUSINESS A703 / Advanced Financial Accounting
- BUSINESS A717 / Seminar in Accounting Theory
- A718/28/38/48… Selected Topics in Accounting
- BUSINESS A721 / Management Accounting Information for Strategic Development
- BUSINESS A723 / Accounting Information Systems

- [BUSINESS A730 / Canadian Taxation I](#)
- [BUSINESS A733 / Canadian Taxation II](#)
- [BUSINESS A745 / Assurance](#)
- A750/F717/V701 Financial Statement Analysis
-
  plus 3 700 level electives

Finance

The Finance specialization offers a complete range of courses to prepare the student for a career in finance. In Business F650, the introductory course which all MBA students must take, students are introduced to the financial market tools of valuation, market efficiency, arbitrage pricing, contingent claims, and risk-return tradeoffs. On the corporate side, students are introduced to concepts such as cost of capital, capital budgeting, dividend policy, and capital structure. In advanced courses, students deepen their practical understanding through the use of models currently used in financial markets: options, futures and other derivatives, portfolio management, and forecasting and quantitative methods. Students apply concepts in cases, computer simulations, projects, and
market analysis. Among other things, the Specialization is designed to prepare students for the exams required to obtain the Chartered Financial Analyst (CFA) and Certified Financial Planner (CFP) designations. The Finance Specialization has been recognized by the CFA Institute as meeting the requirements for membership in its University Recognition Program. At a minimum, students pursuing the CFA designation should take the courses marked with an asterisk (*).

Career opportunities for graduates in finance include employment in the financial services sector, a sector which currently accounts for about one-fifth of the Canadian economy and continues to grow - banks, trusts, management consulting, investment banks, pension funds, mutual funds, real estate, and insurance companies. The financial function in corporations offers opportunities for the finance specialist as well. For more information, students should contact the Finance and Business Economics Area.

- Required:
- [BUSINESS P700 / Business, Government and the Global Environment](#)
- [BUSINESS P720 / Strategic Management](#)
- *and five of the following:*
- [BUSINESS E714 / Business and Economic Forecasting](#)

- [BUSINESS F700 / Valuation for Finance Professionals](#)
- [BUSINESS F701 / Alternative Investments and Portfolio Management](#) *
- BUSINESS F703 / The History of Finance
- [BUSINESS F710 / Financial Economics and Quantitative Methods](#)
- [BUSINESS F711 / Financial Institutions](#)
- [BUSINESS F712 / Applied Corporate Finance](#)
- [BUSINESS F713 / Security Analysis](#) *
- [BUSINESS F714 / Options and Futures: Theory and Applications](#)
- [BUSINESS F715 / Portfolio Theory and Management](#)
- [BUSINESS F716 / International Financial Management](#)
- F717/A750/V701 Financial Statement Analysis*
- F718/28/38/48/58... Selected Topics in Finance
- [BUSINESS F720 / Small Business/Entrepreneurial Finance](#)
- [BUSINESS F721 / Mergers, Acquisitions and Corporate Control](#)
- [BUSINESS F722 / Market Trading and Risk Management](#)
- [BUSINESS F723 / Fixed Income Analysis](#) *
- F724/V705 Venture Capital and Private Equity
- [BUSINESS F725 / Personal Financial Management](#)
- F726/V702 Behavioural Finance
- [BUSINESS F727 / Working Capital Management](#)
- [BUSINESS F730 / Pension, Retirement and Estate Planning](#)
- [BUSINESS F731 / Insurance and Risk Management](#)
- [BUSINESS F732 / Personal Financial Planning and Advising](#)
- [BUSINESS F733 / Financial Risk Management](#)
- [BUSINESS F734 / Real Estate Finance and Investment](#)
- F735/V703 Financial Modelling
- [BUSINESS F736 / Ethics and Professional Practice in Finance](#) *
- [BUSINESS F741 / Introduction to FinTech](#)
- [BUSINESS F743 / Big Data in Finance](#)

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General MBA

The General MBA is designed for students who are interested in preparing themselves for positions which require ability to co-ordinate several functional areas of business and other complex organizations. The General MBA might also be considered by those intending to start their own business enterprise as well as by those experienced students who are interested in preparing themselves for advancement to upper management levels.

The General MBA combines a required program of introductory courses in all

the functional areas of management with a program of electives offering students considerable freedom to seek a broad education tailored to their individual backgrounds and career interests.

- Required:
- [BUSINESS P700 / Business, Government and the Global Environment](#)
- [BUSINESS P720 / Strategic Management](#)
-
  and eight 700-level courses

Health Services Management

The competent professional health services manager is a critical element in the framework of effective and efficient delivery of health services. Such individuals need solid management grounding in the fundamentals of planning, operations and evaluation, and a broad orientation to the realities, limitations, and potentialities of our health "system".

The underlying assumption of this specialization is that a solid MBA training, including selected graduate courses in health services, coupled with a range of work term experiences in the health sector designed with specific educational objectives, will produce a unique graduate with accelerated capabilities in the health services field. The health services management (HSM) specialization also provides the added benefit of preparing students for a career and certification as a Certified Health Executive (CHE), Canada's only professional credential available to health leaders, under the DeGroote School of Business' strategic alliance with the Canadian College of Health Service Executives (CCHSE).

For those who choose Co-op, the work-study nature of the MBA co-op program is an excellent educational format. The three work terms provide a 12-month "residency" training period as an integral part of the total educational experience. To the extent possible, the work term sites and activities are based on the student's interests and needs. During each work term, the student receives on-the-job training under the guidance of a supervisor (preceptor) from the work setting. MBA co-op work terms in the Canadian health services management field can be credited towards the CHE practical experience requirement.

This specialization provides students a fast-track opportunity to earn the

MBA degree and CHE designation. Students who enroll in the strategic alliance must complete the CHE program requirements within three years from the date of enrollment.

For more information, please visit http://www.cchl-ccls.ca/

This specialization is also available to students in the Accelerated Program provided they have a minimum of 1-year work experience in the Health Care industry at the time of their application.

- Required:
- [BUSINESS P700 / Business, Government and the Global Environment](#)
- [BUSINESS P720 / Strategic Management](#)
- [BUSINESS C711 / Health Economics and Evaluation for Managers](#)
- [BUSINESS C721 / Health Policy Analysis for Managers](#)
- *and three of the following:*
- [BUSINESS C715 / Health Care Funding and Resource Allocation](#)
- [BUSINESS C722 / Management of Population Health](#)
- [BUSINESS C725 / Managing Communications in Health Care](#)
- [BUSINESS C727 / Pharma/Biotech Business Issues](#)
- [BUSINESS C735 / Proposal Development for Health Care Leaders](#)
- [BUSINESS C736 / Quality Management in Health Services](#)
- C741/M722 Health Care Marketing
- [BUSINESS C750 / Ethical and Legal Issues in Health Care](#)
-

  plus 3 700 level electives, excluding C700
  Co-op students are required to complete at least two out of three work terms in the Health Services Management field.
  Students in programs other than Co-op, who have had full-time, management positions in the health services sector, may be able to take the Health Services Management specialization. Students' work experience will be assessed on a case-by-case basis by the Area.
  Effective September 2018, students enrolled in the Blended Learning Part-Time MBA program are unable to declare specializations.

Strategic Business Valuation

Students in the Strategic Business Valuation (SBV) specialization who successfully complete V700 (Strategic Business Valuation) and V704 (Advanced Strategic Business Valuation) will be exempt from taking the Level I and Level II Canadian Institute of Chartered Business Valuators (CICBV) courses (two of six required courses) for earning the CBV designation, as long

as they pass the corresponding CICBV exams before the end of the third calendar year after completing V700 and V704.

Students in the Strategic Business Valuation specialization learn best practices for business valuation through a unique interdisciplinary approach using a blend of finance, economics, and accounting principles which include: investigative techniques to identify the drivers of value in an enterprise; case analysis and class discussion; and panel discussions with industry experts. They are exposed to valuation models and analytical techniques that value a business, including both tangible and intangible assets, drawing upon both traditional valuation techniques and newer, more contemporary approaches. The purpose is to accurately and exhaustively profile firms to identify those that meet rigorous standards of excellence and growth and to develop strategies for further value enhancement and preservation.

The underlying philosophy of this whole-business approach is that wise investments are made for the long run rather than for quick returns through rapid buying and selling. This approach requires the identification of firms for investment which have enduring financial health and growth. Such long-term potential can only be assessed through a complete analysis of the firm and the drivers of value.

The pedagogy in the specialization stresses the use of conceptual/theoretical material in analyses that have practical value in solving the kinds of problems and making the kinds of decisions that are encountered in the workplace. Graduates are thus prepared to enter unique positions in, business valuation, credit analysis, consulting, and corporate management, and are well prepared to assume positions of responsibility relatively quickly.

- Required:
- BUSINESS P700 / Business, Government and the Global Environment
- BUSINESS P720 / Strategic Management
- BUSINESS V700 / Strategic Business Analysis and Valuation
- BUSINESS V704 / Advanced Strategic Business Valuation
-
  and three of the following:
- BUSINESS F712 / Applied Corporate Finance
- BUSINESS F713 / Security Analysis
- BUSINESS F721 / Mergers, Acquisitions and Corporate Control
- V701/A750/F717 Financial Statement Analysis
- V702/F726 Behavioural Finance
- V703/F735 Financial Modeling and Valuation

- V705/F724 Venture Capital and Private Equity

plus 3 700 level electives

Strategic Marketing

Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large. Professional marketers act in a forward looking manner to create, maintain, and enhance relationships among different stakeholders to facilitate such exchanges. Highly successful marketers understand both the quantitative (e.g. economics) as well as the qualitative (e.g. psychology, sociology and politics) aspects of customer behaviour in consumer and business markets.

The Strategic Marketing Specialization provides MBA students a diverse selection of courses to develop the broad understanding of the fundamental concepts, theories and applications needed to be a successful marketer. Integrated experiential learning is an important part of this education. This is achieved via projects with local and national businesses, cases, research projects, and marketing simulations.

Graduates in this specialization are well prepared for careers in marketing management, new product marketing, brand management, services marketing, marketing analytics, marketing research, retailing, sales, advertising, promotion etc. Students are provided with the education and experience to become highly successful in both consumer and business marketing professions as well as to effectively operate in domestic and international markets.

- Required:
- BUSINESS P700 / Business, Government and the Global Environment
- BUSINESS P720 / Strategic Management
- BUSINESS M731 / Marketing Research
-
  and four of the following:
- M718/28/38/48... Selected Topics in Marketing

- [BUSINESS M721 / Business Marketing](#)
- M722/C741 Health Care Marketing
- [BUSINESS M724 / Innovation and New Products](#)
- [BUSINESS M727 / Marketing Communication](#)
- [BUSINESS M732 / Consumer Behaviour](#)
- [BUSINESS M733 / Marketing Analytics](#)
- [BUSINESS M734 / Strategic Marketing Analysis](#)
- [BUSINESS M736 / Services Marketing](#)
- [BUSINESS M740 / Corporate Reputation and Brand Management](#)
- [BUSINESS M750 / Consultative Selling](#)
- [BUSINESS M751 / Sustainability and Corporate Social Responsibility](#)
- [BUSINESS P715 / Entrepreneurship](#)
- [BUSINESS P731 / Crisis Management and Communications](#)
-

plus 3 700 level electives

MBA Courses

Note 1: Not all courses are necessarily offered every year.

Note 2: Under normal circumstances, a student is expected to complete all first year courses before beginning 700-level courses. Requests to circumvent this expectation are not permitted.

Selected Topics Courses

Selected topics courses are special courses offered in the MBA program which are not part of the regular curriculum.

Topics vary depending on recent developments in the subject area and on the research interests of the instructor(s).

These courses are not listed in the MBA Academic Calendar and may change from term to term. Course descriptions are available at http://mbastudent.degroote.mcmaster.ca/courses/courseschedule/

Prerequisites for these courses depend upon the topic offered.

Selected topics courses with a given course number may be repeated for credit if a different topic is offered.

Year 1 Courses

Year 1 Courses - DeGroote MBA (Full-time) and DeGroote MBA with Co-op (For students admitted on or after September 2016)

- BUSINESS L611 / Foundations 1
- BUSINESS I601 / Managing Financial Resources
- BUSINESS I602 / Economics & Business Statistics
- BUSINESS I603 / Competing Through Digital Transformation & Analytics
- BUSINESS I604 / Creating Customer Value
- BUSINESS I605 / Managing Organizations
- BUSINESS A650 / Accounting for Decision Makers
- BUSINESS F650 / Firms and Markets
- BUSINESS L624 / Foundations 2: Advanced Professional Skills
- BUSINESS L625 / Foundations 2: Review & Relaunch
- BUSINESS L626 / Integrating Project
- **Students choose from 3 out of 5 from the following:**
- BUSINESS B650 / Managing People in Organizations
- BUSINESS C650 / Introduction to Health Management
- BUSINESS K650 / Information Systems in Business
- BUSINESS M650 / Strategic Marketing Management
- BUSINESS O650 / Operations Management

Year 1 Courses

Year 1 Courses - All Programs except Part-Time. (For students admitted prior to September 2016)

- BUSINESS A600 / Financial Accounting and Reporting
- BUSINESS A610 / Managerial Accounting
- BUSINESS B600 / Organizational Behaviour
- BUSINESS E600 / Economics
- BUSINESS F600 / Managerial Finance
- BUSINESS K603 / Information Systems in Business
- BUSINESS M600 / Marketing Concepts and Applications
- BUSINESS O600 / Operations Management
- BUSINESS Q600 / Applied Business Statistics

Year 2 Courses

- **Required Courses:**
- BUSINESS P700 / Business, Government and the Global Environment
- BUSINESS P720 / Strategic Management

- Plus eight 700-level courses from the following:

Accounting Courses

- [BUSINESS A600 / Financial Accounting and Reporting](#)
- [BUSINESS A610 / Managerial Accounting](#)
- [BUSINESS A701 / Intermediate Financial Accounting I](#)
- [BUSINESS A702 / Intermediate Financial Accounting II](#)
- [BUSINESS A703 / Advanced Financial Accounting](#)
- [BUSINESS A717 / Seminar in Accounting Theory](#)
- A718/28/38/48 Selected Topics in Accounting
- [BUSINESS A721 / Management Accounting Information for Strategic Development](#)
- [BUSINESS A722 / Market Trading and Risk Management](#)
- [BUSINESS A723 / Accounting Information Systems](#)
- [BUSINESS A730 / Canadian Taxation I](#)
- [BUSINESS A732 / Canadian Income Tax Fundamentals](#)
- [BUSINESS A733 / Canadian Taxation II](#)
- [BUSINESS A740 / Strategic Management Accounting](#)
- [BUSINESS A745 / Assurance](#)
- [BUSINESS A750 / Financial Statement Analysis](#)

Organizational Behaviour

- [BUSINESS B600 / Organizational Behaviour](#)
- [BUSINESS B712 / Managerial Negotiations](#)
- [BUSINESS B715 / Principles of Leadership](#)
- [BUSINESS B716 / Strategic Organizational Change](#)
- [BUSINESS B717 / Management Development](#)
- B718/28/38/48 Selected Topics in Organizational Behaviour
- [BUSINESS B730 / Strategic Management of Technology](#)
- BUSINESS B733 / ~~Multidisciplinary~~ Biomedical Entrepreneurship
- BUSINESS B734 / ~~International~~ Experiential Entrepreneurship

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Health Services Management

- [BUSINESS C700 / Introduction to Health Management](#)
- [BUSINESS C710 / Interdisciplinary Perspectives on Health Economics and Evaluation](#)
- [BUSINESS C711 / Health Economics and Evaluation for Managers](#)
- [BUSINESS C720 / Interdisciplinary Perspectives on Health Policy Analysis](#)
- [BUSINESS C721 / Health Policy Analysis for Managers](#)
- [BUSINESS C722 / Management of Population Health](#)

- [BUSINESS C725 / Managing Communications in Health Care](#)
- [BUSINESS C727 / Pharma/Biotech Business Issues](#)
- [BUSINESS C735 / Proposal Development for Health Care Leaders](#)
- [BUSINESS C736 / Quality Management in Health Services](#)
- [BUSINESS C740 / Interdisciplinary Perspectives on Health Care Marketing](#)
- [BUSINESS C741 / Health Care Marketing for Managers](#)
- [BUSINESS C750 / Ethical and Legal Issues in Health Care](#)
- [BUSINESS C755 / Analytics and Decision Making in Healthcare](#)
- [BUSINESS D700 / Case Analyses and Presentations](#)

Business Economics

- [BUSINESS E600 / Economics](#)
- [BUSINESS E714 / Business and Economic Forecasting](#)

Finance

- [BUSINESS F600 / Managerial Finance](#)
- [BUSINESS F700 / Valuation for Finance Professionals](#)
- [BUSINESS F701 / Alternative Investments and Portfolio Management](#)
- [BUSINESS F702 / Sustainable and Social Finance](#)
- [BUSINESS F703 / The History of Finance](#)
- [BUSINESS F710 / Financial Economics and Quantitative Methods](#)
- [BUSINESS F711 / Financial Institutions](#)
- [BUSINESS F712 / Applied Corporate Finance](#)
- [BUSINESS F713 / Security Analysis](#)
- [BUSINESS F714 / Options and Futures: Theory and Applications](#)
- [BUSINESS F715 / Portfolio Theory and Management](#)
- [BUSINESS F716 / International Financial Management](#)
- [BUSINESS F717 / Financial Statement Analysis](#)
- F718/28/38/48 Selected Topics in Finance
- [BUSINESS F720 / Small Business/Entrepreneurial Finance](#)
- [BUSINESS F721 / Mergers, Acquisitions and Corporate Control](#)
- [BUSINESS F722 / Market Trading and Risk Management](#)
- [BUSINESS F723 / Fixed Income Analysis](#)
- [BUSINESS F724 / Venture Capital and Private Equity](#)
- [BUSINESS F725 / Personal Financial Management](#)
- [BUSINESS F726 / Behavioural Finance](#)
- [BUSINESS F727 / Working Capital Management](#)
- [BUSINESS F730 / Pension, Retirement and Estate Planning](#)
- [BUSINESS F731 / Insurance and Risk Management](#)
- [BUSINESS F732 / Personal Financial Planning and Advising](#)

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- [BUSINESS F733 / Financial Risk Management](#)
- [BUSINESS F734 / Real Estate Finance and Investment](#)
- [BUSINESS F735 / Financial Modelling](#)
- [BUSINESS F736 / Ethics and Professional Practice in Finance](#)
- [BUSINESS F741 / Introduction to FinTech](#)
- [BUSINESS F743 / Big Data in Finance](#)

Human Resources and Management

- [BUSINESS H600 / Human Resources Management](#)
- H718/28/38/48 Selected Topics in Human Resources

International Business

Management Information Systems

- [BUSINESS K603 / Information Systems in Business](#)
- K718/28/38/48 Selected Topics in Management Information Systems
- [BUSINESS K723 / Data Mining and Business Intelligence](#)
- [BUSINESS K724 / eBusiness Strategies](#)
- [BUSINESS K725 / Business Process Management](#)
- [BUSINESS K731 / Project Management](#)
- [BUSINESS K735 / Managing the Implementation of Enterprise Systems](#)
- [BUSINESS K736 / Management Issues in eHealth](#)
- [BUSINESS K737 / Cases in eBusiness, Innovation and Entrepreneurship](#)
- [BUSINESS K740 / Business Applications of Data Analytics/AI](#)
- BUSINESS M600 / Marketing Concepts and Applications

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Strategic Marketing

- [BUSINESS M600 / Marketing Concepts and Applications](#)
- [BUSINESS M721 / Business Marketing](#)
- M718/28/38/48 Selected Topics in Marketing
- [BUSINESS M722 / Health Care Marketing for Managers](#)
- [BUSINESS M724 / Innovation and New Products](#)
- [BUSINESS M727 / Marketing Communication](#)
- [BUSINESS M731 / Marketing Research](#)
- [BUSINESS M732 / Consumer Behaviour](#)
- [BUSINESS M733 / Marketing Analytics](#)
- [BUSINESS M734 / Strategic Marketing Analysis](#)

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- [BUSINESS M736 / Services Marketing](#)
- [BUSINESS M740 / Corporate Reputation and Brand Management](#)
- [BUSINESS M750 / Consultative Selling](#)
- [BUSINESS M751 / Sustainability and Corporate Social Responsibility](#)
- [BUSINESS M752 / Digital Marketing](#)

Operations Management

- [BUSINESS O600 / Operations Management](#)
- BUSINESS O701 / Modeling and Prescriptive Analytics ~~Modeling and Analytics using Spreadsheets~~ **Commented [BL12]:** Pending name change approval.
- [BUSINESS O711 / Predictive Modelling and Analytics](#)
- [BUSINESS O712 / Data Analytics using Python](#) **Commented [BL13]:** New Course pending approval.
- [BUSINESS O715 / Simulation for Business Analytics](#)
- O718/28/38/48 Selected Topics in Operations Management
- [BUSINESS O721 / Inventory Management and Production Planning](#)
- [BUSINESS O725 / Business Logistics](#)
- [BUSINESS O726 / Methods for Quality ~~Mangement~~Management](#)
- [BUSINESS O734 / Supply Chain Management](#)
- [BUSINESS O735 / Strategic Procurement](#)

Business Environment and Policy

- [BUSINESS P700 / Business, Government and the Global Environment](#)
- [BUSINESS P715 / Entrepreneurship](#)
- [BUSINESS P720 / Strategic Management](#)
- [BUSINESS P721 / The Clinic - Innovation Lab](#)
- [BUSINESS P722 / Legal Aspects of Business](#)
- [BUSINESS P724 / Innovation](#)
- [BUSINESS P727 / Strategic Knowledge Management](#)
- [BUSINESS P731 / Crisis Management and Communications](#)
- [BUSINESS P737 / Profiting from Intellectual Property](#)
- [BUSINESS P745 / Corporate Governance](#)
- [BUSINESS Q600 / Applied Business Statistics](#)

Strategic Business Valuation

- [BUSINESS V700 / Strategic Business Analysis and Valuation](#)
- [BUSINESS V701 / Financial Statement Analysis](#)
- [BUSINESS V702 / Behavioural Finance](#)
- [BUSINESS V703 / Financial Modeling and Valuation](#)
- [BUSINESS V704 / Advanced Strategic Business Valuation](#)
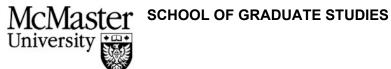
- BUSINESS V705 / Venture Capital and Private Equity

Special Research Projects

There is no thesis requirement for graduation in the MBA program. However, a student in the second year may undertake, with the prior approval of the appropriate instructor, Area Chair, and Associate Dean of Business, to develop an original paper, research study, or project in an area directly associated with their program of study. Special Research Projects must be supervised by a faculty member. Credit for one second-year course will be granted upon satisfactory completion of the project. In order to make best use of this opportunity the student must plan the research and contact a faculty member in the session preceding the one in which they intend to register for the special research project.

- BUSINESS A719 / Independent Research Project in Accounting
- BUSINESS B719 / Independent Research Project in Organizational Behaviour
- BUSINESS C719 / Independent Research Project in Health Sciences Management
- BUSINESS D729 / Independent Research Project in Business Analytics
- BUSINESS E719 / Independent Research Project in Business Economics
- BUSINESS F719 / Independent Research Project in Finance
- BUSINESS H719 / Independent Research Project in Human Resources Management
- BUSINESS I719 / Independent Research Project in International Business
- BUSINESS K719 / Independent Research Project in Management Information Systems
- BUSINESS M719 / Independent Research Project in Marketing
- BUSINESS O719 / Independent Research Project in Operations Management
- BUSINESS P719 / Independent Research Project in Strategic Management
- BUSINESS V719 / Independent Research Project in Strategic Business Valuation

⬅ Return to: DeGroote School of Business

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McMaster University

SCHOOL OF GRADUATE STUDIES

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

IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:
1.   This form must be completed for **ALL** changes involving degree program requirements/procedures. **All** sections of this form **must** be completed. 2.   An electronic version of this form (must be in MS WORD **not** PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca). 3.   A representative from the department is **required to attend** the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.

DEPARTMENT	DeGroote School of Business
NAME OF PROGRAM and PLAN	Blended Learning Part-Time MBA Program

DEGREE	**Master of Business Administration**

NATURE OF RECOMMENDATION *(PLEASE CHECK APPROPRIATE BOX)*
Is this change a result of an IQAP review? ☐ Yes ☒ No

CREATION OF NEW MILESTONE ☐

CHANGE IN ADMISSION REQUIREMENTS		CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS	

CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR	x	**EXPLAIN:** Proposal to add K740, F703 and O712 to the list of approved electives that are available to Blended Learning Part-Time MBA students.

OTHER CHANGES		**EXPLAIN:**

DESCRIBE THE <u>EXISTING</u> REQUIREMENT/PROCEDURE:

K740, F703 and O712 are three new electives that have been added to the regular MBA course offerings and as such were not previously available to MBA students.

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

The proposal is to add K740, O712 and F703 to the approved elective list available to BLPT MBA students. These three electives have recently been added as electives to the regular MBA program and the respective Areas have agreed that they should also be included to the approved elective list for BLPT students.

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

Through the BLPT program, students in their third year of study have the opportunity to complete electives either in the blended format (online/in-person learning) or through a select list of elective offerings through the regular MBA program. K740, O712 and F703 will be added to the elective offering roster for the regular MBA program and the respective Areas have also determined that these courses can also be made available to BLPT students.

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

September, 2021

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

    N/A

CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: John Medcof   Email: medcofj@mcmaster.ca   Extension: 20599   Date submitted: January 25, 2021

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

McMaster University   **School of Graduates Studies Calendar, 2020-2021**

Business Administration Part-Time, M.B.A.

Part-Time MBA Programs

For students wishing to complete their MBA but unable to commit to a full-time study schedule, a part-time program is an ideal alternative.

The Blended Learning Part-time MBA launched in September 2018. Admission into the Part-time MBA Program was discontinued in 2017. Part-time students generally may take up
to 6 units of course work per term, with the exception of Terms 8 and 9 in the Blended Learning Part-time Program.

Students with a Bachelor of Commerce degree may complete an Accelerated MBA Program on a full-time or part-time basis. Please refer to the Accelerated MBA Program section for additional
detail.

Blended Learning Part-time MBA

For students enrolled after September 2018

Length: 9 terms. Please note this program follows a prescribed sequence.

Number of courses/units: 21 courses/55.5 units

Admission Criteria

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

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

degree. Please refer to Section 2.1.1 of the Graduate Calendar on this matter.

Program specific notes:

Meeting minimum admission requirements does not guarantee acceptance into the program.

This program offers non-elective courses in a Blended Learning format. Students are required to engage in on-line learning activities, in addition to attending 3 mandatory weekend residencies per term.

Please note that it is not possible to transfer from the BLPT Program to other MBA Programs (MBA, MBA with Co-op or Accelerated MBA). Please speak with program staff to ensure this is the best program option for you.

Required Courses

Term 1 (6 units)

- BUSINESS BL600 / Leadership Fundamentals
- BUSINESS BL610 / Management Fundamentals

Term 2 (6 units)

- BUSINESS BL602 / Economics & Business Statistics
- BUSINESS BL604 / Creating Customer Value

Term 3 (6 units)

- BUSINESS BL601 / Managing Financial Resources
- BUSINESS BL603 / Competing Through Digital Transformation & Analytics

Term 4 (6 units)

- BUSINESS BL605 / Managing Organizations
- BUSINESS BL651 / Management Accounting for Decisions Makers
  BL652 Intermediate Finance

Term 5 (6 units)

  BUSINESS BL700 / Business, Government
  & Global Environment

- ~~BUSINESS BL720 / Strategic Management~~
  BL653 Intermediate Marketing
  BL654 Intermediate Operations

Term 6 (6 units)

- ~~BUSINESS BL700 / Business, Government & Global Environment~~
- BUSINESS BL720 / Strategic Management

  BUSINESS BL751 / Innovation & Design Thinking
- BUSINESS BL752 / Co-Creating Strategic Foresight

Term 7 (6 units)

Elective credits* (6 units)

Term 8 (6 units)

Elective credits* (3 units)

Strategic Integration Project A (3 units)

Term 9 (7.5 units)

Elective Credit (3 units)

Strategic Innovation Project B (3 units)

Program Synthesis & Future Planning (1.5 units)

BLPT Electives

*12 units of elective credit are to be taken from one of the 3 categories below:

1. Blended Learning Format Electives

(weekend residencies combined with online components)

- BUSINESS BL710 / Accounting for Decision Makers
- BUSINESS BL711 / Predictive Analytics for Managers
- BUSINESS BL712 / Managerial Negotiations
- BUSINESS BL713 / Entrepreneurial & Small Business Finance
- BUSINESS BL714 / Innovation and New Products
- BUSINESS BL715 / Project Management

2. Other Electives

Electives in this category will be offered in person (*with the exception of courses marked with an asterisk, which are offered online) and not through the weekend residency/online blended format model.

- BUSINESS A721 / Management Accounting Information for Strategic Development
- BUSINESS A732 / Canadian Income Tax Fundamentals
- BUSINESS A750 / Financial Statement Analysis
- ~~BUSINESS B712 / Managerial Negotiations~~
- BUSINESS B715 / Principles of Leadership
- BUSINESS B716 / Strategic Organizational Change

- BUSINESS B717 / Management Development
- BUSINESS B730 / Strategic Management of Technology
- BUSINESS F700 / Valuation for Finance Professionals
- BUSINESS F701 / Alternative Investments and Portfolio Management
- BUSINESS F703 / The History of Finance
- BUSINESS F712 / Applied Corporate Finance

BUSINESS F712 / Applied Corporate Finance

- BUSINESS F713 / Security Analysis
- BUSINESS F716 / International Financial Management
- BUSINESS F720 / Small Business/Entrepreneurial Finance
- BUSINESS F721 / Mergers, Acquisitions and Corporate Control
- BUSINESS F722 / Market Trading and Risk Management
- BUSINESS F723 / Fixed Income Analysis
- BUSINESS F724 / Venture Capital and Private Equity
- BUSINESS F725 / Personal Financial Management
- BUSINESS F726 / Behavioural Finance
- BUSINESS F727 / Working Capital Management
- BUSINESS F730 / Pension, Retirement and Estate Planning
- BUSINESS F731 / Insurance and Risk Management
- BUSINESS F732 / Personal Financial Planning and Advising
- BUSINESS F733 / Financial Risk Management
- BUSINESS F734 / Real Estate Finance and Investment
- BUSINESS F735 / Financial Modelling
- BUSINESS F741 / Introduction to FinTech
- BUSINESS F743 / Big Data in Finance
- BUSINESS K723 / Data Mining and Business Intelligence
- BUSINESS K724 / eBusiness Strategies
- BUSINESS K725 / Business Process Management
- BUSINESS K731 / Project Management
- BUSINESS K735 / Managing the Implementation of Enterprise Systems
- BUSINESS K736 / Management Issues in eHealth
- BUSINESS K737 / Cases in eBusiness, Innovation and Entrepreneurship
- BUSINESS K740 / Business Applications of Data Analytics and Artificial Intelligence
- BUSINESS M721 / Business Marketing
- BUSINESS M722 / Health Care Marketing for Managers
- BUSINESS M724 / Innovation and New Products
- BUSINESS M727 / Marketing Communication
- BUSINESS M731 / Marketing Research
- BUSINESS M732 / Consumer Behaviour
- BUSINESS M733 / Marketing Analytics
- BUSINESS M734 / Strategic Marketing Analysis
- BUSINESS M736 / Services Marketing
- BUSINESS M740 / Corporate Reputation and Brand Management
- BUSINESS M750 / Consultative Selling

- ◇ [BUSINESS M751 / Sustainability and Corporate Social Responsibility](#)
- ◇ [BUSINESS O701 / Modeling and Analytics using Spreadsheets](#)

- ◦
- ◦
- ◦
- ◦
- ◦

- BUSINESS O712 / Data Analytics with Python
  - BUSINESS O721 / Inventory Management and Production Planning
  - BUSINESS O725 / Business Logistics
  - BUSINESS O726 / Methods for Quality Mangement
  - BUSINESS O734 / Supply Chain Management
  - BUSINESS O735 / Strategic Procurement
  - BUSINESS P715 / Entrepreneurship
  - BUSINESS P722 / Legal Aspects of Business
  - BUSINESS P731 / Crisis Management and Communications
  - BUSINESS C711 / Health Economics and Evaluation for Managers
  - BUSINESS C715 / Health Care Funding and Resource Allocation
  - BUSINESS C721 / Health Policy Analysis for Managers
  - BUSINESS C722 / Management of Population Health
  - BUSINESS C725 / Managing Communications in Health Care *
  - BUSINESS C727 / Pharma/Biotech Business Issues
  - BUSINESS C735 / Proposal Development for Health Care Leaders *
  - BUSINESS C736 / Quality Management in Health Services
  - BUSINESS C741 / Health Care Marketing for Managers

3. Special Research Project

Students can complete an independent study under the supervision of a faculty member.
There is no thesis requirement for graduation in the MBA program. However, a student in third year of the BLPT program may undertake, with the prior approval of the appropriate instructor, Area Chair, and Associate Dean of Business, to develop an original paper, research study, or project in an area directly associated with their program of study. Special Research Projects must be supervised by a faculty member. Credit for one second-year course will be granted upon satisfactory completion of the project. In order to make best use of this opportunity the student must plan the research and contact a faculty member in the session preceding the one in which they intend to register for the special research project. *BLPT students are permitted to take only one Special Research Project as an elective. The remaining three electives must be taken from either the Blended Format Elective list or Other Elective list (see items #1 and #2 above).

BUSINESS A719 / Independent Research Project in Accounting
BUSINESS B719 / Independent Research Project in Organizational Behaviour
BUSINESS C719 / Independent Research Project in Health Sciences Management
BUSINESS E719 / Independent Research Project in Business Economics
BUSINESS F719 / Independent Research Project in Finance
BUSINESS H719 / Independent Research Project in Human Resources Management
BUSINESS I719 / Independent Research Project in International Business
BUSINESS K719 / Independent Research Project in Management Information Systems
BUSINESS M719 / Independent Research Project in Marketing
BUSINESS O719 / Independent Research Project in Operations Management
BUSINESS P719 / Independent Research Project in Business Environment and Policy
BUSINESS V719 / Independent Research Project in Strategic Business Valuation

Part-Time MBA

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<u>For students enrolled on or before September 2016</u>

Length: Variable. It takes most students 4 to 5 years, but students have a maximum of 8 years to complete the program.

Number of courses: 20

Program specific requirements: Work experience helps, but is not required.

Program specific notes:

- You can take a maximum of 2 classes per term.
- You may have the option of taking complete terms off. Please consult an Academic Advisor.
- Evening courses are held once a week and usually run from 7 p.m. to 10 p.m.
- Students admitted prior to September 2016 are not permitted to transfer into the Blended Learning Part-time Program.

☒ **RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING COURSES & MILESTONES**

<table>
<tr><td colspan="2"><u>IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM</u>:

1.   This form must be completed for ALL course changes. Sections of this form pertaining to your requested change must be completed.

2.   An electronic version of this form (must be MS WORD not PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).

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.</td></tr>
</table>

<table>
<tr>
<td>DEPARTMENT</td>
<td colspan="3">DSB – Finance and Business Economics</td>
</tr>
<tr>
<td>COURSE TITLE</td>
<td colspan="3">Advanced Topics in Finance</td>
</tr>
<tr>
<td rowspan="2">COURSE NUMBER</td>
<td rowspan="2">MFIN 718</td>
<td colspan="3" align="center">COURSE CREDIT</td>
</tr>
<tr>
<td>6 Unit Course (   )</td>
<td>3 Unit Course (X)</td>
<td>1.5 Unit Course   (   )</td>
</tr>
<tr>
<td>REQUISITE(S)

(Pre/Co/Anti or program enrollment requirement)</td>
<td colspan="4">Departmental permission required</td>
</tr>
</table>

<table>
<tr><td colspan="4" align="center">NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX)

Is this change a result of an IQAP review? ☐ Yes ☒ No</td></tr>
<tr>
<td>NEW COURSE</td>
<td>X</td>
<td>DATE TO BE OFFERED (FOR <u>NEW</u> COURSES ONLY):   2021/2022</td>
<td>WAS THE PROPOSED COURSE OFFERED ON DEAN'S APPROVAL?   NO</td>
</tr>
<tr><td colspan="4">WILL THE COURSE BE <u>CROSS-LISTED (COMBINED SECTIONS)</u> WITH ANOTHER DEPARTMENT?   NO   IF YES, PLEASE NOTE WHICH DEPARTMENT:

ATTACH TO THIS FORM ANY RELEVANT CORRESPONDENCE WITH THE OTHER DEPARTMENT(S). NO<u>TE</u>: CROSS-LISTING OF COURSES REQUIRES WRITTEN APPROVAL FROM <u>EACH</u> DEPARTMENT AND FACULTY CONCERNED. IF YOU WOULD LIKE TO REMOVE A CROSS-LISTING YOU MUST INCLUDE A WRITTEN EXPLANATION AGREED UPON BY BOTH DEPARTMENTS AFFECTED.

N/A</td></tr>
<tr>
<td colspan="2">CHANGE IN COURSE TITLE</td>
<td colspan="2">PROVIDE THE <u>NEW</u> COURSE TITLE:</td>
</tr>
<tr>
<td colspan="2">CHANGE IN COURSE DESCRIPTION</td>
<td></td>
<td>600-LEVEL COURSE (Undergraduate course for graduate credit) Please see #4 on page 2 of this form</td>
</tr>
</table>

COURSE CANCELLATION	PROVIDE THE REASON FOR COURSE CANCELLATION:
	PLEASE NOTE: CROSS-LISTED (COMBINED SECTIONS) COURSES CAN ONLY BE CANCELLED BY THE DEPARTMENT WHO OWNS THE COURSE.

OTHER CHANGES		EXPLAIN:

BRIEF COURSE DESCRIPTION FOR CALENDAR - Provide a brief description *(maximum 6 lines)* to be included in the Graduate Calendar.

The topic offered will vary from year to year, depending on recent developments in the field and the research interests of the instructor. The topic to be offered will be announced at the time of offering. For information on course offerings, please refer to the Master of Finance program website at https://mfin.degroote.mcmaster.ca/program-info/courses or contact the program office at mfin@mcmaster.ca.

CONTENT/RATIONALE - Provide a brief description, i.e., outline the topics or major sub-topics, and indicate the principal texts to be used.

The topic will vary from year from year to year. If a topic is sufficiently well-subscribed over a two-year period, it may be recommended for inclusion in the program as a unique offering.

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1. **STATEMENT OF PURPOSE (How does the course fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review (if applicable)?)**

Presently the MFIN program comprises fifteen disciplinary courses offered over three terms. Students are also required to complete a Math-Stats review at the beginning of the program and a Career Preparation Tools course over the first two terms. Thirteen of the fifteen disciplinary courses are required. Two electives are presently offered in the third term. Students may also choose from a limited number of MBA electives subject to available space.

Most students take the two MFIN electives inasmuch as (i) they may not be able to gain entry to a desired MBA elective, (ii) they must travel to the Burlington campus for MBA electives, and (iii) scheduling overlaps may not allow them to take their preferred MBA electives. By allowing one more elective, and one which is currently topical and in demand by students, the program will be able to provide students with greater flexibility in choosing electives congruent with their interests and career aspirations, while obviating the problems created for the MBA program when MFIN students converge on particular MBA electives, which are also typically popular among MBA students (BUS F741 – Fintech and BUS F743 – Big Data in Finance presently). A dedicated MFIN course would also allow the instructor to design a course congruent with the preparation in Mathematics and Statistics required of students admitted to the MFIN program.

2. **EXPECTED ENROLMENT:**

   35-40 students

3. **DESCRIBE IN DETAIL THE METHOD OF PRESENTATION OF COURSE MATERIAL (i.e., lectures, seminars):**

The course will be ordinarily offered in a lecture format (three hours per week). Depending on the topic, lectures may be augmented with case discussions, invited speakers, student presentations and other complementary activities.

4. **DESCRIBE IN DETAIL THE METHOD OF EVALUATION (<u>percentage breakdown, if possible</u>): (For 600-level course, indicate the <u>Extra Work</u> to be required of graduate students, i.e., exams, essays, etc. Please also note if a lab or tutorial will be included.)**

The evaluation methods will depend on the topic offered. Most MFIN courses include mid-term and final exams and a project (often done in teams to foster team-building skills). Projects are often accompanied by a class presentation in order to offer students an opportunity to give a professional presentation. The projects usually have an experiential focus in so far as students are expected to utilize the skills and knowledge they have learned in class in order to address a "real-world" question. Other evaluation methods used in MFIN courses include class quizzes, problem sets, cases (usually undertaken in teams) and class participation.

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).**

No

6. **IF THE COURSE IS INTENDED PRIMARILY FOR STUDENTS OUTSIDE YOUR DEPARTMENT, DO YOU HAVE THE SUPPORT OF THE DEPARTMENT/PROGRAM CONCERNED?**

N/A

PLEASE PROVIDE THE CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Trevor W. Chamberlain   E-mail: chambert@mcmaster.ca Extension: 23980   Date submitted: February 14, 2021

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

SCHOOL OF GRADUATE STUDIES

☒ **RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING COURSES & MILESTONES**

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 (cbryce@mcmaster.ca).   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	MSc eHealth		
COURSE TITLE	Independent Research Project		

COURSE NUMBER	eHealth 702	**COURSE CREDIT**		
		6 Unit Course ( )	3 Unit Course (**x**)	1.5 Unit Course ( )

REQUISITE(S) **(Pre/Co/Anti or program enrollment requirement)**	Prerequisite: enrollment in a course-based stream of the MSc eHealth program (PT or FT)

NATURE OF RECOMMENDATION *(PLEASE CHECK APPROPRIATE BOX)*
Is this change a result of an IQAP review? ☐ Yes ☒ No

NEW COURSE	**x**	DATE TO BE OFFERED (FOR NEW COURSES ONLY): summer 2021	WAS THE PROPOSED COURSE OFFERED ON DEAN'S APPROVAL? YES
WILL THE COURSE BE CROSS-LISTED (COMBINED SECTIONS) WITH ANOTHER DEPARTMENT? NO IF YES, PLEASE NOTE WHICH DEPARTMENT:			
ATTACH TO THIS FORM ANY RELEVANT CORRESPONDENCE WITH THE OTHER DEPARTMENT(S). NOTE: CROSS-LISTING OF COURSES REQUIRES WRITTEN APPROVAL FROM EACH DEPARTMENT AND FACULTY CONCERNED. IF YOU WOULD LIKE TO REMOVE A CROSS-LISTING YOU MUST INCLUDE A WRITTEN EXPLANATION AGREED UPON BY BOTH DEPARTMENTS AFFECTED.			

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*

COURSE **CANCELLATION**		**PROVIDE THE REASON FOR COURSE CANCELLATION:** **PLEASE NOTE: CROSS-LISTED (COMBINED SECTIONS) COURSES CAN ONLY BE CANCELLED BY THE DEPARTMENT WHO OWNS THE COURSE.**
OTHER CHANGES		**EXPLAIN:**

BRIEF COURSE DESCRIPTION FOR CALENDAR - Provide a brief description *(maximum 6 lines)* to be included in the Graduate Calendar.

In this course, an eHealth student may work under the supervision of a faculty member to develop an original paper, research study, or project in an area directly associated with their program of study. Approval of the project and its parameters must be received by the instructor, the student's academic advisor, and the program director. In order to make best use of this opportunity the student must plan the research and contact a faculty member in the session preceding the one in which they intend to register for the special research project.

CONTENT/RATIONALE - Provide a brief description, i.e., outline the topics or major sub-topics, and indicate the principal texts to be used.

This course is intended to facilitate the opportunity for eHealth students to develop a paper, research study, or project associated with their program of study under the supervision of a faculty member. This one-on-one course will be unique in content each iteration subject to the interests of the student and instructor. The project must be proposed in advance of the term in which it occurs, allowing time for approval by the student's academic advisor and the program director. These approvals will ensure that sufficient structure is planned for the project and sufficient effort required by the student for course credit. Please see attached the approval form that will be used for each proposed iteration of the course. It is a slightly modified version of the form utilized for similar projects in the MBA program.

1. **STATEMENT OF PURPOSE (How does the course fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review (if applicable)?)**

This course is intended to facilitate the opportunity for eHealth students to develop a paper, research study, or project associated with their program of study under the supervision of a faculty member. To make best use of this opportunity the student must plan the research and contact a faculty member in the session preceding the one in which they intend to register for the special research project. A written proposal must be approved by the instructor, the student's academic advisor, and the eHealth program director in advance of the drop/add date.

2. **EXPECTED ENROLMENT:**

Utilization of this course will likely be rare, perhaps one student per year.

3. **DESCRIBE IN DETAIL THE METHOD OF PRESENTATION OF COURSE MATERIAL (i.e., lectures, seminars):**

The method of presentation of course material will be unique to each instance as appropriate for the project and decided by the instructor and student, subject to approval by the student's academic advisor, and the eHealth program director. A standard form will be required for approval which outlines the deadlines, deliverables, and basis of evaluation for the course (please find attached).

4. **DESCRIBE IN DETAIL THE METHOD OF EVALUATION (<u>percentage breakdown, if possible</u>): (For 600-level course, indicate the <u>Extra Work</u> to be required of graduate students, i.e., exams, essays, etc. Please also note if a lab or tutorial will be included.)**

The method of presentation of evaluation will be unique to each instance as appropriate for the project and decided by the instructor and student, subject to approval by the student's academic advisor, and the eHealth program director. A standard form will be required for approval which outlines the deadlines, deliverables, and basis of evaluation for the course (please find attached). The instructor of the course will submit a grade by the end of the examination period for the term. The final grade shall be determined in a way appropriate to the specific project. Components may include questionnaires, computer programs, etc. in addition to the final paper/report.

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).**

6. **IF THE COURSE IS INTENDED PRIMARILY FOR STUDENTS OUTSIDE YOUR DEPARTMENT, DO YOU HAVE THE SUPPORT OF THE DEPARTMENT/PROGRAM CONCERNED?**

PLEASE PROVIDE THE CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Nicole Wagner   Email: wagnernm@mcmaster.ca   Extension: Date submitted: January 13, 2021

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

SCHOOL OF GRADUATE STUDIES

☒ **RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING COURSES & MILESTONES**

IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:
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DEPARTMENT	MSc eHealth		
COURSE TITLE	Management Issues in eHealth		

COURSE NUMBER	eHealth 736	**COURSE CREDIT**		
		6 Unit Course ( )	3 Unit Course (x)	1.5 Unit Course ( )
REQUISITE(S) **(Pre/Co/Anti or program enrollment requirement)**				

NATURE OF RECOMMENDATION *(PLEASE CHECK APPROPRIATE BOX)*		
Is this change a result of an IQAP review? ☐ Yes ☐ No		
NEW COURSE	DATE TO BE OFFERED (FOR <u>NEW</u> COURSES ONLY):	WAS THE PROPOSED COURSE OFFERED ON DEAN'S APPROVAL?
WILL THE COURSE BE <u>CROSS-LISTED (COMBINED SECTIONS)</u> WITH ANOTHER DEPARTMENT? IF YES, PLEASE NOTE WHICH DEPARTMENT:		
ATTACH TO THIS FORM ANY RELEVANT CORRESPONDENCE WITH THE OTHER DEPARTMENT(S). NO<u>TE</u>: CROSS-LISTING OF COURSES REQUIRES WRITTEN APPROVAL FROM <u>EACH</u> DEPARTMENT AND FACULTY CONCERNED. IF YOU WOULD LIKE TO REMOVE A CROSS-LISTING YOU MUST INCLUDE A WRITTEN EXPLANATION AGREED UPON BY BOTH DEPARTMENTS AFFECTED.		
CHANGE IN COURSE TITLE		PROVIDE THE <u>NEW</u> COURSE TITLE:
CHANGE IN COURSE DESCRIPTION		**600-LEVEL COURSE** *(Undergraduate course for graduate credit) Please see #4 on page 2 of this form*

COURSE CANCELLATION		**PROVIDE THE REASON FOR COURSE CANCELLATION:** **PLEASE NOTE: CROSS-LISTED (COMBINED SECTIONS) COURSES CAN ONLY BE CANCELLED BY THE DEPARTMENT WHO OWNS THE COURSE.**
OTHER CHANGES	X	**EXPLAIN:** **ADD ANTIREQUISITE OF BUSINESS K650**

BRIEF COURSE DESCRIPTION FOR CALENDAR - Provide a brief description *(maximum 6 lines)* to be included in the Graduate Calendar.

From the Graduate Calendar:

This course covers a number of topics relevant to the management of electronic health systems. These topics will be presented in an integrated manner that will promote an understanding of health system governance, accountability, risk analysis, management, legal and regulatory standards, and policies. It will demonstrate real issues by focusing on a teambased case study through much of the course that covers the life cycle process of managing a project to implement an eHealth system, beginning with needs analysis and ending with implementation and maintenance.

CONTENT/RATIONALE - Provide a brief description, i.e., outline the topics or major sub-topics, and indicate the principal texts to be used.

The learning outcomes and content of eHealth 736 and Business K650 have significant similarities. Therefore Business K650 should be added as an Antirequisite for eHealth 736.

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1. **STATEMENT OF PURPOSE (How does the course fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review (if applicable)?)**
2. **EXPECTED ENROLMENT:**
3. **DESCRIBE IN DETAIL THE METHOD OF PRESENTATION OF COURSE MATERIAL (i.e., lectures, seminars):**
4. **DESCRIBE IN DETAIL THE METHOD OF EVALUATION (<u>percentage breakdown, if possible</u>): (For 600-level course, indicate the <u>Extra Work</u> to be required of graduate students, i.e., exams, essays, etc. Please also note if a lab or tutorial will be included.)**

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).
6. IF THE COURSE IS INTENDED PRIMARILY FOR STUDENTS OUTSIDE YOUR DEPARTMENT, DO YOU HAVE THE SUPPORT OF THE DEPARTMENT/PROGRAM CONCERNED?
PLEASE PROVIDE THE CONTACT INFORMATION FOR THE RECOMMENDED CHANGE: Name: Email: Extension: Date submitted:

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SCHOOL OF GRADUATE STUDIES

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</table>

DEPARTMENT	MSc eHealth		
COURSE TITLE	eHealth 705 – Statistics for eHealth		

COURSE NUMBER	eHealth 705	**COURSE CREDIT**		
		6 Unit Course ( )	3 Unit Course (**X**)	1.5 Unit Course ( )

REQUISITE(S) **(Pre/Co/Anti or program enrollment requirement)**	Prerequisite(s): Enrolment in the MSc eHealth program or permission of the instructor Antirequisite: HRM 702

<table>
<tr><td colspan="3" align="center">NATURE OF RECOMMENDATION <i>(PLEASE CHECK APPROPRIATE BOX)</i>

Is this change a result of an IQAP review? ☐ Yes ☒ No</td></tr>
<tr><td>NEW COURSE</td><td>DATE TO BE OFFERED (FOR <u>NEW</u> COURSES ONLY):</td><td>WAS THE PROPOSED COURSE OFFERED ON DEAN'S APPROVAL?</td></tr>
<tr><td colspan="3">WILL THE COURSE BE <u>CROSS-LISTED (COMBINED SECTIONS)</u> WITH ANOTHER DEPARTMENT? IF YES, PLEASE NOTE WHICH DEPARTMENT:

ATTACH TO THIS FORM ANY RELEVANT CORRESPONDENCE WITH THE OTHER DEPARTMENT(S). NO<u>TE</u>: CROSS-LISTING OF COURSES REQUIRES WRITTEN APPROVAL FROM <u>EACH</u> DEPARTMENT AND FACULTY CONCERNED. IF YOU WOULD LIKE TO REMOVE A CROSS-LISTING YOU MUST INCLUDE A WRITTEN EXPLANATION AGREED UPON BY BOTH DEPARTMENTS AFFECTED.</td></tr>
<tr><td>CHANGE IN COURSE TITLE</td><td colspan="2">PROVIDE THE <u>NEW</u> COURSE TITLE:</td></tr>
<tr><td>CHANGE IN COURSE DESCRIPTION</td><td></td><td>600-LEVEL COURSE <i>(Undergraduate course for graduate credit) Please see #4 on page 2 of this form</i></td></tr>
</table>

1

COURSE CANCELLATION		**PROVIDE THE REASON FOR COURSE CANCELLATION:** **PLEASE NOTE: CROSS-LISTED (COMBINED SECTIONS) COURSES CAN ONLY BE CANCELLED BY THE DEPARTMENT WHO OWNS THE COURSE.**
OTHER CHANGES	X	**EXPLAIN:** **CHANGE THE DELIVERY OF THE COURSE TO ONLINE.** Initially the course was offered in person, until winter 2020 when it was offered in blended format (partly online with some in-person sessions). During winter 2020 the course was taken online for the last few weeks due to COVID. Online delivery has been well received by students and the instructor believes, based on documented feedback from students, that online delivery offers a better learning experience for students given the technical subject matter. The flexibility of online delivery will also be appealing for the part-time students in the eHealth program who are often working full-time while studying and some live quite some distance from Hamilton.

BRIEF COURSE DESCRIPTION FOR CALENDAR - Provide a brief description *(maximum 6 lines)* to be included in the Graduate Calendar.

From the graduate calendar:

This course covers basic statistical concepts and techniques as they apply to the analysis and presentation of data in eHealth practice. Statistical software will be used extensively. The course includes graphical presentation of data, elementary probability, descriptive statistics, and probability distributions. Statistical inferencing techniques, including statistical decision theory, confidence intervals, hypothesis tests (z-tests, t-tests, and nonparametric methods), ANOVA, contingency tables, chi-square tests, correlation, and simple and multiple regression. Students will analyze data gathered from eHealth studies and will review examples drawn from published eHealth research.

CONTENT/RATIONALE - Provide a brief description, i.e., outline the topics or major sub-topics, and indicate the principal texts to be used.

eHealth 705 is a required course for all MSc eHealth students. Students are introduced to the process of empirical research in eHealth, the basics of the R computing environment, experiments, populations, samples, sampling, the central limit theorem, bootstrapping, null hypothesis significance testing, linear regression, logistic regression and survival analysis. Instructional material is provided in Avenue to Learn for fifty topics. That A2L support material includes captioned videos, PowerPoint decks, R Markdown files and several data files. The text is "R for Health Data Science" by E. Harrison and R. Pius and is published online by CRC Press (2020).

1.   STATEMENT OF PURPOSE (How does the course fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review (if applicable)?)

This course covers basic statistical concepts and techniques as they apply to the analysis and presentation of data in eHealth practice. Students will learn and apply concepts and techniques to typical problems that arise in eHealth studies, and develop an awareness and understanding of published studies in eHealth-related journals. This became a core course as a result of our previous IQAP, to prepare our students to a consistent level with statistical approaches used in the field.

2.   EXPECTED ENROLMENT:

~40

3. DESCRIBE IN DETAIL THE METHOD OF PRESENTATION OF COURSE MATERIAL (i.e., lectures, seminars):

The main learning platform in this course will be asynchronous content videos accompanied by PowerPoint decks and R Markdown documents. The course includes 10 assignments, synchronous webinars, intra-course chats and a term project.

Webinars review past assignments, preview future assignments, discussion topics and Q&A and will be held weekly for 1 hour with the professor and one hour with the teaching assistant. The topic videos introduce, discuss and provide examples of all course material and are backed up by PowerPoint decks and/or R Markdown documents.

The balance of the learning results from lectures on statistical methodologies, relevant readings from the literature on statistical applications in eHealth and working in teams to analyze and present findings from data sets.

4. DESCRIBE IN DETAIL THE METHOD OF EVALUATION (<u>percentage breakdown, if possible</u>): (For 600-level course, indicate the <u>Extra Work</u> to be required of graduate students, i.e., exams, essays, etc. Please also note if a lab or tutorial will be included.)

Individual Assignments (70%). Each assignment will include application of learning from the course materials and include analysis and interpretation of the results.

There will be 10 assignments during the term. These will constitute 70% of the final mark. These assignments must be done by each individual student without help from any other person and submitted to the Avenue Drop Box when required. This is a statistics + eHealth course, i.e., the analysis must be done correctly and to the proper extent and the results must be interpreted to support better health decisions. All assignments must be written in R Markdown and both HTML and R Markdown files must be submitted unless otherwise specified by the professor.

Term Project (presentation 5% + written report 25%). The term projects utilize datasets from health and eHealth research projects and are often accompanied by scholarly articles that utilized that data and explain the studies.

The term projects will be focused on providing commercial grade experiences in eHealth analytics. These projects will be assigned to teams and it is expected that each team member contribute appropriately and equally to the end result. The term projects will be presented orally during the scheduled final examination period for this course.

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).

6. IF THE COURSE IS INTENDED PRIMARILY FOR STUDENTS OUTSIDE YOUR DEPARTMENT, DO YOU HAVE THE SUPPORT OF THE DEPARTMENT/PROGRAM CONCERNED?

PLEASE PROVIDE THE CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Nicole Wagner   Email: wagnernm@mcmaster.ca   Extension: Date submitted: January 13, 2021

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

RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING 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	DSB/FHS - Master of Health Management			
COURSE TITLE	Managing Communications in Healthcare and Strategic Writing in Health Management			
COURSE NUMBER	BUSADMIN C725 and HLTHMGT 732	**COURSE CREDIT**		
		FULL COURSE ( )	**HALF COURSE (X)**	**QUARTER (MODULE) ( )**
INSTRUCTOR(S)	Glen Randall/Neil Barr BUSADMIN C725 Patty Solomon/Mary Clark HLTHMGT 732			
PREREQUISITE(S)				

NATURE OF RECOMMENDATION *(PLEASE CHECK APPROPRIATE BOX)*			
NEW COURSE		**DATE TO BE OFFERED (FOR <u>NEW</u> COURSES ONLY):**	**WAS THE PROPOSED COURSE OFFERED ON DEAN'S APPROVAL?**
WILL THE COURSE BE <u>CROSS-LISTED</u> WITH ANOTHER DEPARTMENT?		**IF YES, PLEASE NOTE WHICH DEPARTMENT:**	
ATTACH TO THIS FORM ANY RELEVANT CORRESPONDENCE WITH THE OTHER DEPARTMENT(S). NOTE: CROSS-LISTING OF COURSES REQUIRES WRITTEN APPROVAL FROM <u>EACH</u> DEPARTMENT AND FACULTY CONCERNED. IF YOU WOULD LIKE TO REMOVE A CROSS-LISTING YOU MUST INCLUDE A WRITTEN EXPLANATION AGREED UPON BY BOTH DEPARTMENTS AFFECTED. ***FOR ALL NEW CROSS-LISTINGS PLEASE NOTE WHICH DEPARTMENT OWNS THE COURSE:**			
CHANGE IN COURSE TITLE		**PROVIDE THE <u>NEW</u> 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**

<table>
<tr><td>COURSE

CANCELLATION</td><td colspan="2">PROVIDE THE REASON FOR COURSE CANCELLATION:

PLEASE NOTE: CROSS-LISTED COURSES CAN ONLY BE CANCELLED BY THE DEPARTMENT WHO OWNS THE COURSE.</td></tr>
<tr><td>OTHER CHANGES</td><td>X</td><td>EXPLAIN: Antirequisite for BUSADMIN C725 and HLTHMGT732: 1. Both courses are writing courses to develop skills and strategies to communicate to healthcare stakeholders (coworker, senior management, patient, community); and 2. Both courses explore types of communication (traditional and social) and ways of communicating to influence the audience.</td></tr>
<tr><td colspan="3">BRIEF DESCRIPTION FOR CALENDAR - Provide a brief description (maximum 6 lines) to be included in the Graduate Calendar.

</td></tr>
<tr><td colspan="3">CONTENT/RATIONALE - Provide a brief description, i.e., outline the topics or major sub-topics, and indicate the principal texts to be used.</td></tr>
</table>

<table>
<tr><td>1. STATEMENT OF PURPOSE (How does the course fit into the department's program?

</td></tr>
<tr><td>2. EXPECTED ENROLMENT:</td></tr>
<tr><td>3. DESCRIBE IN DETAIL THE METHOD OF PRESENTATION OF COURSE MATERIAL (i.e., lectures, seminars):

</td></tr>
<tr><td>4. DESCRIBE IN DETAIL THE METHOD OF EVALUATION (<u>percentage breakdown, if possible</u>): (For 600-level course, indicate the <u>Extra Work</u> to be required of graduate students, i.e., exams, essays, etc.)</td></tr>
<tr><td>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)

</td></tr>
<tr><td>6. IF THE COURSE IS INTENDED PRIMARILY FOR STUDENTS OUTSIDE YOUR DEPARTMENT, DO YOU HAVE THE SUPPORT OF THE DEPARTMENT/PROGRAM CONCERNED?</td></tr>
<tr><td>PLEASE PROVIDE THE CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Glen Randall / Patty Solomon   Email: <u>randalg@mcmaster.ca / solomon@mcmaster.ca</u>   Date submitted: February 1, 2020</td></tr>
</table>

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

SGS /2013

☒ **RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING COURSES & MILESTONES**

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 (cbryce@mcmaster.ca).   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	DeGroote School of Business- IS
COURSE TITLE	Management Issues in eHealth

COURSE NUMBER	K736	COURSE CREDIT		
		6 Unit Course ( )	3 Unit Course (**x**)	1.5 Unit Course ( )
REQUISITE(S) **(Pre/Co/Anti or program enrollment requirement)**		BUSINESS K603 OR BUSINESS I603 AND BUSINESS I604 OR enrollment in the Blended Learning Part-time MBA Program.		

NATURE OF RECOMMENDATION *(PLEASE CHECK APPROPRIATE BOX)*		
Is this change a result of an IQAP review? ☐ Yes ☐ No		
NEW COURSE	DATE TO BE OFFERED (FOR NEW COURSES ONLY):	WAS THE PROPOSED COURSE OFFERED ON DEAN'S APPROVAL?
WILL THE COURSE BE CROSS-LISTED (COMBINED SECTIONS) WITH ANOTHER DEPARTMENT? IF YES, PLEASE NOTE WHICH DEPARTMENT: ATTACH TO THIS FORM ANY RELEVANT CORRESPONDENCE WITH THE OTHER DEPARTMENT(S). NOTE: CROSS-LISTING OF COURSES REQUIRES WRITTEN APPROVAL FROM EACH DEPARTMENT AND FACULTY CONCERNED. IF YOU WOULD LIKE TO REMOVE A CROSS-LISTING YOU MUST INCLUDE A WRITTEN EXPLANATION AGREED UPON BY BOTH DEPARTMENTS AFFECTED.		
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*	

COURSE CANCELLATION		PROVIDE THE REASON FOR COURSE CANCELLATION:
		PLEASE NOTE: CROSS-LISTED (COMBINED SECTIONS) COURSES CAN ONLY BE CANCELLED BY THE DEPARTMENT WHO OWNS THE COURSE.
OTHER CHANGES	X	EXPLAIN: ADD ANTIREQUISITE OF BUSINESS K650

BRIEF COURSE DESCRIPTION FOR CALENDAR - Provide a brief description *(maximum 6 lines)* to be included in the Graduate Calendar.

From the Graduate Calendar:

This course covers a number of topics relevant to the management of electronic health systems. These topics will be presented in an integrated manner that will promote an understanding of health system governance, accountability, risk analysis, management, legal and regulatory standards, and policies. It will demonstrate real issues by focusing on a teambased case study through much of the course that covers the life cycle process of managing a project to implement an eHealth system, beginning with needs analysis and ending with implementation and maintenance.

CONTENT/RATIONALE - Provide a brief description, i.e., outline the topics or major sub-topics, and indicate the principal texts to be used.

The learning outcomes and content of Business K736 and Business K650 have significant similarities. Therefore Business K650 should be added as an Antirequisite for eHealth 736.

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1.   STATEMENT OF PURPOSE (How does the course fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review (if applicable)?)
2.   EXPECTED ENROLMENT:
3.   DESCRIBE IN DETAIL THE METHOD OF PRESENTATION OF COURSE MATERIAL (i.e., lectures, seminars):
4.   DESCRIBE IN DETAIL THE METHOD OF EVALUATION (<u>percentage breakdown, if possible</u>): (For 600-level course, indicate the <u>Extra Work</u> to be required of graduate students, i.e., exams, essays, etc. Please also note if a lab or tutorial will be included.)

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).**
6. **IF THE COURSE IS INTENDED PRIMARILY FOR STUDENTS OUTSIDE YOUR DEPARTMENT, DO YOU HAVE THE SUPPORT OF THE DEPARTMENT/PROGRAM CONCERNED?**

PLEASE PROVIDE THE CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Email: Extension: Date submitted:

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

SCHOOL OF GRADUATE STUDIES

☒ **RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING COURSES & MILESTONES**

DEPARTMENT	MBA, DeGroote School of Business
COURSE TITLE	Independent Research Project in Business Analytics

COURSE NUMBER	D729	**COURSE CREDIT**		
		6 Unit Course ( )	3 Unit Course (X)	1.5 Unit Course ( )

REQUISITE(S) **(Pre/Co/Anti or program enrollment requirement)**	Completion of first year of the MBA Program.

NATURE OF RECOMMENDATION *(PLEASE CHECK APPROPRIATE BOX)*
Is this change a result of an IQAP review? ☐ Yes ☒ No

NEW COURSE	X	DATE TO BE OFFERED (FOR **NEW** COURSES ONLY): Fall 2021	WAS THE PROPOSED COURSE OFFERED ON DEAN'S APPROVAL? NO
WILL THE COURSE BE CROSS-LISTED (COMBINED SECTIONS) WITH ANOTHER DEPARTMENT? NO IF YES, PLEASE NOTE WHICH DEPARTMENT:			
ATTACH TO THIS FORM ANY RELEVANT CORRESPONDENCE WITH THE OTHER DEPARTMENT(S). NOTE: CROSS-LISTING OF COURSES REQUIRES WRITTEN APPROVAL FROM EACH DEPARTMENT AND FACULTY CONCERNED. IF YOU WOULD LIKE TO REMOVE A CROSS-LISTING YOU MUST INCLUDE A WRITTEN EXPLANATION AGREED UPON BY BOTH DEPARTMENTS AFFECTED.			

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*

COURSE CANCELLATION	PROVIDE THE REASON FOR COURSE CANCELLATION:
	PLEASE NOTE: CROSS-LISTED (COMBINED SECTIONS) COURSES CAN ONLY BE CANCELLED BY THE DEPARTMENT WHO OWNS THE COURSE.

OTHER CHANGES		EXPLAIN:

BRIEF COURSE DESCRIPTION FOR CALENDAR - Provide a brief description *(maximum 6 lines)* to be included in the Graduate Calendar.

No detailed calendar description required (as per other independent research courses.

CONTENT/RATIONALE - Provide a brief description, i.e., outline the topics or major sub-topics, and indicate the principal texts to be used.

The rationale for this Independent Research Project course is the same as that for the other Independent Research Project courses in the MBA Program. They do not have separate calendar descriptions or detailed lists of topics as each delivery is unique to the student/professor collaboration involved. The calendar description for the other Independent Research Projects is as follows and it is to apply to this one. "There is no thesis requirement for graduation in the MBA program. However, a student in the second year may undertake, with the prior approval of the appropriate instructor, Area Chair, and Associate Dean of Business, to develop an original paper, research study, or project in an area directly associated with their program of study. Special Research Projects must be supervised by a faculty member. Credit for one second-year course will be granted upon satisfactory completion of the project. In order to make best use of this opportunity the student must plan the research and contact a faculty member in the session preceding the one in which they intend to register for the special research project."

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1. STATEMENT OF PURPOSE (How does the course fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review (if applicable)?)

Enrollment in the Business Analytics Specialization has been steadily growing. This course will be listed as an elective option for students completing the Specialization who wish to undertake independent research in this area of study. We require a separate Independent Research Project course for the Business Analytics Specialization so it can be efficiently identified for student credit toward the Specialization.

2. EXPECTED ENROLMENT:

Occasional, by permission only

3. DESCRIBE IN DETAIL THE METHOD OF PRESENTATION OF COURSE MATERIAL (i.e., lectures, seminars):

The supervising faculty member will assign readings and other requirements for the student and meet, as necessary, with the student to carry out the project. They will also set milestones to ensure the major research paper or project is progressing throughout the term.

4. DESCRIBE IN DETAIL THE METHOD OF EVALUATION (percentage breakdown, if possible): (For 600-level course, indicate the Extra Work to be required of graduate students, i.e., exams, essays, etc. Please also note if a lab or tutorial will be included.)

To be determined by the supervising faculty member.

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). No
6. IF THE COURSE IS INTENDED PRIMARILY FOR STUDENTS OUTSIDE YOUR DEPARTMENT, DO YOU HAVE THE SUPPORT OF THE DEPARTMENT/PROGRAM CONCERNED? N/A
PLEASE PROVIDE THE CONTACT INFORMATION FOR THE RECOMMENDED CHANGE: Name: John Medcof   Email: medcofj@mcmaster.ca   Extension: 26996   Date submitted: January 28, 2021

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

McMaster University

SCHOOL OF GRADUATE STUDIES

☒ **RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING COURSES & MILESTONES**

IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:
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2.   An electronic version of this form (must be MS WORD not PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).
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	DSB - Finance
COURSE TITLE	The History of FInance

COURSE NUMBER	BUS F703	**COURSE CREDIT**		
		6 Unit Course ( )	3 Unit Course (X)	1.5 Unit Course ( )

REQUISITE(S) **(Pre/Co/Anti or program enrollment requirement)**	Completion of I601 or BL601

NATURE OF RECOMMENDATION *(PLEASE CHECK APPROPRIATE BOX)*
Is this change a result of an IQAP review? ☐ Yes ☒ No

NEW COURSE	X	DATE TO BE OFFERED (FOR NEW COURSES ONLY): **2021/2022**	WAS THE PROPOSED COURSE OFFERED ON DEAN'S APPROVAL? OFFERED AS A SELECTED TOPICS COURSE (F718).

WILL THE COURSE BE CROSS-LISTED (COMBINED SECTIONS) WITH ANOTHER DEPARTMENT?   NO   IF YES, PLEASE NOTE WHICH DEPARTMENT:

 ATTACH TO THIS FORM ANY RELEVANT CORRESPONDENCE WITH THE OTHER DEPARTMENT(S). NO<u>TE</u>: CROSS-LISTING OF COURSES REQUIRES WRITTEN APPROVAL FROM <u>EACH</u> DEPARTMENT AND FACULTY CONCERNED. IF YOU WOULD LIKE TO REMOVE A CROSS-LISTING YOU MUST INCLUDE A WRITTEN EXPLANATION AGREED UPON BY BOTH DEPARTMENTS AFFECTED.

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*	

COURSE CANCELLATION	PROVIDE THE REASON FOR COURSE CANCELLATION: PLEASE NOTE: CROSS-LISTED (COMBINED SECTIONS) COURSES CAN ONLY BE CANCELLED BY THE DEPARTMENT WHO OWNS THE COURSE.
OTHER CHANGES		EXPLAIN:

BRIEF COURSE DESCRIPTION FOR CALENDAR - Provide a brief description *(maximum 6 lines)* to be included in the Graduate Calendar.

This course explores the emergence, evolution, and future of the tools and organizations that make modern finance possible. By studying the history of payments, debt, banking, corporations, markets, derivatives, pensions, insurance companies and investment funds, students will learn why such institutions are organized as they are today and how we might design better versions to tackle the challenges of the twenty-first century. This course will be of particular interest to students interested in fintech as it explores the core functions of financial institutions and their modern innovations.

CONTENT/RATIONALE - Provide a brief description, i.e., outline the topics or major sub-topics, and indicate the principal texts to be used.

To help catalyze innovation in the design of financial instituions, this course explores the core functions of various organizations and tools used for the re-allocation of capital. A historical perspective is used to help students frame the problems these tools/organizations were created to alleviate and to showcase how they have evolved to suit society's changing needs over the past 5,000 years. A global perspective is used to enhance student's appreciation or how core financial functions are adapted to local needs and to highlight the universality of resource allocation problems.

The principal text supporting the course is William Goetzmann's "Money Changes Everything: How Finance Made Civilization Possible" (Princeton U Press, 2016). HBS/Ivey/Darden cases are also used in support.

The main topics include: institutions and specialization, payments, debt, banking, central banking, investment companies, markets, derivatives, insurance, trusts, pensions, and the state.

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1. STATEMENT OF PURPOSE (How does the course fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review (if applicable)?)

To put modern finance into historical and cultural perspectives
To deepen students' understanding of the role of finance in society
To emphasize the role of governance and system design in resource allocation
To highlight ethical issues arising from the design choices in our financial system
To draw students into the innovation process

2. EXPECTED ENROLMENT:

   25 students

3. **DESCRIBE IN DETAIL THE METHOD OF PRESENTATION OF COURSE MATERIAL (i.e., lectures, seminars):**

Under traditional delivery, the course involves weekly two hour lectures followed by an hour of in-depth discussion (seminar style) related to recent developments, stakeholder considerations, and other design-related issues. The discussion components are essential for students to explore the complex and (sometimes) competing objectives of the institutions in question.

Under online delivery, the lectures will be replaced with asynchronous video content while the related seminars will be conducted synchronously each week to fortify student engagement with both the content and their peers.

4. **DESCRIBE IN DETAIL THE METHOD OF EVALUATION (<u>percentage breakdown, if possible</u>): (For 600-level course, indicate the <u>Extra Work</u> to be required of graduate students, i.e., exams, essays, etc. Please also note if a lab or tutorial will be included.)**

30% - Three case studies (HBS) worth 10% each (completed either in groups or solo)

30% - Group project on recent innovations related to one of the financial tools of their choice (payments, banking, central banking, investment companies, markets, derivatives, insurance, trust, or pensions)

40% - Two individual tests worth 20% each (midterm and final)

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).**

No

6. **IF THE COURSE IS INTENDED PRIMARILY FOR STUDENTS OUTSIDE YOUR DEPARTMENT, DO YOU HAVE THE SUPPORT OF THE DEPARTMENT/PROGRAM CONCERNED?**

N/A

PLEASE PROVIDE THE CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Trevor Chamberlain   E-mail: chambert@mcmaster.ca Extension: 23980 Date submitted: October 19, 2020

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

SCHOOL OF GRADUATE STUDIES

☒ **RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING COURSES & MILESTONES**

<table>
<tr><td colspan="2"><u>IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM</u>:

1. This form must be completed for ALL course changes. Sections of this form pertaining to your requested change must be completed.

2. An electronic version of this form (must be MS WORD not PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).

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.</td></tr>
</table>

DEPARTMENT	Information Systems (Faculty of Business)		
COURSE TITLE	Business Applications of Data Analytics and Artificial Intelligence		

COURSE NUMBER	K740	**COURSE CREDIT**		
		6 Unit Course ( )	3 Unit Course (X)	1.5 Unit Course ( )

REQUISITE(S) **(Pre/Co/Anti or program enrollment requirement)**	Completion of I603 or registration in the Blended Learning Part-time MBA Program

NATURE OF RECOMMENDATION *(PLEASE CHECK APPROPRIATE BOX)*
Is this change a result of an IQAP review? ☐ Yes ☒ No

NEW COURSE	X	**DATE TO BE OFFERED (FOR <u>NEW</u> COURSES ONLY): WINTER 2022**	**WAS THE PROPOSED COURSE OFFERED ON DEAN'S APPROVAL?** NO
WILL THE COURSE BE <u>CROSS-LISTED (COMBINED SECTIONS)</u> WITH ANOTHER DEPARTMENT? IF YES, PLEASE NOTE WHICH DEPARTMENT:			
ATTACH TO THIS FORM ANY RELEVANT CORRESPONDENCE WITH THE OTHER DEPARTMENT(S). NO<u>TE</u>: CROSS-LISTING OF COURSES REQUIRES WRITTEN APPROVAL FROM <u>EACH</u> DEPARTMENT AND FACULTY CONCERNED. IF YOU WOULD LIKE TO REMOVE A CROSS-LISTING YOU MUST INCLUDE A WRITTEN EXPLANATION AGREED UPON BY BOTH DEPARTMENTS AFFECTED.			

CHANGE IN COURSE TITLE		Business Applications of Data Analytics and Artificial Intelligence	
CHANGE IN COURSE DESCRIPTION		**600-LEVEL COURSE** *(Undergraduate course for graduate credit) Please see #4 on page 2 of this form*	

COURSE CANCELLATION	PROVIDE THE REASON FOR COURSE CANCELLATION:
	PLEASE NOTE: CROSS-LISTED (COMBINED SECTIONS) COURSES CAN ONLY BE CANCELLED BY THE DEPARTMENT WHO OWNS THE COURSE.

OTHER CHANGES		EXPLAIN:

BRIEF COURSE DESCRIPTION FOR CALENDAR- Provide a brief description *(maximum 6 lines)* to be included in the Graduate Calendar.

This course provides an in-depth overview of the business applications of Data Analytics (DA) and Artificial Intelligence (AI). Students will be introduced to the core techniques involved in analytics and AI-based systems as well as the benefits and limitations to consider when managing the introduction of these decision support tools in various business environments. Students will be exposed to specific analytics and AI application platforms and use them to develop or assess a DA or AI based system as part of a team project. The ethical implications of using these information technologies will also be explored.

CONTENT/RATIONALE - Provide a brief description, i.e., outline the topics or major sub-topics, and indicate the principal texts to be used.

This course aligns well with the Business Analytics specialization offered in the MBA program.

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1.   STATEMENT OF PURPOSE (How does the course fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review (if applicable)?)

This course addresses current gaps in the Business Analytics Specialization of the MBA program offered by the DeGroote School of Business. This new course will provide opportunities for students to explore the business applications of data analytics and artificial intelligence.

2.   EXPECTED ENROLMENT:

45 students per section

3.   DESCRIBE IN DETAIL THE METHOD OF PRESENTATION OF COURSE MATERIAL (i.e., lectures, seminars):

The course will be designed in blended learning format. That is, half of the lectures will be face-to-face synchronously, while the other half will be delivered in online format synchronously or asynchronously. If needed, all lectures could be delivered in an online format. Lectures will comprise PowerPoint presentations and live demonstrations.

4. DESCRIBE IN DETAIL THE METHOD OF EVALUATION (<u>percentage breakdown, if possible</u>): (For 600-level course, indicate the <u>Extra Work</u> to be required of graduate students, i.e., exams, essays, etc. Please also note if a lab or tutorial will be included.)

Methods of evaluation will comprise several components. These include the following:

- Participation 10%,
- Memos / Self-Reflections 20%,
- Individual Assignment #1 20%,
- Individual Assignment #2 20%,
- Team project 30%

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).

NO.

6. IF THE COURSE IS INTENDED PRIMARILY FOR STUDENTS OUTSIDE YOUR DEPARTMENT, DO YOU HAVE THE SUPPORT OF THE DEPARTMENT/PROGRAM CONCERNED?

N/A

PLEASE PROVIDE THE CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Brian Detlor   Email: detlorb@mcmaster.ca   Extension: 23949   Date submitted: Dec 8th, 2020

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

☒ **RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING COURSES & MILESTONES**

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 (cbryce@mcmaster.ca).
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	Operations Management, DeGroote School of Business
COURSE TITLE	Data Analytics with Python

COURSE NUMBER	O712	**COURSE CREDIT**		
		6 Unit Course ( )	3 Unit Course (X)	1.5 Unit Course ( )

REQUISITE(S) (Pre/Co/Anti or program enrollment requirement)	Completion of I602 and I603, or O600, or enrollment in the Blended Learning Part-time MBA Program

NATURE OF RECOMMENDATION *(PLEASE CHECK APPROPRIATE BOX)*
Is this change a result of an IQAP review? ☐ Yes ☒ No

NEW COURSE	X	DATE TO BE OFFERED (FOR NEW COURSES ONLY): Fall 2021	WAS THE PROPOSED COURSE OFFERED ON DEAN'S APPROVAL?
WILL THE COURSE BE CROSS-LISTED (COMBINED SECTIONS) WITH ANOTHER DEPARTMENT? IF YES, PLEASE NOTE WHICH DEPARTMENT:			
ATTACH TO THIS FORM ANY RELEVANT CORRESPONDENCE WITH THE OTHER DEPARTMENT(S). NOTE: CROSS-LISTING OF COURSES REQUIRES WRITTEN APPROVAL FROM EACH DEPARTMENT AND FACULTY CONCERNED. IF YOU WOULD LIKE TO REMOVE A CROSS-LISTING YOU MUST INCLUDE A WRITTEN EXPLANATION AGREED UPON BY BOTH DEPARTMENTS AFFECTED.			

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

COURSE CANCELLATION	**PROVIDE THE REASON FOR COURSE CANCELLATION:**
	PLEASE NOTE: CROSS-LISTED (COMBINED SECTIONS) COURSES CAN ONLY BE CANCELLED BY THE DEPARTMENT WHO OWNS THE COURSE.

OTHER CHANGES		**EXPLAIN:**

BRIEF COURSE DESCRIPTION FOR CALENDAR - Provide a brief description *(maximum 6 lines)* to be included in the Graduate Calendar.

This course will address advanced applications of statistics and statistical learning through data manipulation, and advanced visualization capabilities for practical business-related applications using relevant datasets. The course intends to make use of the relevant packages in Python to build, validate and refine models using visualization, data manipulation, statistical learning, and cross-validation techniques.

CONTENT/RATIONALE - Provide a brief description, i.e., outline the topics or major sub-topics, and indicate the principal texts to be used.

This course will cover advanced statistics, statistical learning, and advanced visualization capabilities that are important in a data-driven decision-making process as part of the business analytics discipline. The course employs methodologies and tools used in different phases of a successful model development and will cover the following topics: data manipulation and data wrangling; advanced visualization techniques; statistical inference and basic regression analysis; advanced statistical learning methods with a focus on model validation and bootstrapping techniques; and a brief overview of non-linear regression and unsupervised statistical learning. State-of-the-art Python packages will be used to in each module, and the materials will be delivered in an experiential setting. Students will gain hands-on experience by engaging in a data-driven decision-making process through building and validating their own models in Python, and the engagement will be further reinforced through a course project.

Textbooks:

Python Data Analytics By Fabio Nelli (electronic version available for free on library.mcmaster.ca)
An Introduction to Statistical Learning by James et al. (electronic version available for free on the author's website)
Python for Data Analysis by Wes McKinney (OPTIONAL)

1.   STATEMENT OF PURPOSE (How does the course fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review (if applicable)?)

Enrollment in the Business Analytics specialization has been steadily growing. Following that, there is a growing interest among students for topics involving machine learning. The course aims to garner the capabilities of Python programming language to facilitate the learning and application of advanced statistical learning and machine learning techniques along with visualization methods. The course combines learning about the theory of statistical learning and developing hands-on experience by building models in Python to address managerial decision making in different business areas. In doing that, the course supplements the skills offered by other courses in the Business Analytics specialization.

2.   EXPECTED ENROLMENT:

30-35

3. DESCRIBE IN DETAIL THE METHOD OF PRESENTATION OF COURSE MATERIAL (i.e., lectures, seminars):

The course material will be provided in lectures. The course is applied and hands-on. Therefore, lectures will be run as labs, where students will be working on their personal laptops at all times. Material will be introduced by the instructor, followed by longer periods of application, in which students will be given in-class assignments to apply and learn the material. The instructor may require a TA to help them during the lecture to oversee students progress, increase interaction and help with resolving issues.

Each 3-hour lecture is divided into three 1-hour periods. Each 1-hour period starts with 30 minutes of theory followed by 20 minutes of practice. There is a 10 minute break after each period.

4. DESCRIBE IN DETAIL THE METHOD OF EVALUATION (<u>percentage breakdown, if possible</u>): (For 600-level course, indicate the <u>Extra Work</u> to be required of graduate students, i.e., exams, essays, etc. Please also note if a lab or tutorial will be included.)

The evaluation proposal is as follows:

- In-class assignments (individual) 30%
- Mid-term (individual) 30%
- Project (group) 40%
    - o 35% report and results
    - o 5% presentation

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).

No

6. IF THE COURSE IS INTENDED PRIMARILY FOR STUDENTS OUTSIDE YOUR DEPARTMENT, DO YOU HAVE THE SUPPORT OF THE DEPARTMENT/PROGRAM CONCERNED?

N/A

PLEASE PROVIDE THE CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Behrouz Bakhtiari   Email: bakhtib@mcmaster.ca   Extension: 23998   Date submitted: January 2, 2021

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

☒ **RECOMMENDATION FOR CHANGE IN GRADUATE CURRICULUM - FOR CHANGE(S) INVOLVING COURSES & MILESTONES**

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 (cbryce@mcmaster.ca).
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	Operations Management, DeGroote School of Business
COURSE TITLE	Modeling and Analytics using Spreadsheets

COURSE NUMBER	O701	COURSE CREDIT		
		6 Unit Course ( )	3 Unit Course (X)	1.5 Unit Course ( )

REQUISITE(S) (Pre/Co/Anti or program enrollment requirement)	I602 and I603, or O600, or enrollment in the Blended Learning Part-time MBA Program

NATURE OF RECOMMENDATION *(PLEASE CHECK APPROPRIATE BOX)*
Is this change a result of an IQAP review? ☐ Yes ☒ No

NEW COURSE		DATE TO BE OFFERED (FOR NEW COURSES ONLY):	WAS THE PROPOSED COURSE OFFERED ON DEAN'S APPROVAL?
WILL THE COURSE BE CROSS-LISTED (COMBINED SECTIONS) WITH ANOTHER DEPARTMENT? IF YES, PLEASE NOTE WHICH DEPARTMENT:			
ATTACH TO THIS FORM ANY RELEVANT CORRESPONDENCE WITH THE OTHER DEPARTMENT(S). NOTE: CROSS-LISTING OF COURSES REQUIRES WRITTEN APPROVAL FROM EACH DEPARTMENT AND FACULTY CONCERNED. IF YOU WOULD LIKE TO REMOVE A CROSS-LISTING YOU MUST INCLUDE A WRITTEN EXPLANATION AGREED UPON BY BOTH DEPARTMENTS AFFECTED.			

CHANGE IN COURSE TITLE	X	PROVIDE THE NEW COURSE TITLE: MODELING AND PRESCRIPTIVE ANALYTICS

CHANGE IN COURSE DESCRIPTION	X	600-LEVEL COURSE *(Undergraduate course for graduate credit) Please see #4 on page 2 of this form*	

COURSE CANCELLATION	PROVIDE THE REASON FOR COURSE CANCELLATION:
	PLEASE NOTE: CROSS-LISTED (COMBINED SECTIONS) COURSES CAN ONLY BE CANCELLED BY THE DEPARTMENT WHO OWNS THE COURSE.

OTHER CHANGES		EXPLAIN:

BRIEF COURSE DESCRIPTION FOR CALENDAR - Provide a brief description *(maximum 6 lines)* to be included in the Graduate Calendar.

This course focuses on one of the four pillars of analytics, i.e., prescriptive analytics. It will discuss the most popular prescription techniques, and demonstrate their application by building computer models of managerial problems drawn from different business areas such as operations, marketing, finance, etc. The computer models would be solved and analyzed using Analytic Solver within a spreadsheet environment.

CONTENT/RATIONALE - Provide a brief description, i.e., outline the topics or major sub-topics, and indicate the principal texts to be used.

Prescriptive analytics, one of the most important pillars of analytics, is a scientific approach to aid managerial decision-making. The underlying tools and techniques are regularly used by major corporations to prescribe the best action to be implemented, which often results in significant savings. This course will discuss the most popular prescriptive analytics techniques such (linear/nonlinear) optimization, optimization of nonsmooth models, and monte carlo simulation, which will be used to logically model real-world applications from various functional areas of business. These logical models will be converted into a computer model, which will then be solved and analyzed using Analytic Solver within a spreadsheet environment.

Textbooks:

Business Analytics: The Art of Modeling with Spreadsheets, 5th Edition. Stephen G. Powell and Kenneth R. Baker. ISBN: 978-1-119-29842-7.

1.   STATEMENT OF PURPOSE (How does the course fit into the department's program and/or tie to existing Program Learning Outcomes from the program's IQAP cyclical review (if applicable)?)

This is a required course for the Business Analytics specialization, and has been offered at least once every year. Most recently, it was offered twice in fall 2020, and is scheduled to be offered in summer 2021.

2.   EXPECTED ENROLMENT:

35

3.   DESCRIBE IN DETAIL THE METHOD OF PRESENTATION OF COURSE MATERIAL (i.e., lectures, seminars):

The course material will be provided in lectures. The course is applied and hands-on. Therefore, lectures will be run as labs, where students will be working on their personal laptops at all times. Material will be introduced by the instructor, followed by longer periods of application, in which students will be given in-class assignments to apply and learn the material. The instructor may require a TA to help them during the lecture to oversee students progress, increase interaction

and help with resolving issues.

4. **DESCRIBE IN DETAIL THE METHOD OF EVALUATION (<u>percentage breakdown, if possible</u>): (For 600-level course, indicate the <u>Extra Work</u> to be required of graduate students, i.e., exams, essays, etc. Please also note if a lab or tutorial will be included.)**

The evaluation proposal is as follows:

- Assignments: 20%
- Term Test: 25%
- Case study: 25%
- Final Exam: 30%

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).**

No

6. **IF THE COURSE IS INTENDED PRIMARILY FOR STUDENTS OUTSIDE YOUR DEPARTMENT, DO YOU HAVE THE SUPPORT OF THE DEPARTMENT/PROGRAM CONCERNED?**

N/A

PLEASE PROVIDE THE CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Manish Verma   Email: mverma@mcmaster.ca   Extension: 27438   Date submitted: January 26, 2021

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

To   :   Graduate Council

From   :   Christina Bryce
                Assistant Graduate Secretary

_____

At its meetings on February 2nd, March 4th and via e-ballot on March 9th the Faculty of Engineering Graduate Curriculum and Policy Committee approved the following graduate curriculum recommendations.

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

FOR APPROVAL OF GRADUATE COUNCIL:

- **Engineering Physics**
  - **Change to Course Requirements and Calendar Copy**

- **Electrical Engineering**
  - **Change to Calendar Copy (M.A.Sc. and Ph.D.)**

- **Materials Science & Engineering**
  - **Change to Comprehensive Exam Requirements and Calendar Copy**

- **School of Engineering Practice and Technology**
  - **Change to Course Requirements and Calendar Copy**
    - Master of Engineering Design
    - Master of Engineering in Systems and Technology

FOR INFORMATION OF GRADUATE COUNCIL:

- **Chemical Engineering**
  - **New Course**
    - 747 Advanced Mass Transfer - Particle Electrokinetics

- **Civil Engineering**
  - **New Cross-listed Course**
    - 710 Advanced Mass Transfer - Particle Electrokinetics
  - **New Course**
    - 706 Environmental Systems Engineering

- **Electrical Engineering**
  - **Change in Course Title and Description**

- - o 6BD4 Biomedical Instrumentation

    - **Materials Science & Engineering**
        - **Course Change**
            - o 6T04 Materials Selection in Design and Manufacturing

    - **School of Engineering Practice and Technology**
        - **New Courses**
            - o 6IT3 Internet Technologies and Databases
            - o 738 Artificial Intelligence Methods in Advanced Manufacturing
            - o 739 Distributed Computing for Process Control

SCHOOL OF GRADUATE STUDIES

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

IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:
1. This form must be completed for **ALL** changes involving degree program requirements/procedures. **All** sections of this form **must** be completed. 2. An electronic version of this form (must be in MS WORD **not** PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca). 3. A representative from the department is **required to attend** the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.

DEPARTMENT	Engineering Physics
NAME OF PROGRAM and PLAN	Graduate Program in Engineering Physics

DEGREE	MASc, PhD and Meng

NATURE OF RECOMMENDATION *(PLEASE CHECK APPROPRIATE BOX)*
Is this change a result of an IQAP review? ☐ Yes ☒ No

CREATION OF NEW MILESTONE ☐

CHANGE IN ADMISSION REQUIREMENTS		CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS	x

CHANGE IN THE DESCRIPTION OF A **SECTION** IN THE GRADUATE CALENDAR	X	EXPLAIN: All sections of the calendar were edited to improve clarity. The section on the description of the nuclear engineering research was updated significantly to reflect the current situation more correctly. A section on Smart Systems Engineering was added as this is a new research field in the department.

		The section on research facilities was brought up to date to include recent additions to facilities including the Smart Home for Aging in Place. The section on courses was updated to reflected changes in course offering and to include courses from biomedical and smart systems
OTHER CHANGES	X	**EXPLAIN:** The descriptions and the requirements for the graduate programs were updated. Editorial changes were made for clarity. Major changes were made to the course requirements as described below. Some of the changes were for clarification of existing requirements (MEng, MASc), the changes for the PhD program were substantial.

DESCRIBE THE <u>EXISTING</u> REQUIREMENT/PROCEDURE:

MEng: the existing requirements led to confusion about the number and the level of courses that were required to be taken from the department. The new text states more clearly what the requirements are. Technically, there is no change in the requirement for MEng.

MASc the existing requirement led to confusion about the distribution of 700, 600 and non-technical courses among the three required courses. The new text more clearly states that of the three courses, one may be 600, one may be non-technical. All other courses must be at the 700-level. Technically there is no change in the requirement for MASc.

PhD: Only two courses were required for the PhD program, in case of direct-entry or a switch from Master's. As a result, students had often taken too many courses when they switched from MASc to PhD. The distribution of the courses led to some confusion as well, in particular with regards to the seminar course, which is in addition to the two required courses.

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

    For the Meng and MASc programs, the recommended changes can be best viewed in the attached marked-up copy. This will provide the exact working of the changes.

The changes to the PhD program should also be viewed in the marked-up copy, but are summarized as follows:

- Students with a prior MASc degree must take two additional 700-level courses;
- Students who transfer from MASc or who start PhD from bachelor's, must take one 700-level course in addition to the MASc requirements.
- The seminar course needs to be taken only once.

Thus, the number of courses for most PhD students is increased from two to four by this change.

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

The recommended changes for MEng and MASc are based on operational experience of the past years and are meant for clarification of the program and to remove ambiguities.

The recommended change for the PhD program is based on a comparison with other departments in the faculty. It was found that our requirements for PhD were much lower than those of other departments. It was felt that by requiring so few courses the department did a disservice to the students and that the IQAP review would flag this low course requirement as well.

With the proposed changes, the department aligns much better with the faculty.

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

Beginning of academic year 2021/22

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

No other details

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

The recommended changes are marked up in the attached copy of the grad calendar.

CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Adriaan Buijs   Email: buijsa@mcmaster.ca   Extension: 24925   Date submitted: 2021-02-11

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

SGS/2013

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

Enquiries: 905 525-9140 Ext. 27925
E-mail: engphys@mcmaster.ca
Website: https://www.eng.mcmaster.ca/engphys/resources#graduate-students

Research in Engineering Physics

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

The ~~d~~Department conducts research in ~~four~~five designated fields:

Photonics Engineering
Nano- and Micro-Device Engineering
Nuclear Engineering ~~and Energy~~
Smart Systems Engineering

Biomedical Engineering

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

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

Nuclear Engineering ~~and Energy Systems~~ ~~cover~~covers a wide range of areas related to long--term ~~sustainable energy including~~ development of nuclear applications, such as ~~power and alternative energy sources. The specific~~reactors, medical radio-isotope production, materials research, nuclear imaging, and nuclear waste management. For its experimental research, the Department has access to on-campus facilities, such as the McMaster Nuclear Reactor (MNR), the Centre for Advanced Nuclear Systems

(CANS), hot cells, thermalhydraulic test loops, a nuclear chemistry lab, and several accelerators and sources, including a D-D fusion neutron source. The theoretical research areas include nuclear reactor physics, plant thermalhydraulics, ~~critical heat flux, post dryout heat transfer and rewetting mechanisms, reactor simulations~~actinide transport, ~~probabilistic methods,~~ safety system performance. ~~nuclear instrumentation~~ CANDU reactors, generation~~-~~IV ~~reactor~~Small Modular Reactor (SMR) designs, and fusion technology~~, and photovoltaics.~~. In addition to the facilities within~~-~~ Engineering Physics, there are ~~opportunities for collaboration~~several collaborations with other McMaster Engineering Departments ~~in the areas of wind energy, fuel cells,~~ as well as with other Canadian and ~~pollution control technologies.~~international institutions in Nuclear Engineering. The NSERC/UNENE Chair and Associate Chair in Nuclear Safety Analysis are also located at McMaster University.

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

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

Research Facilities

The ~~d~~Department benefits strongly from various McMaster ~~institutes, schools~~Institutes, Centres, Schools, and facilities including the Centre for Emerging Device Technologies (CEDT), the Brockhouse Institute for Materials Research (BIMR), McMaster School of Biomedical Engineering, the McMaster Institute for Applied Radiation Sciences, and the McMaster Institute for Energy Studies. The technical capabilities available to our graduate students include, for example, "clean rooms" with industry standard capabilities, molecular beam epitaxy, chemical vapour deposition, nuclear radiation detectors, positron lifetime and Doppler-broadening systems, compact and high-~~-~~power lasers, and a wide host of analytical capabilities and data acquisition equipment. The McMaster Nuclear Reactor (5 MW) is located on campus and is the largest ~~academic~~research reactor in Canada. This provides access to neutron and gamma beam ports, neutron irradiation and neutron activation analysis facilities, ~~neutron radiography,~~and neutron ~~flux mapping. In addition, there are~~radiography for research in Nuclear Engineering (see above), but also ~~facilities~~for ~~Critical Heat Flux~~research in materials, life and ~~post CHF heat transfer experiments, computational fluid~~

~~dynamics modeling facilities, as well as~~health sciences, and archeology. The Center for Advanced Nuclear System (CANS) provides a suite of hot cells and specimen analysis capability which is unique in Canada.

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

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

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

University Network of Excellence in Nuclear Engineering (UNENE)

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

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

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

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

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

Enquiries: 905 525-9140 ext. 20168
Fax: 905 527-8409
Email: unene@mcmaster.ca
Websites: http://www.unene.ca
~~http://engphys.mcmaster.ca/graduate-studies/degrees/~~https://www.eng.mcmaster.ca/engphys/programs/degree-options/meng/unene-nuclear-engineering

Programs
Master
- Engineering Physics, M.-Eng.

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

Doctoral
- Engineering Physics, Ph.D

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

Engineering Physics, M. Eng.

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

M.Eng. Degree

Course Requirements

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

Students currently enrolled in the M.Eng. program may request advance credit for one course based on courses taken in their ~~final year of an Engineering Physics~~ undergraduate ~~program~~degree at McMaster ~~University may apply for an Advanced Credit Option~~. The **Advanced Credit Option** is open to students who were undergraduates ~~who have~~ in the Engineering Physics program at McMaster University who graduated with an overall average (CGPA) of at least B ~~at the time they are applying for the option.~~. The Advanced Credit Option allows ~~undergraduate students to take up to two 600-level courses during their final undergraduate year for~~ graduate credit ~~In exceptional circumstances, students from other Engineering departments in McMaster applying for entry into~~ for one 600-level course taken in the ~~M.Eng. program in Engineering Physics may apply for the Advanced Credit Option with the permission of the Department's Associate Chair (Graduate). Entry into the M.Eng. program under the Advanced Credit Option must occur less than one year upon completing one's undergraduate degree and must meet the same requirements for admission as other candidates~~final undergraduate year.

Transfer to the Ph.D.

After a minimum of ~~1~~one year in the M.~~A.Sc. or M.~~Eng. program, a student may transfer to the Ph.D. program without completion of the Master's, upon successful completion of a transfer examination. The transfer examination will be completed with the intended Ph.D. Supervisory Committee. The transfer exam will count towards the requirement of the ~~PhD~~Ph.D. thesis proposal.

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

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

~~The degree may be earned either with a thesis option (M.A.Sc.) or an industrial internship (M.Eng.) to be decided jointly by the candidate, the supervisor, and the chair.~~ A strong baccalaureate degree with an average of at least B (equivalent to a McMaster GPA of 8.0) in engineering, mathematics, or the physical sciences is ~~gen~~e~~o~~r~~m~~ally required for admission to the M.A.Sc. program. ~~For the M.Eng. program, an average of at least B is required.~~

M.A.Sc. Degree

Course Requirements

A candidate for the M.A.Sc. degree is required to complete a minimum of three half courses~~,~~ and a thesis; one of the three half courses ~~can~~may be at the 600-level~~, with an overall average of at least B and a thesis. The M.A.Sc. students are allowed to take~~; another one may be a non-technical course ~~at~~with written approval from the ~~600- or 700-level among the three required half-courses. The thesis topic is chosen in consultation with the supervisor.~~Supervisor. In addition to the minimum of three half courses, M.A.Sc. candidates are required to complete the ~~mandatory~~ seminar half course **ENG PHYS 702**. A minimum grade of B− must be obtained for all courses. The thesis topic is chosen in consultation with the Supervisor and must result in a written thesis.

Students currently enrolled in ~~their final year of an Engineering Physics~~ the M.A.Sc. program may request advance credit for one course based on courses taken in their undergraduate ~~program~~degree at McMaster ~~University may apply for an Advanced Credit Option~~. The **Advanced Credit Option** is open to students who were undergraduates ~~who have~~ in the Engineering Physics program at McMaster University who graduated with an overall average (CGPA) of at least B~~at the time they are applying for the option.~~. The Advanced Credit Option allows ~~undergraduate students to take one 600-level course during their final undergraduate year for~~graduate credit~~. The Advanced Credit Option may not be used in conjunction with the Accelerated Option which similarly allows an undergraduate student to count~~ for one 600-level course taken ~~during their final year towards their degree requirements of the M.A.Sc program. In exceptional circumstances, students from other Engineering departments in McMaster applying for entry into the M.A.Sc. program~~ in ~~Engineering Physics may apply for the Advanced Credit Option with the permission of the Department's Associate Chair (Graduate). Entry into the M.A.Sc. program under the Advanced Credit Option must occur less than one year upon completing one's~~

undergraduate degree and must meet the same requirements for admission as other candidates.the final undergraduate year.

An **Accelerated Option** is also available to students currently enrolled at McMaster as undergraduate students in the Department of Engineering Physics Department. The graduateaccelerated credit and thesis-related research work completed under the Accelerated Option are expected to reduce time to completion of the Master'sM.A.Sc. program. In exceptional circumstances, students from other Engineering departments in McMaster applying for entry into the M.A.Sc. program in Engineering Physics may apply for the Accelerated Option with the permission of the Department Associate Chair (Graduate). Application for entry into the Accelerated Option occurs in the finalpenultimate year of undergraduate studies. Applicants must have an overall average (CGPA) of at least B at the time they are applying for the option. The Accelerated Option requires students to complete the equivalent of at least one term of their thesis-related project with a sSupervisor from the dDepartment prior to completion of their undergraduate degree. A 600-level course offered by the department is required under the Accelerated Option in the final undergraduate year for graduate credit. For students enrolled in the Accelerated Option, research conducted in ENGPHYS 3H04, 4H04 or the equivalent may count towards the Accelerated Option and therefore towards partial fulfillment of the graduate M.A.Sc. thesis work. A 600-level course offered by the Department is required under the Accelerated Option in the final undergraduate year for graduate credit. Students must enter into the M.A.Sc. program under the Accelerated Option less than one year after they complete their undergraduate degree and they must meet the same requirements for admission as other candidates. The Advanced Credit Option may not be used in conjunction with the Accelerated Option.

In exceptional circumstances, students from other Engineering departments in McMaster may apply for entry into the Accelerated Option by contacting the department's Associate Chair (Graduate). Entry into the M.A.Sc. program under the Accelerated Option must occur less than one year upon completing one's undergraduate degree and must meet the same requirements for admission as other candidates.

Transfer to the Ph.D.

After a minimum of 1one year in the M.A.Sc. or M.Eng. program, a student may transfer to the Ph.D. program without completion of the Master's, upon successful completion of a transfer examination. The transfer examination will be completed with the intended Ph.D. Supervisory Committee. The transfer exam will count towards the requirement of the PhDPh.D. thesis proposal.

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

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

Course Requirements

The general ~~R~~regulations for the ~~D~~degree Doctor of Philosophy appear earlier in the Calendar. Students with a Master's degree (from McMaster or elsewhere) are required to take two half courses, both ~~must be~~ at the 700 level. ~~If a student is~~ Students transferring from the M.A.Sc. program at McMaster to the ~~PhD~~Ph.D. program without completing the Master's degree~~, then~~ or students entering the ~~courses completed under~~Ph.D. program directly from a Bachelor's degree without beginning an M.A.Sc. must complete a minimum of one additional half course at the ~~M. A. Sc. may be counted towards~~700 level beyond the ~~PhD. Among these two half courses, one can be a non-technical course with approval of the Associate Chair (Graduate).~~ M.A.Sc. requirement. In addition to the ~~minimum of two half~~aforementioned courses, all Ph.D. candidates are required to ~~complete~~have completed the mandatory seminar half course ENG PHYS 702. A minimum grade of B− must be obtained for all courses.

Comprehensive Examination

~~During their course of study, doctoral~~Doctoral candidates ~~will be~~are required to pass a Departmental Comprehensive Examination. ~~T~~whose purpose ~~of this examination~~ is to ensure that the candidate possesses sufficient knowledge and maturity of approach. The examination format is oral and will test the student's knowledge and understanding of mathematics, physics, and the engineering sciences. The candidate will normally take the examination within ~~8~~eight months and no later than 20 months following admission to the doctoral program. ~~The examination may, at~~The Comprehensive Examination includes a provision for second opportunity for assessment should the ~~discretion~~student fail the first attempt. This second assessment is given in place of ~~the Department, be repeated once~~any "re-read" of a comprehensive evaluation, which is explicitly excluded from the Student Appeal Procedures. Reporting of examination results will be done in accordance with the Regulations of the School of Graduate Studies.

Thesis Proposal

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

Industrial Ph.D. Option

The general Regulations for the degree Doctor of Philosophy appear earlier in the Calendar. This program option offers the candidate the potential to conduct all or a portion of their research at their company or research institute of employment. To be enrolled under the option, the candidate must be a full-time student in the degree program, have previously completed a Masters of Applied Science or its equivalence, and be employed by a company or research institute outside of McMaster continuously until degree completion. A candidate is required to complete the normal course requirements of their enrolled department as well as any milestones, but is exempt from seminar requirements. As a doctoral candidate, they must take the Ph.D. Comprehensive Examination that is designed to test the breadth of knowledge and the ability to synthesize and integrate ideas from within and peripheral to the candidate's research area. The Comprehensive Examination will normally take place between 6six and 18 months after the candidate initially registers in the Ph.D. program. A supervisory committeeA Supervisory Committee monitors the progress of a Ph.D. candidate and determines when the candidate is ready to write the thesis. The student is required to defend the thesis at a Final Oral Examination.

Engineering Physics Courses

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

Courses marked with an asterisk (*) are half courses.

The following 600-level courses are offered for graduate credit and are also available to senior undergraduate students. Not all of the courses, however, will be offered each year.:

Courses

ENG PHYS 6B03 / Biosensors - Fundamentals and Applications
ENG PHYS 6D03 / Nuclear Reactor Physics
ENG PHYS 6F03 / Advanced Solid State Devices
ENG PHYS 6I03 / Introduction to Biophotonics
ENG PHYS 6L04 / Industrial Monitoring and Detection Techniques
ENG PHYS 6MD3 / Nanoscale Semiconductor Devices
ENG PHYS 6NE3 / Advanced Nuclear Engineering
ENG PHYS 6P03 / Nuclear Power Plant Systems and Operation
ENG PHYS 6PP3 / Plasma Physics Applications
ENG PHYS 6QC3 / Introduction to Quantum Computing
ENG PHYS 6S03 / Introduction to Lasers and Electro-Optics
ENG PHYS 6X03 / Introduction to Photovoltaics
ENG PHYS 6Z03 / Semiconductor Manufacturing Technology

Graduate Credit Courses

The following 700-level courses are offered for graduate credit only.:

ENG PHYS 702 / Graduate Seminars
ENG PHYS 704 / Selected Topics in Engineering Physics
ENG PHYS 705 / III-V Materials and Devices
ENG PHYS 706 / Toward a New Era of Nuclear Energy: Messages from Fukushima

ENG PHYS 707 / Nuclear Fuel Cycle and Radioactive Waste Management
ENG PHYS 708 / Quantum Materials, Devices, and Systems
ENG PHYS 709 / Advanced Topics in Biophotonics
ENG PHYS 710 / Nuclear Reactor Dynamics and Control
ENG PHYS 713 / Nuclear Safety Analysis and Reactor Accidents
ENG PHYS 714 / Nuclear Reactor Safety Design
ENG PHYS 715 / Advanced Nuclear Reactor Thermalhydraulics
ENG PHYS 716 / Nuclear Reactor Heat Transport System Design
ENG PHYS 718 / Reactor Heat Transport System Simulation and Analysis
ENG PHYS ~~719 / MEMS Devices: Design, Fabrication,~~721 / Optical Amplifiers and ~~Applications~~Lasers
~~ENG PHYS 720 / Advanced Modeling of Semiconductor Device Fabrication~~
~~ENG PHYS 721 / Lasers and Laser Physics~~
ENG PHYS 723 / Semiconductor Diode Laser Physics
ENG PHYS 724 / Materials Characterization by Electron/Ion Microscope
ENG PHYS 726 / Optoelectronic Device Physics
ENG PHYS 727 / Advanced Reactor Physics and Analysis
~~ENG PHYS 728 / Luminescence and Point Defects in Solids~~
ENG PHYS 729 / Thin Film Growth and Deposition
ENG PHYS 730 / Thin Film Characterization
ENG PHYS 733 / Research Project in Engineering Physics
ENG PHYS 734 / Nonlinear Optics
ENG PHYS 743 / Functional Materials
ENG PHYS 752 / Advanced MEMS Fabrication and Microfluidics
ENG PHYS 777 / Advanced Photovoltaics
ENG PHYS 782 / Solid-State Electronics
ENG PHYS 783 / Nuclear Fuel Engineering
ENG PHYS 784 / Nuclear Fuel Management

Additional Nuclear Engineering Courses

A selection of Nuclear Engineering related courses offered by other departments is given below.

~~Electrical and Computer Engineering Course~~

Materials Science and Engineering ~~Course~~

MATLS 6D03 / Corrosion

Mechanical Engineering ~~Courses~~

[MECH ENG 706 / Advanced Heat Transfer](#)
[MECH ENG 707 / Analytical Solutions in Transport Phenomena](#)
[MECH ENG 708 / Two-Phase Flow and Heat Transfer](#)
[MECH ENG 723 / Flow Induced Vibrations](#)

Medical Physics and Applied Radiation Sciences ~~Courses~~

[MED PHYS 6R03 / Radiation and Radioisotope Methodology](#)
[MED PHYS 771 / Isotopes In-Vivo](#)
[MED PHYS 772 / Medical Health Physics](#)
[MED PHYS 775 / Advanced Radiation Physics](#)
[MED PHYS 776 / Introduction to Operational Health Physics](#)

Additional Photonics Engineering and Nano ~~Technology~~ and Micro-device Engineering Courses

Courses related to Photonics ~~and nano technology related courses~~ Engineering and Nano- and Micro-device Engineering offered by other departments include the following:

Electrical and Computer Engineering ~~Courses~~

[ECE 740 / Semiconductor Device Theory and Modeling](#)
[ECE 741 / Analog Integrated Circuits](#)
[ECE 750 / Advanced Engineering Electromagnetics](#)
[ECE 754 / Modeling ~~Aa~~nd Simulation ~~Of~~of Photonic Devices](#)

Physics and Astronomy ~~Courses~~

[PHYSICS 729 / Condensed Matter Physics I](#)
[PHYSICS 730 / Condensed Matter Physics II](#)
[PHYSICS 731 / Condensed Matter Theory](#)
[PHYSICS 734 / Special Topics in Condensed Matter Physics](#)
[PHYSICS 739 / Advanced Quantum Mechanics I](#)
[PHYSICS 740 / Advanced Quantum Mechanics II](#)

Additional Smart Systems Engineering Courses

A selection of courses related to Smart Systems Engineering offered by other departments is given below.

~~Chemical Engineering~~School of Engineering Practice and Technology
~~CHEM ENG~~SEP 786 / Artificial Intelligence and Machine Learning Fundamentals
~~CHEM ENG~~SEP 787 / Machine Learning: Classification Models
~~CHEM ENG~~SEP 789 / Deep Learning and Its Applications

Mechanical Engineering
MECH ENG 735 / Additive Manufacturing

Additional Biomedical Engineering Courses

A selection of courses related to Biomedical Engineering offered by other departments is given below.

Biomedical Engineering
BIOMED 706 / Biomedical Engineering II (Core)

Mechanical Engineering
MECHENG 712 / Bio-Inspired Engineering
MECHENG 717 / Current Topics in Orthopaedic Biomechanics

Electrical and Computer Engineering
ECE 6BD4 / Biomedical Instrumentation
ECE 6BC3 / Modeling of Biological Systems
ECE 779 / Medical Imaging Systems I
ECE 780 / Medical Imaging Systems II
ECE 798 / Biomedical Signal Modeling and Processing

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

IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:
1.   This form must be completed for **ALL** changes involving degree program requirements/procedures. **All** sections of this form **must** be completed. 2.   An electronic version of this form (must be in MS WORD **not** PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca). 3.   A representative from the department is **required to attend** the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.

DEPARTMENT	ECE		
NAME OF PROGRAM and PLAN	Electrical and Computer Engineering		
DEGREE	M.A.Sc.		
NATURE OF RECOMMENDATION *(PLEASE CHECK APPROPRIATE BOX)* **Is this change a result of an IQAP review? ☐ Yes ☒ No**			
CREATION OF NEW MILESTONE ☐			

CHANGE IN ADMISSION REQUIREMENTS		**CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE**		**CHANGE IN COURSE REQUIREMENTS**	
CHANGE IN THE DESCRIPTION OF A <u>SECTION</u> IN THE GRADUATE CALENDAR	X	**EXPLAIN:**			
OTHER CHANGES	**EXPLAIN:**				

DESCRIBE THE <u>EXISTING</u> REQUIREMENT/PROCEDURE:

A candidate is required to complete successfully at least four graduate half courses (or equivalent), of which at least two must be from among the 700-level graduate courses offered by the Electrical and Computer Engineering Department, and to prepare a thesis embodying the results of the research taken on by the candidate.

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

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

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

Some students have been confused about course requirements when the policies around 600-level courses and courses outside the ECE program are in the general regulations section of the calendar but not in our program-specific section of the calendar. To goal of these changes is to consolidate our departmental policies into the calendar text for the MASc program in ECE.

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

September 2021

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

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

A candidate is required to complete successfully at least four graduate half courses (or equivalent), of which at least two must be from among the 700-level graduate courses offered by the Electrical and Computer Engineering Department, and to prepare a thesis embodying the results of the research taken on by the candidate. Up to one 600-level graduate course within the ECE program can be taken with prior permission from the department. 700-level courses to be taken outside of the ECE program also require prior approval from the department.

CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Dr. Ian C. Bruce   Email: ibruce@ieee.org   Extension: 26984   Date submitted: Dec. 10th, 2020

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

SGS/2013

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

<table>
<tr><td colspan="2"><u>IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM</u>:

1.   This form must be completed for <u>**ALL**</u> changes involving degree program requirements/procedures. <u>**All**</u> sections of this form <u>**must**</u> be completed.

2.   An electronic version of this form (must be in MS WORD <u>**not**</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).

3.   A representative from the department is <u>**required to attend**</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.</td></tr>
</table>

<table>
<tr><td>**DEPARTMENT**</td><td colspan="3">ECE</td></tr>
<tr><td>**NAME OF PROGRAM and PLAN**</td><td colspan="3">Electrical and Computer Engineering</td></tr>
<tr><td>**DEGREE**</td><td colspan="3" align="center">Ph.D.</td></tr>
<tr><td colspan="4" align="center">**NATURE OF RECOMMENDATION** *(PLEASE CHECK APPROPRIATE BOX)*

Is this change a result of an IQAP review? ☐ Yes ☒ No</td></tr>
<tr><td colspan="4">**CREATION OF NEW MILESTONE ☐**</td></tr>
<tr><td>**CHANGE IN ADMISSION REQUIREMENTS**</td><td>**CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE**</td><td colspan="2">**CHANGE IN COURSE REQUIREMENTS**</td></tr>
<tr><td colspan="2">**CHANGE IN THE DESCRIPTION OF A <u>SECTION</u> IN THE GRADUATE CALENDAR**</td><td>X</td><td>**EXPLAIN:**</td></tr>
<tr><td>**OTHER CHANGES**</td><td colspan="3">**EXPLAIN:**</td></tr>
</table>

DESCRIBE THE <u>EXISTING</u> REQUIREMENT/PROCEDURE:

The minimum number of graduate courses required is three half courses (or equivalent) beyond the Master's degree, or six half courses (or equivalent) for students transferring to the Ph.D program from the M.A.Sc. program without defending a Master's thesis or entering the Ph.D. program directly from the Bachelor's degree without beginning an M.A.Sc.

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

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

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

Some students have been confused about course requirements when the policies around 600-level courses and courses outside the ECE program are in the general regulations section of the calendar but not in our program-specific section of the calendar. To goal of these changes is to consolidate our departmental policies into the calendar text for the PhD program in ECE.

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

September 2021

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

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

The minimum number of graduate courses required is three <u>700-level</u> half courses (or equivalent) beyond the Master's degree~~,~~. One of these three courses may be taken outside of the ECE program with prior approval by the department. For students transferring to the Ph.D program from the M.A.Sc. program without defending a Master's thesis or entering the Ph.D. program directly from the Bachelor's degree without beginning an M.A.Sc, the minimum number of graduate courses required is~~or~~ six half courses (or equivalent) ~~for students transferring to the Ph.D program from the M.A.Sc. program without defending a Master's thesis or entering the Ph.D. program directly from the Bachelor's degree without beginning an M.A.Sc~~. A maximum of two of these six courses can be 700-level courses taken outside the ECE program with prior approval by the department, and a maximum of one of these six courses can be a 600-level ECE course with prior approval by the department.

CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Dr. Ian C. Bruce   Email: ibruce@ieee.org   Extension: 26984   Date submitted: Dec. 11th, 2020

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

SGS/2013

SCHOOL OF GRADUATE STUDIES

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

IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:
1.   This form must be completed for **ALL** changes involving degree program requirements/procedures. **All** sections of this form **must** be completed.
2.   An electronic version of this form (must be in MS WORD **not** PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).
3.   A representative from the department is **required to attend** the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.

DEPARTMENT	Materials Science and Engineering
NAME OF PROGRAM and PLAN	Materials Science and Engineering

DEGREE	PhD

NATURE OF RECOMMENDATION *(PLEASE CHECK APPROPRIATE BOX)*
Is this change a result of an IQAP review? ☐ Yes ☒ No

CREATION OF NEW MILESTONE ☐

CHANGE IN ADMISSION REQUIREMENTS	No	CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE	Yes	CHANGE IN COURSE REQUIREMENTS	No
CHANGE IN THE DESCRIPTION OF A <u>SECTION</u> IN THE GRADUATE CALENDAR		Yes	**EXPLAIN:** Change to the Comprehensive Examination requirement to comply with Graduate Calendar requirements		
OTHER CHANGES	Yes	**EXPLAIN:** Deletion of redundant coursework requirement statements			

DESCRIBE THE <u>EXISTING</u> REQUIREMENT/PROCEDURE:

<u>Comprehensive Exam:</u>

We currently require two examinations that essential meet the requirements of the comprehensive examination: research proposal report and examination and a comprehensive examination, which consists of two parts. The part 1 examination usually takes place during the first two terms (8 months). The research proposal examination usually takes place after three terms (12 months), but no later than 16 months and the part 2 comprehensive exam taking place within the first 6 terms (24 months).

<u>Coursework Requirements Statements:</u>

Identical course work requirements are repeated three times: one for each mode of entry into the PhD program (entering with a bachelor's degree, a master's degree, or transferring from a master's program).

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

<u>Comprehensive Exam:</u>

The recommended change is to remove the part 1 examination requirement for the comprehensive examination. So the part 2 examination now becomes a single comprehensive examination requirement (to be completed within 24 months), in addition to the research proposal examination requirement (to be completed within 12-20 months, but not more than 24 months). We also added a statement about the exam committee makeup for both the research proposal examination and the now single comprehensive examination.

<u>Coursework Requirements Statements</u>:

The recommended change is replacing the three redundant paragraphs documenting the coursework requirements. No changes are made to the requirements themselves (course load).

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

<u>Comprehensive Exam</u>:

The rationale for the change is to ensure our PhD graduate students complete the comprehensive examination requirements (the now single comprehensive examination itself, along with the research proposal examination) be completed within the 24 month deadline, as stated in the graduate calendar's general regulations.

We have 18 program learning outcomes (PLOs) in our graduate program (three each for the government's six degree learning expectations). The part 1 examination requirements address 2 of those 18 PLOs, whereas the research proposal examination and the part 2 examination address 11 and 4 of those PLOs respectively. One of the 2 PLOs addressed by the part 1 examination is also addressed by research proposal exam. The other PLO addressed by the part 1 exam is also addressed by our graduate seminar course. Therefore, our recommended change does not impact our PLOs in any meaningful way.

<u>Coursework Requirement Statements</u>:

The rationale for the change is to improve clarity in our description of the coursework requirements. As the

requirements themselves have not changed, there is no impact on our department's PLOs.

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

September 2021

Student who join(ed) in Jan. 2021 or May 2021 will be excused from the comprehensive exam part 1.

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

No.

CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Oleg Rubel   Email: rubelo@mcmaster.ca   Extension: 24094   Date submitted: Jan, 2021

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

McMaster University

School of Graduates Studies Calendar,

2020-2021

Materials Science and Engineering, Ph.D

Requirements

Students entering the Ph.D. program in Materials Science and Engineering ~~directly with a Bachelor's degree~~ are required to successfully complete at least 12 units (4 half-courses) of course work, which includes the mandatory seminar course MATLS 702 (3 units) ~~and 6 units of technical courses at the 700 level~~. Courses at the 700 level are offered as either a half course (3 units) or a quarter course (1.5 units), whereas courses offered at the 600-level are offered as half courses (3 units). Only one 600-level course is permitted for graduate credit. Only one non-technical half course (3 units) is permitted for graduate credit with written approval from the Supervisor.

~~Students entering the Ph.D. program in Materials Science and Engineering with a Master's degree are required to successfully complete at least 12 units (4 half-courses) of course work, which includes the mandatory seminar course MATLS 702 (3 units) and 6 units of technical courses at the 700 level. Courses at the 700 level are offered as either a half course (3 units) or a quarter course (1.5 units), whereas courses offered at the 600-level are offered as half courses (3 units). Only one 600-level course is permitted for graduate credit. Only one non-technical half course (3 units) is permitted for graduate credit with written approval from the Supervisor.~~

~~Students transferred to the Ph.D. program in Materials Science and Engineering from the Master's program are required to successfully complete at least 12 units (4 half-courses) of course work, which includes the mandatory seminar course MATLS 702 (3 units) and 6 units of technical courses at the 700 level. Courses at the 700 level are offered as either a half course (3 units) or a quarter course (1.5 units), whereas courses offered at the 600-level are offered as half courses (3 units). Only one 600-level course is permitted for graduate credit. Only one non-technical half course (3 units) is permitted for graduate credit with written approval from the Supervisor.~~

Students are encouraged to consult with their Supervisor to ~~to~~ select some of their courses from areas beyond the focus of their research, including courses offered by other Departments. For courses to be taken for credit outside of the Department, but within the Faculties of Engineering, Science and Health Science, written approval from the Supervisor is required. Any other courses for credit require approval from the Associate Dean Graduate Studies, ~~(~~Engineering~~)~~.

Students are also required to complete a career planning exercise within the first three terms (12 months) of full time study. Students will participate in a planning session with a career specialist within

the Faculty and subsequently produce (at most) a two-page report before completion of the first three terms (12 months) of full time study. The report must be submitted to the Associate Chair, (Graduate). Students transferring to the Ph.D. program are except from this requirement since they previously submitted such a report while enrolled in the M.A.Sc.aster's program.

Research Proposal Examination

Students entering the Department's Ph.D. program in Materials Science and Engineering with either a Bachelor's or Master's degree must submit a written Research Proposal for their research program and complete (pass) the associated oral exam after the completion of three terms (12 months), but no more than four terms (16 months). Their Supervisory Committee, augmented by two other members, will give a critical review and examine the student on the content contained in or related to the Research Proposal during the oral exam.

Students entering the Ph.D. program in Materials Science and Engineering must submit a written Research Proposal for their research program and complete (pass) the associated oral exam within three-five terms (12-20 months) in the program, but no more than six terms (24 months). Their Supervisory Committee, augmented by two other members, will give a critical review and examine the student on the content contained in or related to the Research Proposal during the oral exam. For students transferring into the Ph.D. program from the M.A.Sc. program, this requirement is replaced by the Transfer Report.

Comprehensive Examination

Students enrolled in the Ph.D. program in Materials Science and Engineering are required to successfully complete (pass) the Comprehensive Examination. The oral exam, which consists of two parts, is meant to ensure that students have a broad understanding of the foundations of the Materials Science and Engineering discipline.

The Part I oral exam covers, at the undergraduate level, topics central to the Materials Science and Engineering discipline. Topics have been divided into core areas that all students are responsible for and into elective areas so that students may choose an area of specialization. The Part I oral exam must be successfully completed prior to the completion of two terms (8 months) of full time study.

The Part II oral exam tests the student's knowledge of three topics related to the research at an advanced level. Students are expected to show the greatest depth of knowledge in their field of research, but also be expected to demonstrate knowledge of fields related to their areas of specialization. The Part II oral exam must be completed within 24 months (two years) of entry into the a Ph.D. program.

Students enrolled in the Ph.D. program in Materials Science and Engineering are required to successfully complete (pass) the Comprehensive Examination. The oral exam, tests the student's knowledge of three topics related to the research at an advanced level. Students are expected to show the greatest depth of

knowledge in their field of research, but also be expected to demonstrate knowledge of fields related to their areas of specialization. The exam committee will consist of the Supervisory Committee, augmented by two other members. The comprehensive exam must be completed within the first 6 terms (24 months) of entry into the Ph.D. program.

Thesis

Students are required to submit a thesis that which embodies the results of original research and to defend the thesis in the Final Oral Examination.

Industrial Ph.D. Option

The general Regulations for the degree Doctor of Philosophy appear earlier in the Calendar. This program option offers the candidate the potential to conduct all or a portion of their research at their company or research institute of employment. To be enrolled under the option, the candidate must be a full-time student in the degree program, have previously completed a Masters of Applied Science or its equivalence, and be employed by a company or research institute outside of McMaster continuously till degree completion. A candidate is required to complete the normal course requirements of their enrolled department as well as any milestones, but is exempt from seminar requirements. As a doctoral candidate they must take the Ph.D. Comprehensive Examination that is designed to test the breadth of knowledge and the ability to synthesize and integrate ideas from within and peripheral to the candidate's research area. The Comprehensive Examination will normally take place between 6 and 18 months after the candidate initially registers in the Ph.D. program. A supervisory committee monitors the progress of a Ph.D. candidate and determines when he/she is ready to write the thesis. The student is required to defend the thesis at a Final Oral Examination.

Research Proposal Exam

Students entering the Ph.D. program in Materials Science and Engineering must submit a written Research Proposal for their research program and complete (pass) the associated oral exam within three-five terms (12-20 months) in the program, but no more than six terms (24 months). The proposal report should take the form of a literature review plus some preliminary results and analysis followed by a detailed research proposal (objectives, methodology and anticipated significance). The literature review should not simply catalogue the papers in the field. Rather it should offer some insight into the state of the field (i.e. what are the main advances achieved, what are the main shortcomings, what is good or bad about the approaches taken by previous workers). This should lead into a discussion of what approach you intend to take in your own research. What will you want to do different from previous research, and what advances in the state-of-the-art do you hope to achieve? Some discussion of the techniques you expect to use will be important. You will be expected to demonstrate that you have thought about how best to approach your problem, and what the associated limitations may be. The report need not, and indeed should not, be a lengthy document. It should indicate that you have a good grasp of the background to the project being undertaken, have demonstrated a potential to perform research, and have thought carefully about the research being proposed.
The oral exam is administered by the Department. The exam committee is comprised by five faculty members, including the three members of the supervisory committee plus two more faculty members (typically from the Department); one of which will serve as the Chair. The exam committee will give a critical review and examine the student on the content contained in or related to the Research Proposal during the oral exam. The exam covers material presented in the written proposal report and the background material to the proposed research. The purpose of this exam is to determine whether the student has a good chance of successfully completing a PhD. It also serves the valuable function of providing a sound appraisal of the problem chosen for research. The exam itself consists of a short (20 minutes maximum) oral presentation that summarizes the contents of the proposal report. The presentation is followed by a question period where the student is asked to defend the proposal and background to the proposed research. The question period (typical no more than 120 minutes) involves two rounds of questions with the majority of time being spent in the first round. Examiners will be allotted equal time to ask questions. Upon conclusion of the exam, the student is asked to leave the exam so that an assessment of the exam can take place in camera. After a discussion of the examination, the Chair will ask for a vote on the success (pass) or failure of the exam. The student is then invited back into the exam for the verdict and feedback. If the verdict is fail (two or more votes to fail form the four voting examiners), then the exam will be reconvened at a later date (typically within four weeks). The reason(s) why the student failed will be clearly communicated by the Chair so that students can focus on these shortcomings for the reconvened exam. The reconvened oral exam is the student's final opportunity to complete the proposal exam. If the student fails the reconvened exam, that decision is final, and is not open to appeal. The student is then invited back into the exam for the verdict and feedback.

For students transferring into the Ph.D. program from the M.A.Sc. program, this requirement is replaced by the Transfer Report.

Comprehensive Exam

Students enrolled in the Ph.D. program in Materials Science and Engineering are required to successfully complete (pass) the Comprehensive Examination. The oral exam, tests the student's knowledge of three topics related to the research at an advanced level. The topics are typically discussed and agreed upon during the supervisory committee meeting held prior to the comprehensive exam. Students are expected to show the greatest depth of knowledge in their field of research, but also be expected to demonstrate knowledge of fields related to their areas of specialization. The exam committee will consist of the Supervisory Committee, augmented by two other members (typically from the Department); one of which will serve as the Chair. The comprehensive exam must be completed within six terms (24 months) of entry into the Ph.D. program.

The oral exam is administered by the Department. It consists of a question and answer format. The question period (typical no more than 120 minutes) involves two rounds of questions with the majority of time being spent in the first round. Examiners will be allotted equal time to ask questions. Upon conclusion of the exam, the student is asked to leave the exam so that an assessment of the exam can take place in camera. After a discussion of the examination, the Chair will ask for a vote on the success (pass) or failure of the exam. The student is then invited back into the exam for the verdict and feedback. If the verdict is fail (two or more votes to fail form the four voting examiners), then the exam will be is reconvened at a later date (typically within four weeks). The reason(s) why the student failed will be clearly communicated by the Chair so that students can focus on these shortcomings for the reconvened exam. The reconvened oral exam is the student's final opportunity to complete the proposal exam. If the student fails the reconvened exam, that decision is final, and is not open to appeal. The student is then invited back into the exam for the verdict and feedback.

SCHOOL OF GRADUATE STUDIES

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

IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:
1. This form must be completed for **ALL** changes involving degree program requirements/procedures. **All** sections of this form **must** be completed.
2. An electronic version of this form (must be in MS WORD **not** PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).
3. A representative from the department is **required to attend** the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.

DEPARTMENT	W Booth School of Engineering Practice and Technology	
NAME OF PROGRAM and PLAN	Master of Engineering Design (MED) – Digital Reality Stream	
DEGREE	Master of Engineering Design (MED)	

NATURE OF RECOMMENDATION *(PLEASE CHECK APPROPRIATE BOX)*
Is this change a result of an IQAP review? ☐ Yes ☒ No

CREATION OF NEW MILESTONE ☐					
CHANGE IN ADMISSION REQUIREMENTS		**CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE**		**CHANGE IN COURSE REQUIREMENTS**	X
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR		**EXPLAIN:**			
OTHER CHANGES		**EXPLAIN:**			

DESCRIBE THE <u>EXISTING</u> REQUIREMENT/PROCEDURE:

The existing requirement indicates that students must pick five courses from a list of six, but students should instead be required to complete all six. This change should have been made last year when the program was approved to increase to 30 units, but this was missed.

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

With the approved increase to 30 units, students should be required to complete all six technical courses in the Digital Reality stream rather than selecting 5 of 6.

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

This change is required in order for students to meet the 30-unit degree requirement. The change to 30 units was approved in Spring 2020.

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

September 1 2021

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

No.

Innovative new designs and the ability to improve performance of existing systems have become a basis for a competitive advantage in the marketplace. Innovativeness, performance, environmental sustainability, safety, usability, desirability, viability and efficiency are integral parts of the requirements in the design of industrial products, healthcare products, large-scale systems, or software solutions. Within this complex set of constraints, successful engineers and engineering managers must be able to lead transformation of an idea to a complete design by working in interdisciplinary teams and with stakeholders. The Master of Engineering Design program provides its participants with technical expertise and leadership capabilities required to innovate and to lead technically-oriented organizations. The M.Eng. Design program emphasizes development of competencies in Design Thinking and innovations methodologies, as well as leadership,

collaboration, and management skills to lead diverse teams. These competencies are combined with advanced technologies to enable design and implementation of solutions

which integrate digital reality with the physical world to deliver solutions for daily living or for complex IT or industrial systems.

The following streams are currently offered in the Program:

Product Design: Design Thinking approach to development of products and services.
Digital Reality: Design of augmented-, virtual-, and mixed-reality immersive experiences.

Admission

In addition to the general requirements for entry into a graduate program in Engineering, applicants must have a four-year undergraduate degree in STEM. Applicants with non-STEM degrees must have at least three years of experience (work or education) in the related fields such as industrial design or media design. Applicants must have at least a B- average (equivalent to a McMaster 7.0 GPA out of 12) in the final year in all courses in the discipline, or relating to the discipline, in which the applicant proposes to do graduate work. Strong letters of recommendation are also required. Applicants will be required to complete an online interview. Professional work experience will be desirable, but not essential.

Candidates may be enrolled on a full- or part-time basis. Full-time students will complete the degree in 24 months with an accelerated path to complete in twelve consecutive months. Students are admitted for September. Part-time students will normally be expected to complete the program in three years and one term (40 months).

Prospective applicants who did not attain the required standing in their undergraduate degree, but who have at least four (4) years of relevant work experience, should discuss their situation with the Program Lead. If the experience is deemed sufficient, the Program Lead may then recommend a live interview. Evidence of ability to do graduate work will still be required. (See Sections 2.1.1 Admission Requirements for Master's Degree and 2.1.5 Admission of Course Work beyond the Bachelor's Degree in the Graduate Calendar.)

McMaster Students may receive advanced standing for up to two courses (note that a maximum of towards a SEPT graduate program) with the approval of the Associate Dean of Graduate Studies.

Curriculum

The curriculum has three main components:

1. **Professional Development** courses that will enable M.Eng. Design graduates to deal with situations in the work environment, to lead teams, and to manage projects.
2. **Courses Relevant to the selected stream:** some courses are mandatory for a given stream others are elective.
3. **An M.Eng. project** that requires synthesis of knowledge from various disciplines.

Product Design Stream

Innovative and creative systems, solutions, and product designs are emphasized through design in a collaborative design studio environment. The interdisciplinary nature of the program enables its participants to work on a variety of design work, such as industrial machinery, consumer products, automotive, etc.

The following course requirements need to be fulfilled by the candidates:

Mandatory Courses

Candidates are required to take the following five half courses (15 units):

SEP 700 / M.Eng. Project in Engineering Design Part I
SEP 700 / M.Eng. Project in Engineering Design Part II
SEP 760 / Design Thinking
SEP 772 / Innovation Studio
SEP 773 / Leadership for Innovation
OR
SEP 6EL3 / Leading Innovation

All full-time students must register for the seminar series courses (attendance is mandatory), which are:

SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part I
(seminar series: full-time students only)
SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part II
(seminar series: full-time students only)

SEP 771 is a seminar series presented by guest speakers, invited by the School, of relevance to all M. Eng. programs at the School. All full-time students are required to take these courses. Course grades are either 'pass' or 'fail'. In order to pass the course, the student must attend a minimum of 80% of the seminars.

Electives

Candidates are required to take five half courses (15 units) which should be selected from graduate courses offered by departments within the Faculty of Engineering. Candidates are required to have their elective course selection approved by the Associate Director of Graduate Studies in SEPT.

Strongly recommended:

SEP 757 / Hardware Prototyping Tools and Methods
Or
SEP 758 / Prototyping Tools (Mobile Applications)
SEP 761 / Human-Centred Design

Other recommended electives include:

SEP 6CG3 / Fundamentals of computer graphics and animation development
SEP 6VE3 / Visual effects and animation production technology
SEP 714 / Workflow Management for Animated Prototypes
SEP 715 / Rendering techniques
SEP 791 / Augmented Reality, Virtual Reality and Mixed Reality
SEP 792 / GPU Intensive applications for real-time projects

Digital Reality Stream

Graduates from Digital Reality stream develop competencies required to work on MR/AR/VR applications in e.g. autonomous vehicles, games design, entertainment, architecture, medicine, etc.. All candidates will complete a project and an optional co-op with an organization which develops products in the digital reality space.

Mandatory Courses

The following four half courses (12 units) are required to be completed by the candidates

SEP 700 / M.Eng. Project in Engineering Design Part I
SEP 700 / M.Eng. Project in Engineering Design Part II
SEP 760 / Design Thinking
SEP 772 / Innovation Studio

All full-time students must register for the seminar series courses (attendance is mandatory), which are:

SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part I (seminar series; full-time students only)
SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part II (seminar series; full-time students only)

SEP 771 is a seminar series presented by guest speakers, invited by the School, of relevance to all M. Eng. programs at the School. All full-time students are required to take these courses. Course grades are either 'pass' or 'fail'. In order to pass the course, the student must attend a minimum of 80% of the seminars.

Electives

~~Five~~ Six courses (~~15~~ 18 units) from the following list must be completed by the candidates:

SEP 6CG3 / Fundamentals of computer graphics and animation development
SEP 6VE3 / Visual effects and animation production technology
SEP 714 / Workflow Management for Animated Prototypes
SEP 715 / Rendering techniques
SEP 791 / Augmented Reality, Virtual Reality and Mixed Reality
SEP 792 / GPU Intensive applications for real-time projects

~~An additional elective (3 units) must be taken with the approval of the Associate Director of Graduate Studies in SEPT, therefore 18 units must be completed in addition to .~~

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CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Dr. Vladimir Mahalec   Email: mahalec@mcmaster.ca   Date submitted: 18/01/2021

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

SGS/2013

McMaster University SCHOOL OF GRADUATE STUDIES

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

IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:
1. This form must be completed for **ALL** changes involving degree program requirements/procedures. **All** sections of this form **must** be completed. 2. An electronic version of this form (must be in MS WORD **not** PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca). 3. A representative from the department is **required to attend** the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.

DEPARTMENT	W Booth School of Engineering Practice and Technology
NAME OF PROGRAM and PLAN	Master of Engineering in Systems and Technology (MEST)
DEGREE	Master of Engineering in Systems and Technology (MEST)

NATURE OF RECOMMENDATION *(PLEASE CHECK APPROPRIATE BOX)* **Is this change a result of an IQAP review?** ☐ Yes ☒ No

CREATION OF NEW MILESTONE ☐

CHANGE IN ADMISSION REQUIREMENTS		CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS	
CHANGE IN THE DESCRIPTION OF A SECTION IN THE GRADUATE CALENDAR	X	**EXPLAIN:** Addition of Process Systems stream			
OTHER CHANGES	**EXPLAIN:**				

DESCRIBE THE <u>EXISTING</u> REQUIREMENT/PROCEDURE:

None of the current SEPT graduate programs deal with process industries.

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

1. Addition of Process Systems stream

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

Process Systems stream focuses on measurements, data analysis, control and optimization of the plants in process industries (chemical, petrochemical, refining, power, food, and similar). Digital Manufacturing stream in MEST focuses on discrete manufacturing. Process Systems stream will focus on continuous and batch plants which process gasses and liquids.

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

September 1 2021

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

No.

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

The Master of Engineering in Systems and Technology is a 24 month program for full time students with an accelerated path to complete the program in 12 months of study. Part time students will normally be expected to complete the program in 3 years, one term (40 months). The program attracts t highly motivated students seeking advanced training in area of cyber-physical systems. Students design their own program of studies by selecting (with approval of their academic advisor) courses of interest to

them in one of the following streams: (i) Automation and Smart Systems, (ii) Automotive, ~~and~~ (iii) Digital Manufacturing, and (iv) Process Systems. Application for admission to the program are made through the W Booth School of Engineering Practice and Technology. The program accepts full-time and part-time students.

In addition to the general requirements for entry into a graduate program in Engineering, students must hold a degree in Engineering, Technology, Sciences, or Software with at least a B average (equivalent to a McMaster 8.0/12 GPA) in the penultimate and final years.

Delivery of the program includes a strong emphasis on project-based experience within the Manufacturing Industry, which is obtained through an industry-based project during the coursework portion of the program. Requirements for these are outlined below. Due to the strong practical orientation of the project components of the program, successful completion requires that students have strong interpersonal and communication skills. Applicants will be required to complete an online interview.

Students completing the Program on a course-only basis will be required to complete 10 courses from the approved list of courses. Course selection must be done in consultation with the program lead.

Students completing the Program through course and project work will be required to complete eight courses from the approved list of courses, plus successful completion of the project. Course and project selection must be done in consultation with the program lead.

McMaster students may receive advanced standing for up to two courses (note that a maximum of two 600-level courses can count towards a SEPT graduate program) with the approval of the Associate Dean of Graduate Studies.

Project

Students wishing to pursue the project-based option must submit a project proposal for approval by both the faculty lead as well as the Associate Director of Graduate Studies in SEPT. If the project is not approved by either individual, students will be reverted to course based stream. Students are encouraged to develop their own ideas and find industrial sponsors. Projects are ideally undertaken at local companies but may be conducted at locations inside Canada or abroad with the Program Lead's approval and provided that none of the work on the project was done prior to admission into the program. Project groups or individuals will have an industry-based

supervisor (stakeholder) with whom the student team can discuss progress, arrange trials etc. Students will also have an academic supervisor who will normally have some expertise in the subject area. It is expected that the teams will meet with their supervisors on a regular basis to discuss their progress.

The project team will orally defend their final project report to an examination committee comprised of their academic supervisor and the second reader (faculty member).

Curriculum

Students enrolling in the program choose their courses in one of the following streams:

- Automation and Smart Systems,
- Automotive, and
- Digital Manufacturing
- Process Systems

Each stream has a set of core courses and a set of recommended elective courses. Students can take maximum of 2 half courses (one term courses) at 600 level.

Students wishing to take an elective course outside of the recommended electives need to obtain a written permission from their graduate advisor.

Students have to complete the minimum required number of core courses in order to complete the program. There are 2 pathways towards the degree:

- 8 courses (24 units) + project (6 units)
    - 2 required courses
    - 2 professional development courses
    - 3 to 4 core courses
    - 0 to 1 elective courses

    Students pursuing this option, in addition to taking 8 courses specified above, must register for the project courses:

    - SEP 799 / M.Eng. Project in Systems and Technology Part 1
    - SEP 799 / M.Eng. Project in Systems and Technology Part 2

- 10 courses (30 units)
    - 2 required courses

- 2 professional development courses
- 4 to 6 core courses
- 0 to 2 elective courses

All full-time students must register for the seminar series courses (attendance is mandatory), which are:

- SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part I (seminar series, full-time students only)
- SEP 771 / W Booth School of Engineering Practice and Technology Practitioner's Forum Part II (seminar series, full-time students only)

SEP 771 is a seminar series presented by guest speakers, invited by the School, of relevance to all M. Eng. programs at the School. All full-time students are required to take these courses. Course grades are either 'pass' or 'fail'. In order to pass the course, the student must attend a minimum of 80% of the seminars.

Students should note that not all courses are offered every year.

Required core courses for all streams:

- SEP 769 / Cyber Physical Systems
- SEP 772 / Innovation Studio (3 units)

Professional Development Courses

Professional Development courses, common to all streams in MEng S&T, are listed below:

- SEP 6TC3 / Technical Communications
- SEP 725 / Practical Project Management for Today's Business Environment
- SEP 773 / Leadership for Innovation
- SEP 760 / Design Thinking

Technical Courses- Process Systems Stream

Other Core Courses

- SEP 750   Model Predictive Control Design and Implementation
- SEP 751 / CHEM ENG 764   Process Design and Control for Operability
- SEP 752   Systems Modeling and Optimization
- SEP 767   Multivariate Statistical Methods for Big Data Analysis and

Process   Improvement

- SEP 718   Industrial Automation
- SEP 783   Sensors and Actuators
- SEP XXX   Distributed Computing for Process Control
- SEP 754   Process Design and Integration for Minimal Environmental Impact

Recommended elective courses are:

- SEP 730   Reliability and Risk Management
- CHEM ENG 773   Advanced Concepts of Polymer Extrusion
- CHEM ENG 740   Advanced PSE Tools and Methods

Students can take other elective courses with permission of their program lead.

CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Dr. Vladimir Mahalec   Email: mahalec@mcmaster.ca   Date submitted: March 4, 2021

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

SGS/2013

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To   :   Graduate Council

From   :   Christina Bryce
                 Assistant Graduate Secretary
_____

At its meeting on February 16th and via e-ballot on February 25th and March 25th the Faculty of Humanities Graduate Curriculum and Policy Committee approved the following graduate curriculum recommendations.

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

FOR APPROVAL OF GRADUATE COUNCIL:
   a. **Classics**
      - **Dual Degree Stream Proposal (M.A.)**

   b. **Communication Management**
      - **Change to Course Requirements and Calendar Copy**

   c. **Gender Studies and Feminist Research**
      - **Program Name Change**
      - **Calendar Copy Updates**

FOR INFORMATION OF GRADUATE COUNCIL:
   a. **Gender Studies and Feminist Research**
      - **New Courses**
         - 708 Creating and Embodying Theory
      - **New Cross-listed Courses**
         - 6G03 Language, Sex and Gender
         - 6RI3 Colonialism and Resistance in Representations of Indigenous Womanhood
         - 6Z03 Gender and The Textile Arts
      - **Course Description and Title Changes**

   d. **Classics**
      - **New Courses**
         - 716 Gender, Sexuality, and the Politics of Desire in Archaic and Classical Greece
         - 771 Archaeological Field Practicum
      - **Change in Course Title**
         - 752 Roman Comedy

- 754 Vergil
- 761 Roman Elegy
- **Course Cancellation**
  - 755 Horace
  - 760 Catullus

e. **Cognitive Science of Language**
- **New Course**
  - 6G03 Language, Sex and Gender

f. **History**
- **New Course**
  - 780 Historical Perspectives on Women and Biography

g. **Philosophy**
- **New Course**
  - 6T03 Topics in Philosophy

h. **English and Cultural Studies**
- **New Course**
  - Trans-Atlantic Indigeneity: Indigenous Literary Presence in Europe

i. **Communication Management**
- **Course Cancellations**
  - 716 Communications Law for Public Relations Advertising
  - 726 Strategic Brand Management
  - 734 Communication and Conflict Resolution Skills
  - 736 Conflict Resolution in Groups: Facilitation and Conflict Management
  - 737 Interpersonal Conflict Resolutions Skills
  - 738 Mediation: Theory and Practice
  - 739 New Technologies in Communications

- **Change to Course Title**
  - 741 Crisis Communications

SCHOOL OF GRADUATE STUDIES

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

IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:
1. This form must be completed for **ALL** changes involving degree program requirements/procedures. **All** sections of this form **must** be completed. 2. An electronic version of this form (must be in MS WORD **not** PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca). 3. A representative from the department is **required to attend** the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.

DEPARTMENT	Classics		
NAME OF PROGRAM and PLAN	Dual M.A. Degree stream between McMaster University and The University of Rome "La Sapienza"		
DEGREE	M.A.		
NATURE OF RECOMMENDATION *(PLEASE CHECK APPROPRIATE BOX)* **Is this change a result of an IQAP review? ☐ Yes ☒ No**			
CREATION OF NEW MILESTONE ☐			

CHANGE IN ADMISSION REQUIREMENTS	X	CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS	
CHANGE IN THE DESCRIPTION OF A <u>SECTION</u> IN THE GRADUATE CALENDAR	X	**EXPLAIN:** Admission: students must be accepted by both universities in order to matriculate in the program			
OTHER CHANGES	X	**EXPLAIN:** (under "Supervisory Committees" section of description) Students will have two co-supervisors, one from each institution.			

DESCRIBE THE <u>EXISTING</u> REQUIREMENT/PROCEDURE:

<u>Admission Requirements for the MA program:</u>

Applicants for the M.A. Program in Classics may be admitted as Regular Students if they are graduates with at least B+ standing of any Honours program taken at McMaster or other university, which includes:

1. At least 12 units of either Ancient Greek or Latin and at least 6 units of the other language with an average of at least B in each language.
2. At least 36 additional units of Classical Civilization, Greek, Latin, Ancient History, or other courses approved by the Department of Classics, at least 12 of these units to be in upper-level courses.

Graduates without sufficient specialization may be admitted with the requirement that they complete extra prerequisite courses with a grade of at least B+.

Candidates will not be allowed to take a graduate course in a language or area in which the Department feels they do not have sufficient background.

<u>Program Requirements:</u>

With the approval of the Department of Classics, candidates may take the degree either with or without thesis. A grade of at least B- is required in all courses.

Requirements for the M.A. degree with thesis are:

1. Ten half courses (one-term courses) offered by the Department, of which no more than four may be at the undergraduate level, and of which at least four, two in each year, must be graduate or undergraduate Latin or Greek (permission of the Graduate Advisor is required to take a course at undergraduate level). Students must pass at least one language class at the graduate level in each ancient language. Six courses are completed in the first year of study and four additional courses are taken in year two. Courses will be selected in consultation with the Graduate Advisor. A grade of at least B is required in all courses. Upon entry into the program all students will take diagnostic exams in Ancient Greek and Latin to determine appropriate language level placement.
2. A comprehension test in French or German or Italian; exemption from this test may be granted to candidates who have completed an equivalent test at this or other universities.
3. A satisfactory thesis of approximately 80 pages on an approved topic.
4. An oral examination to defend the thesis.

Requirements of the M.A. degree without thesis are:

1. Six half courses offered by the Department, of which no more than two may be at the undergraduate level, and of which at least two must be graduate or undergraduate Latin or Greek (permission of the Graduate Adviser is required to take a course at undergraduate level). Courses will be selected in consultation with the graduate advisor. Students entering with less than 24 units of Greek and Latin may require two years to complete the degree and so should anticipate taking the degree with thesis. Upon entry into the program all students will take diagnostic exams in Ancient Greek and Latin to determine appropriate language level placement.

2. A project consisting of a major research paper to be written during the summer, under the supervision of a faculty member;
3. comprehension test in French or German or Italian; exemption from this test may be granted to candidates who have completed an equivalent test at this or other universities.

MA Supervisory Committees

Students entering the program are instructed to think about possible thesis topics and to approach appropriate faculty members to discuss ideas in term 1. At the beginning of term 2, once students have been granted permission to write a thesis (as opposed to writing a project), assignments of supervisors and students are made with agreement on both sides, usually arranged with the aid of the graduate advisor. Throughout term 3, while the proposal is being researched and written, the student and supervisor decide on two appropriate committee members among the faculty; the student is responsible for asking those two faculty members to serve on the committee. A committee meeting is held before the proposal is submitted for circulation to the whole department to establish a time-table for completion. The two secondary committee members may be consulted throughout the writing of the thesis and may read drafts.

MA thesis or project

Students write either a thesis or project; the former results in a two-year MA, the latter in a one-year MA. The aim of both thesis and project is to address a specific issue or set of issues, a corpus of material, or set of problems and, through research and critical inquiry, produce a thoughtful piece of scholarship. The major difference is one of scale. A thesis is approximately 80-100 pages while a project is 50-60 pages. A thesis involves a proposal of 5-6 pages with bibliography, and, in the course of production, a series of chapter drafts. A project is less ambitious, and involves consultation and discussion with a supervisor, but no drafts; a single, final text is submitted to the department, with a transcript notation of 'pass' or 'fail'.

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

This proposal creates an M.A. stream within the Department of Classics at McMaster University in which students will undertake a dual degree with the Department of Classics at the University of Rome, "La Sapienza." The new M.A. stream is designed to complement the existing M.A. The new M.A. stream will adhere to extant requirements for the M.A. at McMaster University and The University of Rome, "La Sapienza"

The requirements for the M.A. in the Dept. of Classics at The University of Rome, "La Sapienza" are:

1) Capacity in Italian and at least one other E.U. language
2) Successful completion of 12 graduate courses

3) Successful defence of thesis written on a topic approved by the appropriate member of the faculty.

Students in the dual degree stream will adhere to McMaster policies regarding courses, and milestones (including regulations in the event that a student is unsuccessful in any of these components).

The dual degree M.A. stream is open to students working in any of the research areas supported by both Departments (philology, history, archaeology). Student applying from each institution will indicate their intent to be considered for the dual degree stream when applying for the M.A. The expected time for completion is two years, one of which will normally be spent at each institution.

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

This new program enriches McMaster's graduate offerings and provides the opportunity for students to work with faculty at and to utilize resources of the University of Rome, "La Sapienza."

PROVIDE IMPLEMENTATION DATE: *(Implementation date should be at the beginning of the academic year)* Sept. 2022

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

Students enrolled in the dual degree stream should expect to spend one year at each institution. Student will have two co-supervisors, one from each institution. Students enrolled are expected to complete <u>12 graduate courses and a M.A. thesis</u>. Accordingly, the dual degree is viable only as a M.A. Degree with thesis. The present McMaster M.A. degree requires 10 courses plus thesis; the count is increased here to meet the requirements for the extant M.A. degree at La Sapienza. Students may enroll in Classics 771, Archaeological Field Practicum, in the spring following each academic year. This will permit a student to maintain the rhythm of course at 10 across the two academic years. Upon successful completion, students will receive the M.A. degree from both universities. Students will pay tuition to their home institution, which is defined as the institution to which their application is made.

CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Spencer Pope   Email: spope@mcmaster.ca   Extension: 23378   Date submitted:

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

SCHOOL OF GRADUATE STUDIES

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

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DEPARTMENT	Communication Studies & Multimedia
NAME OF PROGRAM and PLAN	Communications Management, M.C.M.

DEGREE	MCM

NATURE OF RECOMMENDATION *(PLEASE CHECK APPROPRIATE BOX)*
Is this change a result of an IQAP review? ☐ Yes ☒ No

CREATION OF NEW MILESTONE ☐

CHANGE IN ADMISSION REQUIREMENTS		CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS	x

CHANGE IN THE DESCRIPTION OF A <u>SECTION</u> IN THE GRADUATE CALENDAR	x	**EXPLAIN:** Under the introductory paragraph of the MCM program, changed the word "credits" (3rd paragraph, second line) to "units" to be consistent with university terminology.

OTHER CHANGES	x	**EXPLAIN:** Under Program Requirements, Public Relations Core: - Change to 5 required courses; 15 units - Remove COMMGMT 714 – Strategic Public Relations Management - Add COMMGMT 741 – Crisis Communications and Issues Management - Add COMMGMT 744 - Data Science and Analytics for Communications Management

1

Under Program Requirements, Management Core:

- Change to 4 required courses; 12 units

Delete the following courses under "Electives" (per the attached course cancellation forms):

COMMGMT 716, 726, 734, 736, 737, 738, 739, 741

Add the following course from Program Requirements, Public Relations Core to Electives:

- COMMGMT 714 – Strategic Public Relations Management

DESCRIBE THE <u>EXISTING</u> REQUIREMENT/PROCEDURE:

Program Requirements:

- …student is required to complete 36 credits…

Existing requirement for Public Relations Core is 4 required courses; 12 credits.

Existing requirement for Management Core is 4 required courses; 12 credits.

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

Program Requirements:

- Changing the wording from credits to units to be consistent with university terminology

Public Relations Core:

- Adding COMMGMT 744 to required PR courses (moving from Electives)
- Adding COMMGMT 741 to required PR courses (moving from Electives)
- Deleting COMMGMT 714 from required PR courses (moving to Electives)
- These additions/deletions change the PR required courses to 5 courses; 15 units (add one course and change the wording from credits to units)

Management Core:

- Changing the wording to 4 courses; 12 units (change the wording from credits to units)

RATIONALE FOR THE RECOMMENDED CHANGE (How does the requirement fit into the department's

The proposed MCM curriculum changes were the result of consultations with students and alumni of the program as part of the IQAP program review in 2019-2020. Students and alumni believed that there was a strong need for a permanent crisis communications management course to be included in the core/required course offerings. In consultation with the MCM program committee, MCM faculty and students/alumni, it was felt that the current COMMGMT 714 — Strategic Public Relations Management course learning objectives could be achieved through inclusion in courses such as COMMGMT 711, 712 and 721. As such, we are recommending that COMMGMT 741 be moved from an elective course into the required course rotation and be renamed "Crisis Communications and Issues Management".

PROVIDE IMPLEMENTATION DATE: *(Implementation date should be at the beginning of the academic year)* October 2021
ARE THERE ANY OTHER DETAILS OF THE RECOMMENDED CHANGE THAT THE CURRICULUM AND POLICY COMMITTEE SHOULD BE AWARE OF? IF YES, EXPLAIN.
==**PROVIDE A DESCRIPTION OF THE RECOMMENDED CHANGE TO BE INCLUDED IN THE CALENDAR**== ==**(please include a tracked changes version of the calendar section affected if applicable):**== See attached
CONTACT INFORMATION FOR THE RECOMMENDED CHANGE: Name: Terry Flynn   Email: tflynn@mcmaster.ca Extension: 26977   Date submitted: March 2021

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

SGS/2013

ACADEMIC CALENDARS

McMaster University

School of Graduates Studies Calendar, 2020-2021

Communications Management, M.C.M.

This is Canada's first Master of Communications Management degree program, combining the best of advanced communication management and business administration courses, designed specifically for the busy, working professional. The program is designed to enable experienced mid-career, communications executives and professionals to acquire critical management and advanced strategic communication abilities.

Recognizing the specialized needs, interest areas and professional time limitations of today's communications practitioners, this program combines an intense and challenging educational experience with flexibility and an opportunity for students to set their own pace for acquiring this valuable degree.

This program is designed so that students may complete their master's degree in two years. To do so, students attend three on-site residencies per year (mid-October, mid- February, and mid-June) and register for six ~~credits~~ <mark>units</mark> (two courses) each term. During the week-long residencies, faculty members present an overview of their entire course and guidelines for specialized study. Upon return to their own communities, students complete readings and assignments at their own pace, meeting pre-determined deadlines with ongoing access to professors via a dedicated web-based student portal.

Admission Requirements

A maximum of 25 students will be admitted each year to this program. The admission decisions will be based on the following considerations:

- An Honours Bachelor's degree or equivalent professional degree from an accredited university with at least a B+ average and three years of full time professional experience in public relations or a related field, excluding time spent in internships.
- Two letters of recommendation, including one from the current employer. (If the applicant is an independent consultant or counselor, this letter can be from a current client or business partner).
- Your current C.V. (On 8.5 x 11 paper, independent of the other application components)
- Two copies of 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. Transcripts should indicate years of attendance, subjects each year, grades, and degree(s) awarded.
- A personal essay (typed; maximum 500 words) explaining interest and suitability for the program as well as potential for completing the program. (On 8.5 x 11 paper, independent of the other application components)
- A portfolio of samples of best work, particularly those which illustrate strategic management ability (e.g. public relations plans; marketing plans; crisis plans).
- A personal interview with the Director or Admissions Committee, either in person or via teleconference. The purpose of this interview is to ensure that the applicant is fully aware of all aspects of the program and the commitment needed for successful completion.

- Prospective applicants who do not meet the normal admission requirements should consult the Program Director to discuss how their work experience might be assessed to make up for insufficient standing in their undergraduate degree. Please refer to Section 2.1.1 of the Graduate Calendar on this matter.

Program Requirements

In order to graduate a student is required to complete 36 ~~credits~~ units covering these four elements:

Public Relations Core

(~~4~~ 5 required courses; ~~12~~ 15 ~~credits~~ units)

- COM MGMT 711 / Organizational Public Relations
- COM MGMT 712 / Public Relations Research
- ~~COM MGMT 714 / Strategic Public Relations Management~~
- COM MGMT 715 / Applied Ethics in Communications Management
- COM MGMT 741 / Crisis Communications and Issues Management
- COM MGMT 744 / Data Science and Analytics for Communications Management

Management Core

(4 required courses; 12 ~~credits~~ units)

- COM MGMT 721 / Strategic Management
- COM MGMT 722 / Financial Reporting and Management Accounting
- COM MGMT 723 / Financial Management
- COM MGMT 724 / Marketing Management

Electives

(~~three~~ two courses; ~~9~~ 6 ~~credits~~ units)

(During the second term, students will vote for a total of three electives, which will be offered in the third term subject to the availability of instructors; taught by faculty from either Syracuse or McMaster faculty).

- COM MGMT 714 / Strategic Public Relations Management
- ~~COM MGMT 716 / Communications Law for Public Relations Advertising~~
- COM MGMT 725 / Understanding Audiences for Strategic Communications
- ~~COM MGMT 726 / Strategic Brand Management~~
- COM MGMT 727 / Organizational Social Responsibility and Sustainability
- COM MGMT 728 / Investor Relations and Financial Communications
- COM MGMT 730 / Leadership, Persuasion and the Successful Executive
- COM MGMT 731 / Strategic Reputation Management
- COM MGMT 732 / Communications Frontiers

- COM MGMT 733 / Communication Theory
  - COM MGMT 734 / Communication and Conflict Resolution Skills
  - COM MGMT 735 / Negotiation: Theory and Practice
  - COM MGMT 736 / Conflict Resolution in Groups: Facilitation and Conflict Management
  - COM MGMT 737 / Interpersonal Conflict Resolutions Skills
  - COM MGMT 738 / Mediation: Theory and Practice
  - COM MGMT 739 / New Technologies in Communications
  - COM MGMT 740 / Professional Project
  - COM MGMT 741 / Crisis Communications
  - COM MGMT 742 / Digital and Social Media: Strategy and Management
  - COM MGMT 743 / Independent Study
  - COM MGMT 744 / Data Science and Analytics for Communications Management

Cumulative Experience

(3-unit Professional Capstone Project)

Students in this program complete a professional capstone project and will require three electives to complete their degree.

CONTACT

TERMS & CONDITIONS

PRIVACY POLICY

1280 Main Street West.   Hamilton, Ontario L8S 4L8.   . (905) 525-9140.

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

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DEPARTMENT	N/A		
NAME OF PROGRAM and PLAN	Gender Studies and Feminist Research M.A. and Ph.D. Diploma		
DEGREE	**M.A. in Gender Studies and Feminist Research; Gender Studies and Feminist Research Graduate Diploma (Ph.D.)**		
NATURE OF RECOMMENDATION (PLEASE CHECK APPROPRIATE BOX) **Is this change a result of an IQAP review?** ☒ Yes ☐ No			
CREATION OF NEW MILESTONE ☐			

CHANGE IN ADMISSION REQUIREMENTS		CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE		CHANGE IN COURSE REQUIREMENTS	
CHANGE IN THE DESCRIPTION OF A <u>SECTION</u> IN THE GRADUATE CALENDAR	X	**EXPLAIN:** IQAP implementation changes re: program name and its intersectional nature.			
OTHER CHANGES	X	**EXPLAIN:** Changes related to new courses, faculty, and program name change.			

DESCRIBE THE <u>EXISTING</u> REQUIREMENT/PROCEDURE:

Please see detailed submission

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

Please see detailed submission.

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

Please see detailed submission.

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

September 1, 2021

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

Please note that these changes are part our IQAP implementation plan and process, and have been previously discussed (some in more detail) with Dean Swett and ADRGS Horn; they also mirror some approved changes in our undergraudate curriculum this year.

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

Please see detailed submission.

CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Dr. Melinda Gough Email: gsfrdir@mcmaster.ca   Extension: Date submitted:

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

SGS/2013

Gender Studies and Feminist Research

Graduate Curriculum

Program Changes – Detailed Submission

February 2021

Summary of Program Changes

1. Program name change(s) (M.A. and Ph.D. Diploma)
2. Program description change (M.A. and Ph.D. Diploma)
3. M.A. Program notes changes
4. Ph.D. Diploma notes changes
5. Program course listing changes
6. Course description changes
7. Course additions

1. PROGRAM NAME CHANGE(S)

Current name(s):

Gender Studies and Feminist Research, MA

TO: Gender and Social Justice, MA

AND

Gender Studies and Feminist Research Graduate Diploma (Ph.D.)

TO: Gender and Social Justice Graduate Diploma (Ph.D.)

Rationale: Our last IQAP suggested that we work to illuminate the intersectional nature of our program, which focuses on gender, race, sexuality, and social justice. Our research, faculty, and courses integrate these important intersections. By signalling these connections to our communities and potential students, in our program name, we are making more explicit this commitment and focus.

2. PROGRAM DESCRIPTION CHANGE

On general "GSFR program" page in SGS Calendar:
https://academiccalendars.romcmaster.ca/preview_entity.php?catoid=42&ent_oid=5821&returnto=8772

Current description:

Candidates may be accepted for graduate work leading to an M.A. degree or a Graduate Diploma (Ph.D.) in Gender Studies and Feminist Research. Both programs are dedicated to furthering understandings of the importance of gender as a category of analysis in scholarly inquiry. Our work is interdisciplinary and draws together those who study women and gender issues from across campus and the larger community.

New description: (Replace entire description with this text)
The Gender and Social Justice Program at McMaster is a vibrant graduate program and learning community committed to the intersectional study of gender, sexuality, race, ethnicity, class, ability, age, and other categories of social difference, through feminist, anti-racist, anti-colonial, and queer social justice lenses. The program is interdisciplinary in our teaching, learning, research, and activism, and prioritizes community-engaged research and praxis. Our M.A. is a one-year degree; our PhD Diploma is open to qualified students admitted to doctoral programs at McMaster as an additional credential.

Rationale: Our last IQAP suggested that we work to illuminate the intersectional nature of our program, which focuses on gender, race, sexuality and social justice. Our current description does not adequately reflect the intersections of our work, even though our research, faculty, and courses integrate these important axes of analysis. By signalling these connections to our communities and potential students in the program description, we are making explicit the commitment and focus of the M.A. and Ph.D. diploma programs.

3. PROGRAM NOTES UPDATE
On MA Page: https://academiccalendars.romcmaster.ca/preview_program.php?catoid=42&poid=22453&returnto=8772

M.A. Degree

The one year Master's program leads to the degree of Master of Arts in Gender and Social Justice. ~~Studies and Fer~~ ~~Research~~.

Admission

Admission to the M.A. program requires an Honours bachelor's degree from a recognized university with at least average (equivalent to a McMaster 8.5 GPA out of 12) in upper year courses in the final year of full time study (or equivalent). The M.A. program is interdisciplinary and does not require a degree in a specific discipline. ~~Eligible s will indicate in a statement of interest what in their academic or experiential background prepares them for grad work in the program.~~ Eligible students should indicate in a statement of interest what in their academic or exper background prepares them for graduate level work in the field of Gender and Social Justice.

For a full description of application materials and procedures, see the Gender and Social Justice website (~~http://gsfr.mcmaster.ca~~) (https://gsj.humanities.mcmaster.ca)

Part Time Studies

Usually, M.A. students in Gender and Social Justice complete the program in one full calendar year, starting in Sep ~~Applications for part-time studies in the M.A. program will be considered.~~ Applicants for part-time studies shoul brief written explanation of the special circumstances that make it impracticable for them to complete the degree time basis.

The program requirements for the part-time Master's are the same as those for the full-time Master's, but may be completed over a maximum timeframe of 5 years, in accordance with McMaster's School of Graduate Studies poli Coursework may be completed in any sequence, but the <u>three core courses</u> must be completed prior to the indep research project.

Program Requirements

The M.A. program requirements include the following mix of course work, experiential learning, and independen

Three compulsory core courses: (12 units)
- GENDR ST 700 / ~~Current Debates in Feminist and Gender Theory~~ Theorizing Gender and Social Just
- GENDR ST 701 / Doing Anti-Oppressive Research ~~in Feminist and Gender Studies~~
- GENDR ST 707 / Knowledge in Action

Two additional elective courses: (6 units)

(from an approved list)

~~An independent~~ A major research project: ~~(6 units)~~

For the ~~independent~~ major research project, students may choose from ~~three~~ four possible options:

- a major research paper ~~project~~ (resulting in a 20-25 page publishable article ~~and oral presentation~~)
- a project in pedagogical research (resulting in the compilation of a reading list, preparation of course outl[...] written paper of ~~7-10~~ 10-15 pages)
- a knowledge in action project (based on work with a community organization and including the developm[...] document or tool for use by the group and a 10-15 page paper)
- an arts-based research/research creation project (in an approved format, and accompanied by a 10-15 pa[...]

~~Independent~~ MRP requirements include a short oral presentation sharing work in progress at a symposium/wor[...] May. All project proposals must be approved by the Program's M.A. Program ~~Graduate~~ Committee.

Rationale:

1. Program name change made universally.
2. Admissions language updated to better reflect existing admission practices for the program.
3. Changes of course titles made due to course changes (see course change forms).
4. To be consistent with other programs in the Faculty of Humanities, we are changing "Independent Research Project" to "Major Research Project".
5. Changes in the length of the written paper for the pedagogical research project for consistency with lengths required for the knowledge in action and arts-based research creation MRP options.
6. New arts-based research/research creation option added in response to student demand (we regularly have students who wish to undertake this work). We are able to offer appropriate supervision for this option with existing faculty expertise in the Department of Communication Studies and Media Arts, and the School of the Arts, and as we have been working with Dr. Zeffiro in the Sherman Centre for Digital Scholarship on digital humanities skills.
7. The MRP oral presentation requirement is not a new requirement, but was not previously listed clearly in the calendar.
8. Reference to the program's "M.A. Program Committee", to distinguish it from our "Ph.D. Diploma Committee" for clarify and transparency.

4. Ph.D. DIPLOMA DESCRIPTION CHANGES

From:
https://academiccalendars.romcmaster.ca/preview_program.php?catoid=42&poid=22516&returnto=8772

The Graduate Diploma (Ph.D.) in Gender and Social Justice ~~Studies and Feminist Research~~ aims to enhance the intellectual development and training of students already enrolled in doctoral programs by allowing them to combine disciplinary research with interdisciplinary scholarship from the fields of Gender and Social Justice ~~Feminist Studies~~.

The Graduate Diploma option is available to incoming and in-course Ph.D. students in McMaster's Departments of Anthropology, Communication New Media and Cultural Studies, English and Cultural Studies, French, History, Philosophy, Religious Studies, Social Work, and Sociology ~~English and Cultural Studies, History, Philosophy, Religious Studies, Social Work, Sociology, French and Communication, New Media and Cultural Studies.~~

Students completing the diploma will receive the notation ***Completed Graduate Diploma in Gender and Social Justice*** ~~***Studies and Feminist Research***~~ on their academic transcript in addition to the doctorate degree from their home graduate unit.

Admission

The primary requirement for admission to the Graduate Diploma program (beyond admission to the home department's stand-alone Ph.D. program) is distinction in a Master's degree with sufficient academic background and preparation (at the undergraduate and/or Master's level) in women's, gender, and/or feminist studies, critical race studies, sexuality studies, disability studies, and/or equity studies. The University requires that applicants' previous graduate work be equivalent to at least a McMaster B+ (77-79%), but higher standards may be set in practice by the diploma student's home department.

The Statement of Interest should clarify what elements in the applicant's academic background prepare them for graduate level work in the field of gender and social justice.

For a full description of application materials and procedures see the Gender and Social Justice ~~Studies and Feminist Research~~ website ~~http://gsfr.mcmaster.ca~~. https://gsj.humanities.mcmaster.ca

Part-time Studies

Doctoral students who wish to pursue a doctorate in their home department together with the ~~GSFR~~ Gender and Social Justice Graduate Diploma will normally be admitted full-time to both. In the occasional instance when the home department and the GSJ~~FR~~ program admits, or converts a student, to part-time studies, the requirements for the diploma program (as for the home department) will remain the same but will be spread out over a longer time period.

Program Requirements

Program requirements for the Graduate Diploma (Ph.D.), in addition to those of the student's home department, are:

- one compulsory core course (~~700 GENDR ST 700 / Current Debates in Feminist and Gender Theory~~ GENDR ST 700 Theorizing Gender and Social Justice) (3 units) (also required for Master's students)
- one additional elective course in gender and social justice ~~studies and feminist research~~ (3 units) (from an approved list). ~~This course is in addition to coursework required for your Ph.D. degree. Courses cannot be counted towards both the Ph.D. degree and the GSFR Ph.D. diploma.~~
- participation in the Program's Research Symposium, including

- o regular attendance at symposium events. Important Note: The symposium is a key way in which we attempt to create an intellectual community in a program in which students come from many different disciplines. ~~Therefore, students are expected to attend all symposia.~~ Students who anticipate missing more than one symposium event per year must contact the Director of the Program ~~and meet with the chair of the Graduate Program Committee~~ to discuss their particular circumstances.
  - o an oral presentation based on the doctoral student's own research~~, normally in the third or fourth year of study~~; and
- a doctoral thesis on a topic related to Gender ~~and/or Feminist Studies,~~ and Social Justice.

Students will normally complete the 6 units of diploma coursework during their second year. In order to ensure timely degree completion, diploma students will be encouraged to choose an elective course likely to directly enhance and move forward their thesis research.

Please note that the 6 units of Graduate Diploma coursework are in addition to coursework required for the Ph.D. from the home department. Courses cannot be counted towards both the Ph.D. degree and the ~~GSFR~~ GSJ Ph.D. diploma.

Diploma students will normally give their Research Symposium presentation during their third or fourth year.

Language Requirements

To be determined by individual home departments.

Thesis Evaluation Procedures

Students in the Graduate Diploma (Ph.D.) program must have their thesis topics approved by both the home department and the program in Gender and Social Justice ~~Studies and Feminist Research~~. The thesis must be on a topic related to the broad fields of Gender and Social Justice. ~~Studies and Feminist Research.~~ Approval is granted by the Gender and Social Justice program's PhD Diploma Committee and occurs in conjunction with the home department's regular schedule for doctoral thesis proposal submission and approval. Members of the Gender and Social Justice ~~Studies and Feminist Research~~ program may sit on diploma students' doctoral thesis supervisory committees, or serve as external examiners of doctoral theses. Such arrangements are at the discretion of the home department.

Diploma Changes Rationale:

1.Change Diploma name to harmonize with change in M.A. program name and overall unit's name.

2.Throughout, change references to the program name to reflect program name change.

3. Admissions description updated to reflect existing admission practices more clearly. Additionally: we are adding the intersectional wording here, in response to IQAP recommendations.

4. List of home departments for students in the Graduate Diploma updated (and alphabetized) for consistency with information already listed on the program website.

5.Change of course name for GENDRST 700 reflects program name change.

5.Program requirements: specifics regarding attendance at Research Symposium events edited to remove redundancy. Wording regarding the nature of the research presentation added to more accurately reflect practices in place over the past several years.

6.References to "Graduate Committee" have been changed to "Graduate Diploma Committee" to clarify that this committee is different than the M.A. Program Committee, for clarity and transparency. This mirrors the change made above in the M.A. section.

6. COURSE LIST CHANGES/UPDATES

On this page, in the SGS Calendar, "Gender Studies and Feminist Research Courses"

https://academiccalendars.romcmaster.ca/preview_program.php?catoid=42&poid=22549

Gender ~~Studies and Feminist Research~~ and Social Justice Courses

Please note not all courses are offered every year.

Courses

Core Courses

All M.A. students must take the following ~~half~~ courses:

- GENDR ST 700 / ~~Current Debates~~ Theorizing ~~Feminist and~~ Gender ~~Theory~~ and Social Justice
- GENDR ST 701 / Doing Anti-Oppressive Research ~~in Feminist and Gender Studies~~
- GENDR ST 707 / Knowledge in Action

Elective Courses

- GENDR ST 6G03 Language, Sex, and Gender
- GENDR ST 6RI3 Colonialism and Resistance in Representations of Indigenous Womanhood
- GENDR ST 6Z03 Gender and the Textile Arts
- GENDR ST 6QA3 / Queerness in the Archives: Lesbian and Gay Writing, Art and Activism in Canada, 1969-1989
- GENDR ST 703 / Topics in Gender and Social Justice ~~Studies and Feminist Research~~
- GENDR ST 704 / Independent Study in Gender and Social Justice ~~Studies and Feminist Research~~
- GENDR ST 705 / Disability, Subjectivity, and Visual Representation
- GENDR ST 706 / From There to Here: Refugee Women in the World and in Our Community
- GENDR ST 708 / Creating and Embodying Theory

Approved Electives from Outside Departments

These courses have been pre-approved to count toward the Gender and Social Justice electives requirements. Note: Not all of these courses will be offered every year and some require special permissions.

In some courses, seats have been reserved for GSJ students; in others, seats will be granted based on availability after students in their home department have registered. Please consult the GSJ program website for specific enrollment instructions.

- ANTHROP 706 Anthropologies of Quantification & Data
- ANTHROP/GLOBALST 786 Global Futures: Theory, Practice, and Possibility
- ANTHROP 788 Topics in Anthropological Approaches
- CMSTMM 714 Feminism, Technology and Science
- CMSTMM 720 Data Cultures
- CMSTMM 722 722 Beyoncé Studies: Creativity, Celebrity and Activism
- CLASSICS 716 Gender, Sexuality, and the Politics of Desire in Archaic and Ancient Greece
- ENGLISH/CULTRST 708 Selfie/Culture
- ENGLISH/CULTRST 757 Gender, Civility, and Courtliness in Early Modern Europe
- ENGLISH 758 / CULTR ST 758: Literature as Witness
- ENGLISH/CULTRST 781 Public Mourning in Canada: What Makes a Life Grievable?
- ENGLISH 785 / CULTR ST 785: Migratory Routes: Indian Diasporic Fiction and Film
- FRENCH 729 / Écrits de femmes québécoises et franco-canadiens contemporains
- HISTORY 766 Comparative Perspectives on Health and Medicine in the Colonial World
- HISTORY 776 History of Sexualities in the Western World, 1750 to the Present
- HISTORY 779 History of Indigenous Manifestos
- HISTORY 780 Historical Perspectives on Women and Biography
- LABRST 791 Contemporary Issues in Labour Studies
- LABRST 793 Advanced Labour Studies Theory

- LABRST 740 Labour Geography
- LABRST 780 Bodies at Work, Science, Law & Occupational Health
- PHILOS 764 Social and Political Philosophy
- PHILOS 759 Topics in Applied Ethics
- RELIGST 777 Topics in Philosophy and Jewish Thought
- RELIGST 781/ANTHROP 704 Introduction to the Anthropology of Religion
- RELIGST 789 Topics in Gender and Feminist Theory and Religious Studies
- SOCSCI 701 Critical Approaches to Community Based Research
- SOCWORK 721 Changing Communities: Tensions and Possibilities for Citizenship and Social Justice
- SOCIOL 758 Sociology of Race and Ethnicity
- SOCIOL 759 Sociology of Gender and Sexuality

Rationale:

1. Delete "half" -- In the course list, the "half-courses" denotation is incorrect: 2 of those courses are indeed half courses (one semester, three units), while the third, 707, is 6 units. Cleaning up an error.
2. Changing names of the core courses, due to IQAP study (see course change forms).
3. Add 6G03, 6IR3, 6Z03, 708 to the list: they are being added, due to IQAP study and faculty interest/expertise (see course addition forms).
4. List of approved electives from departments outside the program added to include information already listed on the program website and/or new courses that have been approved by the GSFR Acting Director and Executive, with permission of the relevant Departments. Having access to this information in the calendar will give prospective as well as current students a better idea regarding potential courses they can take, and save administrative staff from having to put through paperwork directing those courses to students' programs each term.

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7. COURSE DESCRIPTION CHANGES

From:
https://academiccalendars.romcmaster.ca/content.php?filter%5B27%5D=GENDR+ST&filter%5B29%5D=&filter%5Bcourse_type%5D=-1&filter%5Bkeyword%5D=&filter%5B32%5D=1&filter%5Bcpage%5D=1&cur_cat_oid=42&expand=&navoid=8729&search_database=Filter&filter%5Bexact_match%5D=1#acalog_template_course_filter

Please also see course change forms.

Gender ~~Studies~~ and Social Justice

GENDR ST 700 / ~~Current Debates in~~ ~~Feminist and Gender Theory~~ Theorizing Gender and Social Justice

3 unit(s)

An investigation of social justice ~~current feminist and gender~~ theorizing at the intersection of gender with race, class, sexuality, ability, and other categories of social difference. This course offers sustained attention to the intellectual skills of reading ~~feminist and gender~~ theory with an eye to its implications for equity-focused ~~It also considers implications of applying theory to feminist and related forms of~~ activism. Specific topics will vary depending on the instructor's area of expertise.

GENDR ST 701 / Doing Anti-Oppressive Research ~~in Feminist and Gender Studies~~

3 unit(s)

This seminar introduces students to ~~faculty researchers from across the McMaster campus and beyond to consider~~ exciting new scholarship that engages anti-oppressive frameworks from a variety of disciplinary perspectives. ~~As part of the course requirements,~~ Students will attend Gender and Social Justice ~~Studies and Feminist~~ Research Symposium events. Readings, assignments, and discussion will consider topics relating to research ethics, epistemologies, and methodologies, including decolonial approaches to knowledge creation and dissemination~~including questions of theoretical framing and socio-political praxis~~. Coursework will include assignments designed to help students prepare effective proposals for independent research.

GENDR ST 707 / Knowledge in Action

6 unit(s)

This seminar takes up local community outreach and participatory action research within the framework of Gender and Social Justice. ~~And Feminist Studies~~. Readings will theorize experiential education as well as the ethics of advocacy and activism. Student learning teams for the course will undertake collaborative experiential learning projects involving community organizations with social justice mandates ~~mandate linked to one or more of the program's four thematic research clusters and with~~ and with which the Gender ~~Studies~~ and Social Justice ~~Feminist Research p~~ program has ongoing experiential education arrangements.

Rationale:

• Harmonize new courses and descriptions in the list.

• Minor edits to course titles and descriptions to reflect course content and respond to IQAP recommendations that we better highlight the intersectional nature of that content.

Please see course change forms.

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8. COURSE ADDITIONS – Please see course addition forms.

GENDR ST 6G03 Language, Sex and Gender
3 unit(s)
This course investigates how patterns of language behaviour interact with social categories of gender and sexuality, and how speakers use language to express their gender and sexual identities.
Departmental permission required.
Antirequisite(s): LINGUIST 4G03
Departmental permission is required.

GENDR ST 6RI3 Colonialism and Resistance in Representations of Indigenous Womanhood
3 unit(s)
This course looks to representations of Indigenous womanhood in a range of contemporary and historical cultural productions for insights into how colonialism shapes all of our lives, in radically different ways.
Antirequisite(s): CSCT 4RI3, ENGLISH 4RI3, INDIG ST 4RI3
Departmental permission is required.

GENDR ST 6Z03 Gender and the Textile Arts
3 unit(s)
This seminar will critically examine issues related to changes in the art and technology of textile-making and ornamentation of various cultures at different time periods: visuality, materiality, function, power, wealth, usage, taste, distribution, and especially, gender.
Antirequisite(s): ARTHISTORY 4Z03
Departmental permission required. Offered on a rotational basis.

GENDR ST 708 Creating and Embodying Theory

3 unit(s)
This course focuses on a range of creative texts (such as film, painting, short stories, novels, and autobiography), looking to their prompts to engage with the pressing everyday issues of ongoingness and revitalization in the face of violence, loneliness, loss, disability, and racial and sexual/gender

discrimination. All of the primary texts will be accompanied by theoretical ones, but the impetus is to explore how the creative *invites* particular theoretical and embodied engagement.
Departmental permission is required.

To   :   Graduate Council

From :   Christina Bryce
             Assistant Graduate Secretary

_____

Via e-ballot on February 24th and March 30th the Faculty of Social Sciences Graduate Curriculum and Policy Committee approved the following recommendations.

Please note that these recommendations were approve by the Faculty of Social Sciences in April 2021.

For Approval of Graduate Council

    a. **Social Work**
          i. **Change to Course Requirements and Calendar Copy**

For Information of Graduate Council:

    a. **Anthropology**
          i. **Change to Course Title**
               1. 706 Anthropologies of Quantification and Data

    b. **Political Science**
          i. **Course Cancellations**
               1. 797 Readings in Comparative Public Policy
         ii. **Course Title Change**
               1. 730 Digital Technology and the Politics of the Information Age
        iii. **New Courses**
               1. 731 Laboratories of Democracy? Public Policy in Canada and other Federal Systems
               2. 778 Methodologies in Critical International Relations

McMaster University | **SCHOOL OF GRADUATE STUDIES**

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

<u>**IMPORTANT: PLEASE READ THE FOLLOWING NOTES BEFORE COMPLETING THIS FORM:**</u>
1. This form must be completed for <u>**ALL**</u> changes involving degree program requirements/procedures. <u>**All**</u> sections of this form <u>**must**</u> be completed.
2. An electronic version of this form (must be in MS WORD <u>**not**</u> PDF) should be emailed to the Assistant Secretary, School of Graduate Studies (cbryce@mcmaster.ca).
3. A representative from the department is <u>**required to attend**</u> the Faculty Curriculum and Policy Committee meeting during which this recommendation for change in graduate curriculum will be discussed.

DEPARTMENT	School of Social Work
NAME OF PROGRAM and PLAN	MSW Critical Analysis, Academic Plan: CSOCWRKMSW MSW Critical Leadership, Academic Plan: CRTLEADMSW Graduate Diploma in Critical Leadership in Social Services and Communities, Academic Plan: CRITLEADIP
DEGREE	**GDip & MSW**

NATURE OF RECOMMENDATION *(PLEASE CHECK APPROPRIATE BOX)*					
Is this change a result of an IQAP review? ☐ Yes ☒ No					
CREATION OF NEW MILESTONE ☐					
CHANGE IN ADMISSION REQUIREMENTS		**CHANGE IN COMPREHENSIVE EXAMINATION PROCEDURE**		**CHANGE IN COURSE REQUIREMENTS**	X
CHANGE IN THE DESCRIPTION OF A <u>SECTION</u> IN THE GRADUATE CALENDAR	x	**EXPLAIN:** Add to Calendar course requirements section Add to Calendar SocSci 701 as core course selection			
OTHER CHANGES		**EXPLAIN:**			

Current MSW Calendar Copy:

Critical Analysis of Social Work

A commitment to critical analysis in the service of social justice underpins this stream in the M.S.W. program. This degree focuses on the development of analytic skills with regard to social work practice and social policy. Students will build on existing knowledge to increase their ability to identify and analyze practice and policy theories and examine how they are utilized within a changing social, political, economic and global context.

Students will engage analyzing social problems and policies, critique existing practices, challenge established knowledge, research alternative approaches and contribute to the development of innovative policies and practices.

This MSW stream prepares students for advanced practice grounded in the critical analysis of social work - analysis understood as the crucial foundation of change processes aimed at fostering just practices and policies. Graduates exercise the critical conceptual abilities and research skills developed in the program in a wide range of agency and community settings, with an appreciation of the intersection of practice and policy at micro, meso and macro levels.

Candidates may be enrolled on a full- or part-time basis. Full-time students will complete the degreein twelve consecutive months of study, beginning in September. Part-time students will normally be expected to complete the degree in about three years.

Critical Leadership in Social Services and Communities

This stream in the M.S.W. program is grounded in a recognition of the contemporary conditions of social service and community work, and in expansive and critical definitions of leadership. The degree aims to foster progressive leadership in the community and social service sectors.

Students will engage foundational conceptual frameworks underpinning critical practice and policy in social work. They will build on existing knowledge and work experience to identify and analyze how contemporary social, political and economic forces are (re)shaping social services and communities, and particularly how these forces shape leadership and leadership practices, including practices of research and evaluation.

This M.S.W. degree prepares students for formal and informal leadership roles in social and community services. Students will consider a range of theories of critical leadership

and of social and organizational change, and demonstrate a capacity to apply coursework knowledge and concepts in practice by undertaking a leadership practicum in a social or community service setting.

Candidates may be enrolled on a full-time or part-time basis. Full-time students will complete the degree in twelve consecutive months of study, beginning in September. Part-time students will normally complete the degree in three years.

Admission

For Students applying to the Critical Analysis of Social Work stream:
Admission requirements:

- B.S.W. degree from an accredited social work program
- half course in introductory social research methods;
- B+ standing in senior level social work courses.

For Students applying to the **Critical Leadership in Social Services and Communities stream**:

Admission requirements:

- B.S.W. degree from an accredited social work program
- half course in introductory social research methods
- B+ standing in senior level social work courses
- experience working in social services or communities / community services

Curriculum

For Students in the Critical Analysis of Social Work stream, the curriculum has three main components:

1. Required courses that provide the content and methodological skills necessary for policy and practice analysis;
2. Elective courses that enable students to deepen their knowledgeof practice and policy in the inner workings of social agencies and in social change efforts at the community level;
3. Thesis designed to integrate analytical and evaluative skills and to contribute to the critical analysis of policy and practice.

Required Courses

Two half courses:

- SOC WORK 700 / Social Work Practice: Critical Frameworks
- SOC WORK 701 / Social Policy: Critical Frameworks

  One full course (over all three terms):

- SOC WORK 739 / Critical Approaches to Social Work Knowledge & Research Methods

Two elective courses

At least one of:

- SOC WORK 721 / Changing Communities: Tensions and Possibility for Citizenship and Social Justice
- SOC WORK 740 / Changing Social Service Organizations: Implications for Workers and Service Users

One additional elective

One elective course offered by Social Work OR by another department or academic unit (provided that permission has been obtained from those departments or academic units, and School of Social Work's Graduate Chair).

Thesis

Each student is required to complete a thesis. It offers students an opportunity to build upon their particular experiences and interests and upon perspectives and materials introduced in courses, and to demonstrate their capacities for critical analysis. The thesis (12,500 words) is supervised by a faculty member and orally examined by a committee including the supervisor and two other faculty members.

Curriculum

For Students in Critical Leadership in Social Services and Communities, the curriculum has two main components:

- Required courses that provide foundational knowledge of the critical analysis of social work practice, and the critical analysis of policy; and required courses that provide analyses and conceptual frameworks about changing conditions in social services and communities, and about leadership
- A practicum of 450 hours that involves a practical experience of leadership. An MSW-prepared social worker will provide field instruction and mentorship.

Required Courses

- SOC WORK 700 / Social Work Practice: Critical Frameworks
- SOC WORK 701 / Social Policy: Critical Frameworks
- SOC WORK 741 / Changing Social Services, Changing Communities: Focus on Leadership
- SOC WORK 742 / Organizational and Social Change: Theories, Practices and Possibilities for Leadership
- SOC WORK 743 / Critical Approaches to Evidence and Evaluation in Social Services & Communities
- SOC WORK 750 / Leadership Seminar
- SOC WORK 751 / Leadership Practicum

And one of:

- SOC WORK 740 / Changing Social Service Organizations: Implications for Workers and Service Users
- SOC WORK 721 / Changing Communities: Tensions and Possibility for Citizenship and Social Justice

Practicum

Each student will have a leadership practicum (SOC WORK 751) in a social service agency or community organization. Students will take on a leadership project - for example, lead the development of a new policy, move a service initiative forward, or explore and provide recommendations about how a community need might be better met. Field instruction will be provided by a social worker who holds an MSW degree. Students' experiences, observations and actions in the field setting will become topics for reflection in the accompanying seminar (SOC WORK 750). The practicum will be 450 hours long (this number of hours is required for accreditation by the Canadian Association for Social Work Education).

It is important to get a theoretical grounding in leadership before the practicum begins. Students may negotiate their placement and begin orienting to the organization but the placement activities (observation and project work) should not formally begin until the student has successfully completed SW741.

Additional Information

or the Critical Leadership in Social Services and Communities graduate diplomaStudents entering either stream of the MSW program who have successfully completed the Community-Engaged Research and Evaluation or the Critical Leadership in Social Services and Communities graduate diploma may receive 3 units of advanced credit if approved by the School of Social Work's Graduate Chair.

Current GDip Critical Leadership Calendar Copy:

Graduate Diploma in Critical Leadership in Social Services and Communities

This Graduate Diploma is designed for people who have an MSW or an MA and who are cu providing formal or informal leadership in social services or communities. It offers critical and conceptual frameworks about changing conditions in social services and communities particular attention to evidence-based practice, audit and accountability); a range of mode progressive and transformative leadership, and opportunities to reflect on leadership pra respected local leaders; opportunities to share knowledge with people who are engaged in work of leading and sustaining progressive public services.

Candidates are enrolled on a full-time or part-time basis. Full-time students will complete program in twelve consecutive months of study, beginning in September. Part-time studer normally be expected to complete the diploma in two years.

Admission

To be eligible for admission to the Critical Leadership in Social Services and Communities program, applicants must have:

- A completed M.S.W. or M.A. degree with an average of at least an A- on whole degree. In ex circumstances, applicants with a B.S.W. or B.A. and an A- average on senior level undergrad courses may apply if they have extensive leadership experience;
- Community or social service leadership experience.

Curriculum

Students take one of two courses that consider specific contexts of social work practice: inst
contexts (SOC WORK 740) or community contexts (SOC WORK 721). They take two co
focused explicitly on aspects of leadership: a theory and praxis course, and a course focused
leadership specifically in the contexts of contemporary social services and communities. The
course considers critical approaches to evidence and evaluation, a key feature of contempor
leadership.

Students will be required to complete four (4) half courses; three required and one elective
include:

Three Required Courses:

- SOC WORK 741 / Changing Social Services, Changing Communities: Focus on
  Leadership
- SOC WORK 742 / Organizational and Social Change: Theories, Practices and Po
  for Leadership
- SOC WORK 743 / Critical Approaches to Evidence and Evaluation in Social Servi
  Communities

One Elective Course:

One of:

- SOC WORK 740 / Changing Social Service Organizations: Implications for Worke
  Service Users
- SOC WORK 721 / Changing Communities: Tensions and Possibility for Citizenshi
  Social Justice

Additional Comments

1. Students entering the Critical Leadership in Social Services and Communities diploma progra
   have already successfully completed SOC WORK 721 in their previous master's degree, mu
   either SOC WORK 740 or an elective (in the School of Social Work or in another departmen
   approved by the School of Social Work's Graduate Chair.
2. Students entering the Critical Leadership in Social Services and Communities graduate diplo
   program who have already successfully completed Soc Work 743 may receive advanced cred
   approved by the School of Social Work's Graduate Chair.

Recommended MSW Calendar Copy:

Critical Analysis of Social Work

A commitment to critical analysis in the service of social justice underpins this stream in the M.S.W. program. This degree focuses on the development of analytic skills with regard to social work practice and social policy. Students will build on existing knowledge to increase their ability to identify and analyze practice and policy theories and examine how they are utilized within a changing social, political, economic and global context.

Students will engage analyzing social problems and policies, critique existing practices, challenge established knowledge, research alternative approaches and contribute to the development of innovative policies and practices.

This MSW stream prepares students for advanced practice grounded in the critical analysis of social work - analysis understood as the crucial foundation of change processes aimed at fostering just practices and policies. Graduates exercise the critical conceptual abilities and research skills developed in the program in a wide range of agency and community settings, with an appreciation of the intersection of practice and policy at micro, meso and macro levels.

Candidates may be enrolled on a full- or part-time basis. Full-time students will complete the degreein twelve consecutive months of study, beginning in September. Part-time students will normally be expected to complete the degree in about three years.

Critical Leadership in Social Services and Communities

This stream in the M.S.W. program is grounded in a recognition of the contemporary conditions of social service and community work, and in expansive and critical definitions of leadership. The degree aims to foster progressive leadership in the community and social service sectors.

Students will engage foundational conceptual frameworks underpinning critical practice and policy in social work. They will build on existing knowledge and work experience to identify and analyze how contemporary social, political and economic forces are (re)shaping social services and communities, and particularly how these forces shape leadership and leadership practices, including practices of research and evaluation.

This M.S.W. degree prepares students for formal and informal leadership roles in social and community services. Students will consider a range of theories of critical leadership

and of social and organizational change, and demonstrate a capacity to apply coursework knowledge and concepts in practice by undertaking a leadership practicum in a social or community service setting.

Candidates may be enrolled on a full-time or part-time basis. Full-time students will complete the degree in twelve consecutive months of study, beginning in September. Part-time students will normally complete the degree in three years.

Admission

For Students applying to the Critical Analysis of Social Work stream:
Admission requirements:

- B.S.W. degree from an accredited social work program
- half course in introductory social research methods;
- B+ standing in senior level social work courses.

For Students applying to the **Critical Leadership in Social Services and Communities stream**:

Admission requirements:

- B.S.W. degree from an accredited social work program
- half course in introductory social research methods
- B+ standing in senior level social work courses
- experience working in social services or communities / community services

Curriculum

For Students in the Critical Analysis of Social Work stream, the curriculum has three main components:

- Required courses that provide the content and methodological skills necessary for policy and practice analysis;
- Elective courses that enable students to deepen their knowledgeof practice and policy in the inner workings of social agencies and in social change efforts at the community level;
- Thesis designed to integrate analytical and evaluative skills and to contribute to the critical analysis of policy and practice.

Required Courses

Two half courses:

- SOC WORK 700 / Social Work Practice: Critical Frameworks
- SOC WORK 701 / Social Policy: Critical Frameworks

  One full course (over all three terms):

- SOC WORK 739 / Critical Approaches to Social Work Knowledge & Research Methods

Two elective courses

At least one of:

- SOC WORK 721 / Changing Communities: Tensions and Possibility for Citizenship and Social Justice
- SOC WORK 740 / Changing Social Service Organizations: Implications for Workers and Service Users
- SocSci 701/ Critical Approaches to Community-Based Research

One additional elective

One elective course offered by Social Work OR by another department or academic unit (provided that permission has been obtained from those departments or academic units, and School of Social Work's Graduate Chair).

Thesis

Each student is required to complete a thesis. It offers students an opportunity to build upon their particular experiences and interests and upon perspectives and materials introduced in courses, and to demonstrate their capacities for critical analysis. The thesis (12,500 words) is supervised by a faculty member and orally examined by a committee including the supervisor and two other faculty members.

Curriculum

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For Students in Critical Leadership in Social Services and Communities, the curriculum has two main components:

- Required courses that provide foundational knowledge of the critical analysis of social work practice, and the critical analysis of policy; and required courses that provide analyses and conceptual frameworks about changing conditions in social services and communities, and about leadership
- A practicum of 450 hours that involves a practical experience of leadership. An MSW-prepared social worker will provide field instruction and mentorship.

Required Courses

- SOC WORK 700 / Social Work Practice: Critical Frameworks
- SOC WORK 701 / Social Policy: Critical Frameworks
- SOC WORK 741 / Changing Social Services, Changing Communities: Focus on Leadership
- SOC WORK 742 / Organizational and Social Change: Theories, Practices and Possibilities for Leadership
- SOC WORK 743 / Critical Approaches to Evidence and Evaluation in Social Services & Communities
- SOC WORK 750 / Leadership Seminar
- SOC WORK 751 / Leadership Practicum

And one of:

- SOC WORK 740 / Changing Social Service Organizations: Implications for Workers and Service Users
- SOC WORK 721 / Changing Communities: Tensions and Possibility for Citizenship and Social Justice
- SocSci 701/ Critical Approaches to Community-Based Research, OR

  - a graduate level course linked with the student's program of study offered by Social Work OR by another department or academic unit (provided that permission has been obtained from those departments or academic units, and School of Social Work's Graduate Chair).

Practicum

Each student will have a leadership practicum (SOC WORK 751) in a social service agency or community organization. Students will take on a leadership project - for example, lead the development of a new policy, move a service initiative forward, or

explore and provide recommendations about how a community need might be better met. Field instruction will be provided by a social worker who holds an MSW degree. Students' experiences, observations and actions in the field setting will become topics for reflection in the accompanying seminar (SOC WORK 750). The practicum will be 450 hours long (this number of hours is required for accreditation by the Canadian Association for Social Work Education).

It is important to get a theoretical grounding in leadership before the practicum begins. Students may negotiate their placement and begin orientating to the organization but the placement activities (observation and project work) should not formally begin until the student has successfully completed SW741.

Additional Information

~~or the Critical Leadership in Social Services and Communities graduate diploma.~~ Students entering either stream of the MSW program who have successfully completed the Community-Engaged Research and Evaluation or the Critical Leadership in Social Services and Communities graduate diploma may receive 3 units of advanced credit if approved by the School of Social Work's Graduate Chair.

Recommended GDip Critical Leadership Calendar Copy:

Graduate Diploma in Critical Leadership in Social Services and Communities

This Graduate Diploma is designed for people who have an MSW or an MA and who are cu[...] providing formal or informal leadership in social services or communities. It offers critical[...] and conceptual frameworks about changing conditions in social services and communities[...] particular attention to evidence-based practice, audit and accountability); a range of mode[...] progressive and transformative leadership, and opportunities to reflect on leadership prac[...] respected local leaders; opportunities to share knowledge with people who are engaged in[...] work of leading and sustaining progressive public services.

Candidates are enrolled on a full-time or part-time basis. Full-time students will complete[...] program in twelve consecutive months of study, beginning in September. Part-time studen[...] normally be expected to complete the diploma in two years.

Admission

To be eligible for admission to the Critical Leadership in Social Services and Communities diploma program, applicants must have:

- A completed M.S.W. or M.A. degree with an average of at least an A- on whole degree. In exceptional circumstances, applicants with a B.S.W. or B.A. and an A- average on senior level undergraduate courses may apply if they have extensive leadership experience;
- Community or social service leadership experience.

Curriculum

Students take one of two courses that consider specific contexts of social work practice: institutional contexts (SOC WORK 740) or community contexts (SOC WORK 721). They take two courses focused explicitly on aspects of leadership: a theory and praxis course, and a course focused on leadership specifically in the contexts of contemporary social services and communities. Their final course considers critical approaches to evidence and evaluation, a key feature of contemporary leadership.

Students will be required to complete four (4) half courses; three required and one elective which include:

Three Required Courses:

- SOC WORK 741 / Changing Social Services, Changing Communities: Focus on Leadership
- SOC WORK 742 / Organizational and Social Change: Theories, Practices and Possibilities for Leadership
- SOC WORK 743 / Critical Approaches to Evidence and Evaluation in Social Services & Communities

One Elective Course:

One of:

- SOC WORK 740 / Changing Social Service Organizations: Implications for Workers and Service Users
- SOC WORK 721 / Changing Communities: Tensions and Possibility for Citizenship and Social Justice
- SocSci 701/ Critical Approaches to Community-Based Research OR

  - a graduate level course linked with the student's program of study offered by Social Work OR by another department or academic unit (provided that permission has been obtained from those departments or academic units, and School of Social Work's Graduate Chair).

Additional Comments

- Students entering the Critical Leadership in Social Services and Communities diploma program who have already successfully completed SOC WORK 721 in their previous master's degree, must take either SOC WORK 740 or an elective (in the School of Social Work or in another department) approved by the School of Social Work's Graduate Chair.
- Students entering the Critical Leadership in Social Services and Communities graduate diploma program who have already successfully completed Soc Work 743 may receive advanced credit if approved by the School of Social Work's Graduate Chair.

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

We recognize that the skills associated with leading community based/engaged research is an area that many social workers and community workers want to develop. This course provides MSW CA students with the opportunity to develop and implement these skills as it relates to social work practice and research, and provides MSW CL and Gdip CL with an opportunity to develop and implement these skills in their course of study including their research project and practicum.

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

September 1, 2021

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

N/A

CONTACT INFORMATION FOR THE RECOMMENDED CHANGE:

Name: Saara Greene Email: greenes@mcmaster.ca Extension: 23782   Date submitted: March 30, 2021

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

Sessional Dates ~~2020~~2021-~~2021~~2022

DEADLINE DATES FOR GRADUATE PROGRAMS	FALL TERM	WINTER TERM	SUMMER TERM
	September - December ~~2020~~2021 September - October, ~~2020~~2021 (1HF) November - December ~~2020~~2021 (2HF)	January - April, ~~2021~~2022 January - February, ~~2021~~2022 (1HF) March - April, ~~2021~~2022(2HF)	May - August, ~~2020~~2022 May - June ~~2021~~2022 (1HF) July-August ~~2021~~2022 (2HF)
On-Time Registration	Tuesday, July ~~7~~6 to Tuesday, August ~~4~~3	Thursday, November ~~26~~25 to Thursday, December ~~10~~9	Thursday, ~~April 1~~March 31st to Thursday, April ~~15~~14
Class Start Dates *	Classes begin on or after September ~~2~~1, 2021~~0~~- check with program for details	Classes begin on or after January ~~4~~3, ~~2021~~2022- check with program for details	Class start dates vary - check with program for details
Late Registration (late fees apply)	August ~~5~~4 to September ~~9~~8	December ~~11~~10 to January ~~4~~3	April ~~16~~15 to April ~~30~~29
Final Dates to Add Courses:			
Multi-term Courses	September ~~25~~24		
Single-term or 1HF Courses	September ~~25~~24	January ~~22~~21	May ~~14~~13
2HF Course	October ~~23~~22	February ~~26~~25	June ~~25~~24
Final Dates to Drop Courses: **			
Multi-term Courses	February ~~24~~25	July ~~26~~29	
Single-term Courses	November ~~13~~12	March ~~19~~18	July ~~16~~15
1HF Courses	October ~~7~~8	February ~~10~~11	June ~~9~~10
2HF Courses	December ~~9~~10	April ~~7~~8	August 5
Final Dates to Submit Grades:			
Multi-term Courses		May ~~3~~2	September ~~3~~2
Single-term Courses	January ~~4~~6	May ~~3~~2	September ~~3~~2
1HF Courses	October ~~23~~22	February ~~26~~25	September 2
2HF Courses	January ~~4~~6	May ~~3~~2	September ~~3~~2

Final Date to Submit Results of Incomplete (INC) Grades for Previous Term with Permission of Associate Dean	March ~~5~~4	July ~~9~~8	November ~~5~~4

Thesis

	FALL 2021	SPRING 2022	FALL 2022
Final Date to Initiate Thesis Defence in Mosaic***	June 25	January 21 (*Health Sci.*) February 2 (*All others*)	June 24
Final Date to Submit Master's Theses to Departments (Prior to Defense)	August 6	March 4	August 5
Final Date to File Theses with Graduate Studies and Complete Degree Requirements****			
- Faculty of Health Sciences	September 27	April 1	September 26
- All Other Faculties	September 27	April 22	September 26

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

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

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

*The precise dates of commencement of courses are determined by the program; students are urged to contact their program for details. SGS maintains the 13-week graduate instruction period; however, if a course does not fall into the traditional 13-week period, the graduate program will inform students of important dates and deadlines in the course syllabus. There is no official fall break or reading week for graduate students (except MBA). Students should check with their program and their course instructor(s) as to whether classes will be held during these periods. Please see sections 1.3 (Responsibilities of Graduate Students to the University) and 2.5.8(Vacations) of the calendar for more information.

**All courses on a student's record after these dates will require a grade. Exceptions require submission of an In-Program Request Form. Graduate programs may establish earlier deadlines for completion of course work and may prescribe penalties for late completion of work and for failure to complete work, provided that these penalties are announced at the time the instructor makes known to the class the methods by which student performance shall be evaluated.

***Please note the following black-out periods in which standard Ph.D. defences cannot be scheduled: December 14th to January 8th inclusive and August 16th to 20th inclusive. Please refer to the SGS website for information about the timeline for scheduling your defence with these dates in mind.

****A final thesis is the corrected, approved version of the thesis which is uploaded to MacSphere following the Final Oral Examination. Note there is no grace period at the end of December or April for final thesis submission and completion of degree requirements.

Convocation Dates

Please consult the link below for convocation dates:

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

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 or diplomas:

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

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

Master of Biomedical Discovery and Commercialization

Master of Business Administration

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

Master of Communications Management

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

Master of Engineering Design

Master of Engineering Entrepreneurship and Innovation

Master of Engineering and Public Policy

Master of Finance

Master of Financial Math

Master of Health Management

Master of Public Health

Master of Public Policy

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

Master of Social Work

Master of Technology Entrepreneurship and Innovation

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

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

1.2 Responsibilities to Graduate Students

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

1.2.1 The School of Graduate Studies

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

The Vice-Provost & Dean of Graduate Studies provides leadership in maintaining and improving the standards of graduate scholarship in the University. These responsibilities include: being the School'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. These responsibilities 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.

1.2.2 The Faculty

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

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

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

1.2.3 The Department (or Graduate Program)

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

- ensuring that every student has, at all times, a faculty advisor or supervisor or a properly constituted supervisory committee;
- to approve the membership and work of the supervisory committee, to report this membership to the Faculty Committee on Graduate Admissions and Study, and when necessary, to make changes in the membership ;
- 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 (such regulations are subject to approval by the Faculty Committee on Graduate Curriculum and Policy);;
- 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.
- to attest to the Faculty Committee on Graduate Admissions and Study, where applicable, that all departmental and University requirements for the degree have been satisfied; and
- to recommend any departmental representatives to the examination committee for the final oral defence of the thesis;

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 or Supervisor

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

- to assist in planning and to approve the student's program of courses and research;
- to approve the thesis proposal;
- to decide within departmental regulations, on the timing of the comprehensive examination (for doctoral students) and, where applicable, of the language and other examinations;
- to maintain knowledge of the student's research activities and progress;
- to give advice on research;
- to provide the student with regular appraisals of progress or lack of it;
- to perform such other duties as may be required by the department;
- to report on the above matters annually, in writing, on the approved form to the department, which in turn will report to the Faculty Graduate Committee on Admissions and Study where applicable;
- to initiate appropriate action if the student's progress is unsatisfactory, including any recommendation that the student withdraw, for approval by the department and the Faculty committee on Graduate Admissions and Study;
- to decide when the student is to write the thesis and to give advice during this process;

- to act as internal examiners for the thesis; and
- to act as members of the examination committee for the final oral defence when so appointed

1.2.5 The Faculty Advisor

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

1.2.6 The Graduate Course Instructor

As noted in the *Policy on Graduate Course Outlines*, the course instructor is responsible for providing each student with evaluations of the student's academic performance at various stages during the course, and, whenever possible, a list of due dates. Although instructors are required to provide written course outlines at the beginning of courses, the *Policy on Graduate Course Outlines* also provides instructors with the opportunity to alter a course'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.

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

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

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

1.3 Responsibilities of Graduate Students to the University

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

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

- Maintaining current contact information with the University, including address, phone numbers, and emergency contact information.

- Using the University provided e-mail address or maintaining 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.

- Accepting that forwarded e-mails may be lost and that e-mail is considered received if sent to the student's @mcmaster.ca account.

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

Courses

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

Research-Based Programs

With regard to research and study, students are responsible for maintaining contact and meeting regularly with the faculty advisor, thesis/project supervisor or supervisory committee, for observing departmental guidelines, and for meeting the deadlines of the department and the School of Graduate Studies. If there is a problem with supervision, it is the student's responsibility to contact the Department Chair or Graduate Advisor. It is also the expectation that students will seek clarification when necessary on questions regarding elements of academic and research progress. The provisions for changing a supervisor are outlined in Section 2.7.

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

Since enrollment permits access to libraries and certain other academic facilities (including off-campus facilities), it also implies a commitment on the part of each graduate student to use such facilities in accordance with applicable rules, including all safety practices, guidelines and policies. Inappropriate behaviour that is deemed to be in violation of such practices and/or policies may lead to denial of access to the facility. If such a denial of access to facilities means that a student can no longer fulfill their academic obligations, the student will be required to withdraw involuntarily from their academic program. (see also Section 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 2.5.8. Any student who is away from campus for longer than one week, which is not part of the student's vacation entitlement, requires their supervisor's approval in writing. If this period of time exceeds two weeks, the approval of the department chair is also required. In accordance with government regulations (see Section 2.5.2) students who will be away from campus for more than four weeks require not only permission from the Department but also that of the appropriate Associate Dean of Graduate Studies

and must submit a Request to be Full Time Off Campus. Note that this permission is needed for conferences, field work or studies elsewhere in the world, in order to allow the University to comply with the regulation requiring that a written explanation for such absences be lodged in the Graduate School office. Students may arrange, through the Department and the Associate Dean of Graduate Studies, to be "full-time off-campus" for periods of up to a year. Students will also be required to complete the Risk Management Manual (RMM) 801 forms and gain approval through EOHSS. In cases of unauthorized absence the student will be deemed to have withdrawn voluntarily from graduate study and will have to petition for readmission. No guarantee of readmission or of renewal of financial arrangements can be made. An exception to this policy would be programs described in the calendar as delivering their curriculum either partially or fully in on-line formats. Please refer to details in individual program descriptions.

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

General Regulations of the Graduate School

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.

<u>Collection of Personal Information</u>

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.

<u>Retention of Documents</u>

All documentation submitted in support of an application for admission becomes the property of the University and is not returnable.

If an applicant is not accepted, or fails to enroll following acceptance, their documentation will be destroyed at the end of the admissions cycle.

2.1 Admission Requirements

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

and Studies Committee for each Faculty or Graduate Associate Dean acting on the committee's behalf. The admission decision is not subject to appeal.

2.1.1 Admission Requirements for Master's Degree

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

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

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

2.1.2 Admission Requirements for Ph.D. Degree

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

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, primarily by academics from a prior learning institution unless otherwise stated by the program.
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 degree;
   c. admission to Ph.D. studies but with concurrent completion of all requirements for a Master's degree within one term from the date of reclassification;
   d. refusal of admission to Ph.D. studies.

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

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

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

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

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

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

2.1.3 Transfer to Ph.D.

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

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

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

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

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

Partner university arrangements may vary and students must investigate what is required to fulfill that institution's cotutelle requirements. For information on how to apply, please view the Cotutelle Policy (embed https://secretariat.mcmaster.ca/app/uploads/2019/06/Cotutelle-Policy.pdf) and the information available on the School of Graduate Studies website (embed https://gs.mcmaster.ca/current-students/visiting-and-exchange-students/cotutelle/).

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

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

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

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.

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

2.1.7 Admission Requirements for Graduate Diploma Programs

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

2.1.8 Admission Requirements for Post-Degree Students

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

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

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

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

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

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

2.1.9 Non-Credit Participants in Graduate Courses

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

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

2.1.10 Visiting Students

Visiting Students are individuals who are currently registered in a graduate degree program in another university, and who have made arrangements through both their home university and a graduate program at McMaster to spend some time at McMaster as part of their degree program at the home university. While they are visiting students, they will not be enrolled in a degree program at McMaster. They are not part of any official exchange agreement including Ontario Visiting Graduate Student (OVGS) arrangement, although there may be an agreement between the McMaster program and their home institution. For more information on Ontario Visiting Graduate Student arrangements please consult Section 6.10. McMaster currently allows out-of-province and international students to visit in one of three ways: to take course work in a specific program; to conduct research in a specific lab; or to participate in an internship with a specific program or faculty member. In any case, students will be enrolled as full-time students for a maximum of one year. Visiting students do not normally pay tuition unless taking courses but in all cases, are expected to pay supplementary fees (see Section 5.1, Fees for Graduate Students). Acceptance is on the recommendation of the department or program at McMaster. For every term that the student is here in residence they must register in SGS 302. Visiting students are not permitted to audit courses.

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

2.1.11 Incoming Exchange Students

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

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

2.1.12 English Language Requirements

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

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

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

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

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

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

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

For a list of acceptable English-language tests, please visit the School of Graduate Studies website.

2.2 Application for Admission

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

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

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

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

Application Fee

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

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

a. One official transcript of academic work completed to date, sent directly from the issuing institution. If the final transcript does not show that a completed degree has been conferred, an official copy of your diploma is also required.
b. Two confidential letters of recommendation from instructors most familiar with your academic work or appropriate relevant experience. 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 2.1.12 - *English Language Requirements*
d. Statement of interest in pursuing graduate studies.

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

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

2.3 Transfer/Advance Credit and Determination of Course Equivalency

Transfer Credit

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

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

Advance Credit

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

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

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

2.4 Acceptance

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

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

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

2.5 Enrollment

2.5.1 Continuity of Registration

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

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

A student who ~~doesn't~~does not enroll for each term of the academic year will be withdrawn in good standing unless there is a scheduled break in the program.

Please note some programs may include a scheduled break, if this is the case it will be listed in the program-specific section of the calendar.

See also section 3.6 or 4.5 for more information on program progression.

2.5.2 Definition of Full- and Part-time Status

Full-Time Status

A full-time graduate student must:

   a. have been admitted to a graduate program as a full-time student;
   b. be pursuing their studies as a full-time occupation;
   c. identify themself as a full-time graduate student;
   d. be designated by the university as a full-time graduate student;
   e. for most programs (and all research-based programs) be geographically available and visit the campus regularly. Other programs may have different requirements and may be conducted fully on-line. Without forfeiting full-time status, a graduate student, while still under supervision, may be away from the university

(e.g. visiting libraries, doing field work, attending a graduate course at another institution, etc.) provided that, if any such period exceeds four weeks in any one term, written evidence shall be available in the Graduate Studies Office to the effect that this request has the approval of the department or program Chair and Graduate Associate Dean. For information on full time off campus please consult section 2.5.6.

f. be considered to be a full-time graduate student by their supervisor or equivalent (designated by the program office)

g. ~~u~~Understand that students who change status from full to part-time, do not receive any more time to complete their program and will continue to be charged tuition fees at the full-time level.

h. Understand that students who change part to full time will have their term count re-set on a ratio of 2:1

All active graduate students other than full-time graduate students as defined above are part-time graduate students. See also section 3.6 or 4.6 for more information on program progression.

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

In accordance with the definitions in section 2.5.2, McMaster requires students to register annually, and to confirm their status as a full-time graduate student. Only full-time graduate students are eligible for scholarship support.

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

"Full-time graduate students are expected to pursue their graduate degree on a full-time basis and make satisfactory progress toward timely completion of all program requirements. It is not possible, or desirable, for the university to monitor and enforce the employment activities of its graduate students outside the university. However, it is both possible and desirable for the university to ensure that it does not itself create a structural situation that jeopardizes the ability of the graduate student to make full-time progress towards the completion of graduate program requirements. Accordingly, OCGS is committed to the principle that full-time graduate students are employed no more than an average of 10 hours per week on campus."

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

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

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

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

2.5.4 Employment Regulations

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

2.5.5 Enrolment - International Students on Study Permits

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

If ~~a~~ their ~~S~~study ~~P~~permit expires prior to program completion, students must apply ~~to~~ to extend their study permit ~~CIC for renewal~~ and submit a copy of the renewed Study Permit to the School of Graduate Studies (check the 'valid until' date on the ~~Study~~ study ~~P~~permit). Make sure to submit your study permit extension application ~~you apply~~ at least 30 days before your current permit expires. If your ~~S~~study ~~P~~permit expires and you have submitted your extension application before it expired, and ~~but~~ ~~made an application to renew it~~, but have not ~~had~~ received a decision yet, you can continue studying under the conditions of your expired study permit until you receive a decision. Proof of application for ~~renewal~~ extension ~~must be submitted to the School of Graduate Studies to permit continuing enrolment.~~may be required by various offices at McMaster depending on your status.

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

For the most up-to-date information about being an international student in Canada, visit the IRCC website. It is the student's responsibility to abide by all necessary government processes.

For information on status change to permanent resident status during the course of your study, please see section 5.1.4.

2.5.6 Full Time Off-Campus

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

2.5.7 Leaves of Absence

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

1. Medical or disability leave;

2. Parenting leave;

3. Compassionate or personal leave; or,

4. No course available leave

<u>General Notes for Leaves of Absence</u>

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

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

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

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

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

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

Alternatively, the student may request to withdraw (<u>Change of Status Form</u>~~Withdrawal at the Request of the Student~~). Should the student opt to withdraw, they may be eligible for reinstatement at the University's discretion upon reapplication.

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

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

1. **Medical or disability leave:**

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

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

2. Parenting leave:

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

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

While students are not covered by the Employment Standards Act, McMaster grants students a Parenting Leave for a maximum of four consecutive terms. A student electing not to take the maximum amount of time available for Parenting Leave will not have the option of taking any unused portion at a later date. Students returning from a leave should consult with their programs and should note that course availability may be affected by the timing of their return.

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

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

3. Compassionate or personal leave:

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

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

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

4. No course available leave:

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

2.5.8 Vacations

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

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

2.5.9 Appeals and Petitions for Special Consideration

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

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

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

2.6 Academic Progression and Graduate Curriculum

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

2.6.1 Definition of 'Good Academic Standing'

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

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

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

2.6.2 Milestones

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

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

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

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

2.6.3 Course Levels and Unit Values

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

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

2.6.4 Course Requirement and Designations

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

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

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

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

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

Extra Courses (Extra Course)

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

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

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

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

2.6.5 Courses Taken at Another Institution

It is possible for a graduate student registered at McMaster University to take a graduate course at another university for credit towards a McMaster degree. In all cases, the student must make a request of the Associate Dean prior to enrolling in the course to determine if it is possible to use the course towards their degree requirements. For courses at another Ontario University, a student must complete the Ontario Visiting Graduate Student (OVGS) form (see Section 6.10). For courses not covered by the OVGS agreement, a student must submit a ~~Petition for Special Consideration~~ Request for In-Program Course Adjustments form and provide documentation on the course (eg. course syllabus), an official transcript as well as confirmation by the department that the course is suitable for degree requirements. If the course is passed per the grading scheme of McMaster University (B- or higher) then a grade of "T" will show on the student's transcript. Students may not count a course taken at another institution while on a leave of absence or workterm placement (coop) or otherwise not have paid tuition at McMaster during the period that the course was schedules and/or taken.

2.6.6. Audited Courses

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

2.6.7 Required Supplementary Courses for All Graduate Students

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

2.6.8 Placeholder Courses

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

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

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

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

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

Students who are here as a visiting or exchange student will need to enroll in SGS 302.

2.6.9 Course Grading and Weighted Average Calculation

Instructors have the discretion of marking individual components of a course with either a letter or numerical grading scheme but final course grades taken at McMaster can only be reported as either Pass/Fail or letter grades. When numerical grading is used in a course, the final course average with decimal place of 0.5 or greater should be rounded

up before conversion to a letter grade. The minimum passing grade for a graduate student in any course taken is a B-, including undergraduate courses or courses taken off campus.

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

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

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

MBA and Master of Finance Grading Scale:

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

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

Course Grade	Grade Points		Course Units		
A-	10	x	6	=	60
B	8	x	6	=	48
B+	9	x	3	=	27
F	0	x	3	=	0

	Total	18		135
To calculate Average: 135 ÷ 18 =7.5				

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

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

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

2.6.10 Incomplete Grades

For scheduled courses where the end date is known and complies to sessional dates, a grade must be supplied by the end of the course. Under exceptional circumstances a course instructor may approve an extension for the student for the completion of work in a course but must assign an Incomplete grade (INC) at the end of the course. ~~The instructor will submit an incomplete grade with a 'Lapse To' grade, which is the grade that will default to at the date to clear incomplete grades.~~ ~~If~~ Normally this extension is in the range of a few weeks. A student who receives an incomplete grade must complete the work as soon as possible, and in any case early enough to allow the instructor to report the grade by the sessional deadline noted as 'Final Date to Submit Results of Incomplete Grades'. If the INC grade is not cleared by the deadline, ~~the~~ an F grade will be entered.. ~~lapsed grade will automatically be recorded.~~ Milestone are not generally scheduled according to sessional dates and therefore, there is no allowance for an INC grade for such learning activities.

2.6.11 Failing a Course or Milestone

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

2.6.12 Repeated Courses

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

2.6.13. Withdrawal

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

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

2.6.14 Outgoing Exchange Students

Students on exchange programs may take graduate courses that with approved transfer credit may count towards completion of course curriculum. Any credit for these courses will depend on the student achieving a passing grade based on the Graduate Grading Scale outlined in Section 2.6.1.Students are required to maintain enrolment at McMaster by registering for SGS 702.

Regulations for Degree Progression

3.1 General Regulations on Supervision

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

The supervisory committee will consist of at least three members. Two, including the supervisor, must be from within the department/program. A third member, whose scholarly interests include the area of the student's main interest, may be from outside the department/program. One member may be appointed from outside the University with the permission of the Vice-Provost & Dean of Graduate Studies. For more information please consult the policy mentioned below on Supervision of Graduate Work. The department/program should ensure that the members of a supervisory committee are sufficiently competent and experienced to serve at the required level. In identifying a supervisory

committee, the department/program should consider the following, among other things: the balance of the committee by rank and experience; publications and other demonstrations of competence in scholarship or research on the part of the supervisor. Supervisory committees for Ph.D. candidates shall be reviewed annually by the department/program. Supervisory committee members must continue their participation on the student's committee, even while on sabbatical, unless otherwise replaced by the Department Chair or delegate.

From time to time it may be appropriate for non-McMaster faculty, e.g., industry experts to be considered for roles on the supervisory committee. In cases such as this, approval is required by the Vice-Provost and Dean of Graduate Studies or delegate. Please refer to the policy at the following link (embed https://secretariat.mcmaster.ca/app/uploads/SPS-A11-Supervision-of-Graduate-Work.pdf).

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

The frequency of meeting is left to the discretion of the supervisory committee based on the progress of the student and provided that a minimum of one meeting occurs per year. A shorter duration between meetings is normal for students who are showing difficulty in their academic progression and each meeting should involve an assessment of progress. Occasionally, an additional meeting that is not assessed may be requested by the supervisory committee, student, department, of Associate Dean when there is a major gap in supervision, for example upon returning from a leave of absence or if there is a change in supervisor.

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

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

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

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

3.2 Theses

This section pertains to the electronic thesis requirement for both research Master's and Doctoral studies. The oral examination is not described in this section and can be found in the corresponding sections for the specific degree, Master's (Sec. 3) and Doctoral (Sec. 4). Electronic theses (e-theses) are text-based PDF files and may contain non-text

elements such as embedded videos and sounds. Normally, a printed paper version is no longer acceptable for degree completion.

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

3.2.1 Preparing a Thesis

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

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

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

All copyrighted materials added into the thesis (text, figures, images, tables, etc.) exceeding 'fair dealing' requires written permission from the owner prior to thesis submission. This includes any publications by the student who has transferred ownership rights to a publisher. Students should consult with campus resources for assistance. See Sec. 6 for regulations regarding ownership.

3.2.2. Response Time for Theses Review

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

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

3.2.3 Submitting a Thesis for Defence

A completed draft of a thesis approved by the student's supervisor and/or supervisory committee for the defence may not be altered till after the defence; see Supervision under Sec. 3 and Sec. 4 for acceptable time limits on review and editing by supervisors.

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

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

3.2.4 Revision of a Thesis after Defence

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

3.2.5 Submitting a Final and Approved Thesis

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

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

~~Having filed the e-thesis to MacSphere, the student may choose to purchase printed and bound copies for their personal use or for presentation. The cost of printing and binding will be borne by the student.~~

Tuition fees continue to be assessed until all degree requirements are met, including the successful submission of the final approved thesis to MacSphere. Note that there is no grace period at the end of December or April for final thesis submission and completion of degree requirements.

3.3 Regulations for Master's Degrees

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

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

Graduate Studies by the department or program, along with any change to the payroll authorization. Graduate Studies approval is not required.

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

3.3.1 Program Requirements

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

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

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

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

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

3.3.2 Program Progression

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

For students in a regular program, the permissible time for completion of a Master's degree program is limited to three years from their initial registration in the program. For those students admitted to a part-time Master's program, and who complete all degree requirements while registered part-time, the permissible time is limited to five years from their initial registration. Please note, students who start as full-time and move to part-time continue to pay full-time tuition and time to completion does not get extended. Students who start as part-time and move to full-time will then pay full-time tuition and the time to completion will be based on full-time status. The terms students spent as a part-time student will be adjusted for purposes of time to completion. For more information please see Section 2.5.2 Definition of Full/Part-Time Status.

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

Overtime more than:
6 terms for a full time Masters
12 terms for a full time Ph.D.

Out of Time more than:
9 terms for a full-time Masters

> **Commented [BC3]:** SB request on March 8th

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

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

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

At the time of readmission to defend, the student will be required to pay a fee (equivalent to one term's tuition at the current part-time level 5 rate - see Section 5.1) to compensate for the costs of the defence and subsequent processing of the thesis. If a student needs more than one term to complete they should be readmitted to program and pay regular fees until all the program requirements are complete. All requests for readmission should be directed to the program for approval by the supervisor and program lead. Once approval is received, students are directed to pay the readmission fee and the department should submit the request for approval by the Associate Dean. The readmission decision is not subject to appeal.

A student enrolled in a course work or project program may also be readmitted if this is deemed acceptable by the student's department. However, course work and project program students who have been withdrawn in good standing should be aware that they may be required to retake courses in which the content is judged by their department to have changed significantly since first completion and/or may be required to take additional courses that are necessary to fulfill current program requirements.

See section 2.5.1 for information on continuity of registration.

3.3.3 Thesis Defence

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

After a discussion of the examination, the student will be dismissed for the deliberation period and the Chair will ask for a vote on the success or failure of the defence. If the examiners approve the defence, the Chair will ask the examiners to complete the Examination Report by initialing appropriately. The student will be invited back in into the exam to the examination room for congratulations by the committeea decision. In the event that minor revisions are required to the thesis, the Chair of the examination committee is responsible for ensuring that (1) the candidate is advised of the revisions, (2) the candidate receives and understands the 'Final Thesis Submission form' to be used by

the Supervisor to confirm that the revisions have been made, and (3) the supervisor is also aware of the form. The Chair will complete and sign the Examination Report and return it to the School of Graduate Studies.

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

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

3.3.4 Project

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

3.4 Regulations for the Doctor of Philosophy Degrees

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

3.4.1 Program Requirements

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

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

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

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

3.4.2 Program Progression

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

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

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

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

Please note, students who choose to move from part-time to full-time or from full-time to part-time will be governed by the time to completion and fees associated with the degree to which they were admitted. For more information please see Section 2.5.2 - Definition of Full/Part-Time Status.

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

At the time of readmission to defend, the student will be required to pay a fee (equivalent to one term's tuition at the current part-time level 5 rate - see section 5.1) to compensate for the costs of the defense and subsequent processing of the thesis. If a student needs more than one term to complete they should be readmitted to program and pay regular fees until all the program requirements are complete. All requests for readmission should be directed to the program for approval by the supervisor and program lead. Once approval is received, students are directed to pay the readmission fee and the department should submit the request for approval by the Associate Dean. The readmission decision is not subject to appeal.

3.4.3 Comprehensive Knowledge

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

A Comprehensive Examination or alternative assessment of comprehensive knowledge must include a provision for second opportunity for assessment should the student fail the first attempt. This second assessment is given in place of any "re-read" of a comprehensive evaluation, which is explicitly excluded from the Student Appeal Procedures. The

second opportunity will normally occur between one to six months after the student was notified that they had failed the original assessment. A failure at the second assessment will require the student to withdraw from the program.

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

3.4.4 Thesis Defence

An oral defence conducted by an examining committee is a mandatory requirement for degree completion. Normally the thesis will be distributed to committee members and examiners in an electronic format (see Section 2.8 - Theses). The oral defence will not be arranged until a majority of the supervisory committee has approved the thesis for defence and an agreed date of defense has been received.

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

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

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

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

Scheduling and Conducting the Oral Examination (Oral Defence)
 .There are blackout periods over the course of an academic year that affect defences coordiantedcoordinated by SGS. *Please refer to the SGS sessional dates to prepare your defence appropriately*.

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

The external examiner must provide a report to the School of Graduate Studies with a written assessment of the thesis at least one week before the scheduled defence. . If the report is not received in time, candidates will be given the option to postpone their defence. Whether the assessment is positive or negative, the School of Graduate Studies will send the report of the external examiner to the supervisory committee. The committee must provide a copy of the

report to the student. Should the assessment be negative, the appropriate Associate Dean will communicate with the supervisory committee and student to discuss the outcome of the review. This is normally followed by a supervisory committee meeting to discuss the situation and proposed plan going forward if the external examiner indicates that the thesis is not acceptable for defence. The supervisory committee and candidate (in consultation with the Associate Dean) may wish to revise and resubmit the dissertation and proceed proceed to the defence with the participation of the same external examiner. A second possible outcome of the review is that the associate dean will recommend to the Vice-Provost & Dean of Graduate Studies that the thesis (in its original format or revised) be reviewed by a different external examiner. A candidate may revise and resubmit the thesis only once. In all cases, despite a negative assessment, a candidate has the right to proceed to a defence.

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

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

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

If the examiners approve the defense, the Chair will ask the examiners to complete the Examination Report by initialing appropriately. The student will be invited back ~~to the examination room~~ for congratulations by the committee. In the event that minor revisions are required to the thesis, the Chair of the examination committee is responsible for ensuring that (1) the candidate is advised of the revisions, if any, (2) the candidate receives and understands the 'Final Thesis Submission form' to be used by the Supervisor to confirm that the revisions have been made, and (3) the supervisor is also aware of the form. The Chair will complete and sign the Examination Report and return it to the School of Graduate Studies.

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

After a successful defense, the candidate must make the revision suggested by the examining committee to the satisfaction of the Supervisor and then submit an electronic copy to the School of Graduate Studies via MacSphere (see Section 2.8.3 - Publication of Electronic Theses at McMaster University). Students are normally expected to submit their final thesis within four weeks of a successful defence.

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

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

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Financial Matters

4.1 Fees for Graduate Students

(The Board of Governors reserves the right to amend fees after the printing of this statement.) These regulations apply to tuition and mandatory supplemental fees. They cover the various charges which would be incurred for reasons of late payment or late registration. The ~~2020~~2021-~~2021~~2022 fees schedule is in effect for a period of September 1, ~~2020~~2021 to August 31, ~~2021~~2022 and applies to all graduate students whether registered in regular or part-time degree programs. Please consult the ~~Accounts and Cashiers~~Student Affairs website (https://registrar.mcmaster.ca/tuition-fees/#tab-10) for the official graduate fees.

Notes:

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

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

Program Fees assessed on a ~~term by term~~term-by-term basis

Most students will pay regular tuition fees and these fees are assessed on a ~~term by term~~term-by-term basis. 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 (full-time) fees. In most cases part-time fees will allow registration in up to 3 half courses per academic year, in programs where fees are costed on a ~~term by term~~term-by-term basis. Students registering in more than 3 half courses will be assessed full-time fees. In situations where a student in a part-time program completes the degree or withdraws from the university, fees for the academic session will be assessed by the number of terms or number of half courses (whichever is the greater). Term count is adjusted if student changes status from part-time to full-time at a ratio of 2:1.

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

Program Fees assessed on a course basis

Students enrolled in programs with course costed tuition will be assessed tuition fees for each course that they take. The limit of 3 half courses per year does not affect their status.

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 tuition fees.

A fee is charged for each course taken on the basis of Section 2.1.8 by persons who are not registered graduate students. The tuition fee for certain courses may be higher.

Leave of Absence

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

Readmission

Students who have "withdrawn in good standing due to time limit" do not pay fees until readmission. Readmission will only take place at the start of a term for students being readmitted to program. Students readmitted to defend will be readmitted at the point that they are ready to defend. See Section 5.1.5 (Readmission Tuition Charges).

Mid-Year Admissions

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

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

4.1.1 Payment of Fees

 In order to register a student must pay ~~full~~ tuition and all additional fees ~~for the full year.~~by the deadline. Details for payment methods and due dates can be found on the ~~Students Accounts and Cashiers~~ Student Affairs (https://registrar.mcmaster.ca/payment-methods/)website.

4.1.2 Non-payment of Fees or Charges

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

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

4.1.3 Discounted Fees - Ph.D. Students

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

4.1.4 Change in Residency

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

4.1.5 Readmission Tuition Charges

Students who do not register and pay tuition fees for any academic session are deemed to have withdrawn. These students and those who have been withdrawn in good standing due to time limit are required to apply for readmission. Master's or Ph.D. students withdrawn in good standing who are being readmitted to defend their thesis pay fees at the "Readmission to Defend" rate and are not eligible for a refund.

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

4.1.6 Refund of Tuition Fees

A student, who completes the degree requirements, withdraws from the program, or takes a leave of absence prior to the end of the academic year will be entitled to a refund, based on the method of payment per section 5.1.1. The refund is based on the schedule set out by Student Accounts and Cashiering (http://www.mcmaster.ca/bms/student/)r. (Note: a refund does not apply to students who are readmitted to defend.) Mandatory supplemental fees are not refundable.

4.2 Financial Assistance

4.2.1 Financial Support for Graduate Students

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

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

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

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

4.2.1.1 Minimum Academic Requirement for Financial Support

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

4.2.1.2 Duration of Financial Support

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

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

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

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

4.2.1.3 Minimum Level of Financial Support for Doctoral Students

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

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

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

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

4.2.2 Financial Payments to Graduate Students

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

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

income only. Net earnings will be deposited bi-weekly, directly into a Canadian Bank account. A statement of your earnings is available online after each pay. The direct deposit method of payment is mandatory.

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

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

Additional University Regulations Affecting Graduate Students

5.1 Academic and Research Integrity

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

Academic Work

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

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

Academic Dishonesty

Definition

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

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

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

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

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

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

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

<u>Research Integrity</u>

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

5.2 Code of Conduct

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

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

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

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

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

5.3 Appeal Procedures

The University has a responsibility to provide fair and equitable procedures for the lodging and hearing of student complaints arising out of University regulations, policies and actions that affect students directly. The procedures described in the 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 communication informally with their instructors, the Chair of their Supervisory Committee (or the Department Graduate Advisor where no committee exists), the Department Chair and/or the Associate Dean of Graduate Studies, the University Ombuds, or the appropriate administrative officer *before* seeking a review under the formal procedures. Experience has shown that many complaints can be resolved satisfactorily through informal communication. Students are requested to speak with the University Secretary regarding a complaint before submitting an application.

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

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

The Student Appeal Procedures may be found at:

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

5.4 Ownership of Student Work

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

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

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

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

    a.   The original physical document becomes the property of the University. This applies particularly to examination answer scripts, and may also be applied to term papers and other course work.

b.   Except for examination scripts, the University receives a royalty-free, non-exclusive licence to make copies of the work for academic purposes within the University, and to circulate the work as part of the University library collection.

5.4.2 Theses and Master's Project Reports

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

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

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

5.4.3 Computer Programs

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

a.   Where a student develops such software at the direct request of a supervisor, and under supervision, it is assumed that there is joint ownership of the intellectual property rights. In such cases, it is recommended that the individuals involved co-author a working paper documenting the software, rather than including it as an appendix to a thesis or report. Prior agreement between the student and supervisor that this is to be the case would be helpful, but is not mandatory.

b.   Where a student develops such software on their own, as for example for an independent project in a course, copyright remains with the student. As a condition of using University computing facilities, the student is required to grant the University a royalty-free licence to use the software. This includes the right of the University to distribute copies of the software to McMaster faculty, staff, and students for the University's administration education and research activities. This licence does not include the right to use the software for commercial purposes or to distribute the software to non-McMaster people.

5.4.4 Research Data

As with computer software, the University recognizes that research is conducted and data are acquired in two different fashions. When the data are acquired as part of a joint or collaborative effort, such as one relying on the equipment within a laboratory, they are not solely the property of the student, although some of the data may ultimately appear in tables or appendices in a completed thesis. As a general rule, such data are the joint property of the student and the

research supervisor, either of whom has the right to make them available to other individuals as well. Both student and supervisor are responsible for insuring that proper acknowledgement of the contributions of the student, supervisor, and other members of the research team is made when the data are released in any form. Students are responsible for ensuring that there is adequate documentation of their research work and findings and that their records meet granting agency, program and supervisor expectations. While original research records are normally the property of the faculty supervisor overseeing the work, students are expected to generate and properly secure adequate, original documentation, in addition to keeping personal copies, in order to ensure the integrity of their records.

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

5.4.5 Equipment

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

5.5 McMaster University Policy for Academic Accommodation of Students with Disabilities

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

McMaster University is committed to excellence in teaching and learning. The University strives to ensure every student is afforded an academic environment that is dedicated to the advancement of learning and is based on the principles of equitable access and individual dignity. At McMaster we nurture and support a culture of acceptance, inclusion and the celebration of diversity. Creating a learning environment that is accessible to all students is a value embedded within the University's fabric as well as our policies, services and practices.

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

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

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

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

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

5.6 Student/Faculty Non-Disclosure Agreements

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

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

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

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

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

5.7 Conflict of Interest Guidelines, School of Graduate Studies

5.7.1 General

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

5.7.2 Conflict of Interest in the Evaluation of Graduate Students

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

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

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

5.8 Student Academic Records

Student academic records are the property of the University. The University has developed procedures designed to protect the confidentiality of student records. A student may have access to 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.

5.9 McMaster University Workplace and Environmental Health and Safety Policy

McMaster University is committed to provide and maintain healthy and safe working and learning environments for all employees, students, volunteers and visitors. This is achieved by observing best practices which meet or exceed the standards to comply with legislative requirements as contained in the Ontario Occupational Health and Safety Act, Environmental Protection Act, Nuclear Safety and Control Act and other statutes, their regulations, and the policy and procedures established by the University. To support this commitment both McMaster University and its employees are responsible jointly to implement and maintain an Internal Responsibility System directed at promoting health and safety, preventing incidents involving occupational injuries and illnesses or adverse effects upon the natural environment.

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

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

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

Implementation:

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

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

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

5.10 Inter-University Cooperation - Ontario Visiting Graduate Student

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

General Information

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

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

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

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

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

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

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

- McMaster Children's Centre Incorporated - https://mcmasterchildrenscentre.wordpress.com
- McMaster Students' Union Child Care Centre - https://www.msumcmaster.ca/services-directory/30-child-care-centre

Parking Services - http://parking.mcmaster.ca
Security Services - http://security.mcmaster.ca
University Chaplain Centre - https://mcmasterchaplaincy.org/

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

Graduate Scholarships, Bursaries and Other Awards

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

6.1 Overview

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

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

6.1.1 General Regulations

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

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

- Have been unconditionally admitted into the eligible graduate degree program for which funding was granted;
- Be registered full-time and progressing satisfactorily in the eligible graduate degree program; part-time students are normally not eligible to receive scholarship support;
    - A student who withdraws, is on approved leave, changes academic load from full to part-time, reduces course load or units, has approved to graduate status or otherwise alters their program of study may be required to forfeit all or part of their funding.
- Accept the terms and conditions of the award;
- Comply with all academic regulations of McMaster University and the requirements of the scholarship and/or award;
- Not hold or accept full-time employment while holding the award; and
- Agree to have McMaster University administer the award in accordance with its policies and procedures.

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

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

6.1.2 Value and Duration of Award

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

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

6.2 Graduate Scholarships

Upon admission to McMaster, graduate students are automatically considered for funding by the various departments. Offers that include funding will state the amount and duration of funding, conditions for renewal (if any), terms of continued funding, and other relevant details. 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.

6.2.1 Internal Awards

The University Senate, acting on behalf of generous benefactors and donors to the University, bestows academic awards, bursaries, academic grants, and travel awards on graduate students. In recognizing financial need and/or academic and/or research merit, the University requires all recipients of awards to fulfill a set of general conditions, in addition to meeting the particular terms attached to individual academic awards. The general conditions and terms have been established to ensure equity in competition and a high academic standing. Any interpretation of the conditions attaching to academic awards is solely the prerogative of the Graduate Council. The University reserves the right not to grant an award in the absence of a suitable candidate, or to limit the number of awards where too few suitable candidates exist. The University also reserves the right to withdraw, or amend the terms of, any award, and/or to suspend granting of an award or to adjust the stated value of an award in years in which insufficient investment income is available due to fluctuations in investment markets. Where the terms of such award become impossible to fulfill through obsolescence, then the University may amend the terms of same to carry out the nearest possible intent of the donor while still ensuring that the benefit of such award continues.

Bursaries

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

In order for students to be considered for any donor bursary, they must apply to the Graduate General Bursary through ~~Mosaic~~AwardSpring. ~~If you are not eligible to apply for the Graduate General Bursary, you may have the option of submitting a need assessment application through the Office of the Registrar, Student Services.~~

Academic Grants

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

In order for students to be considered for an academic grant, they must have applied for OSAP and have received an entitlement of at least $1~~apply to the Graduate General Bursary through Mosaic. If you are not eligible to apply for the Graduate General Bursary, you may have the option of submitting a need assessment application through the Office of the Registrar, Student Services.~~

Internal Scholarships (including travel awards)

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

6.2.2 External Awards Tenable at the University

External awards tenable at the University are given by federal and provincial government agencies and other private organizations that rely on McMaster University to recommend candidates, facilitate payments, and ensure compliance of terms and conditions of the award. Examples of these agencies include the Canadian Institute of Health Research (CIHR), the Natural Sciences and Engineering Research Council (NSERC), the Social Sciences and Humanities Research Council (SSHRC), and the Ontario Graduate Scholarships (OGS). ~~In most cases applicants must be invited by their department to submit an application to these competitions and verify eligibility requirements with the external agencies.~~

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

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

6.3 Funding Application Deadlines

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

6.4 Financial Planning

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

Governing Bodies

7.1 Senate

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

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

7.2 Graduate Council

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

The responsibilities of the Graduate Council have been specified in some detail by Senate and are outlined in the 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.

7.2.1 Executive Committee of Graduate Council

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

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

7.2.2 Scholarships Committee of Graduate Council

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

7.3 Standing Committees

7.3.1 Faculty Graduate Curriculum and Policy Committees

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

7.3.2 Faculty Graduate Admissions and Study Committees

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

April 2021 Graduate Council

New awards for approval

Name of Fund: Davey Family French Scholarship

Terms of Reference: Established in 2021 by Lynda Davey-Longstreet B.A. (Class of '75 & '79) to help promote French language and culture. To be awarded by the School of Graduate Studies to incoming graduate students in The Department of French who, on the recommendation of the Department of French, demonstrate academic excellence.

Trust Fund Changes for approval

Bev Bayus Graduate Scholarship

Original award terms: Established in 2018 by Bev Bayus, B.A./B.P.E (Class of '75). To be awarded by the School of Graduate Studies to a student within the Faculty of Science or Faculty of Social Sciences. Preference will be given to a student pursuing graduate studies in either of the Department of Kinesiology, the Department of Sociology, or the School of Geography and Earth Sciences.

TFOC Approved Terms Change: Established in 2018 by Bev Bayus, B.A./B.P.E (Class of '75). To be awarded by the School of Graduate Studies to a student within the Faculty of Science or Faculty of Social Sciences. Preference will be given to a student pursuing graduate studies in either of the Department of Kinesiology, the Department of Sociology, or the School of Earth, Environment & Society.

deGrijs OGS

Current Terms: Established in 2009 by Jan W. deGrijs (Class of '71) to contribute to the funding of Ontario Graduate Scholars at McMaster University within the Faculty of Science. Preference will be given to a student pursuing graduate studies in the School of Geography and Earth Sciences.

*TFOC Approved Term Change***:** Established in 2009 by Jan W. deGrijs (Class of '71) to contribute to the funding of Ontario Graduate Scholars at McMaster University within the Faculty of Science. Preference will be given to a student pursuing graduate studies in the School of Earth, Environment & Society*.*

Kanaroglou Memorial Scholarship

Current Terms: Established in 2016 to honour Dr. Pavlos S. Kanaroglou, Professor Emeritus, for his invaluable contributions to research and education in the study of Geography and Earth Sciences at McMaster University. To be awarded by the School of Graduate Studies on the recommendation of the School of Geography and Earth Sciences to a graduate student working in the McMaster Institute for Transportation and Logistics. The recipient will demonstrate high academic achievement, a proven interest in transportation and logistics, a good work ethic, and a potential for collaboration with others and participation in research activities that will be of benefit to the community at large.

TFOC Approved Term Change: Established in 2016 to honour Dr. Pavlos S. Kanaroglou, Professor Emeritus, for his invaluable contributions to research and education in the study of Geography and Earth Sciences at McMaster University. To be awarded by the School of Graduate Studies on the recommendation of the School of Earth, Environment & Society to a graduate student working in the McMaster Institute for Transportation and Logistics. The recipient will demonstrate high academic achievement, a proven interest in transportation and logistics, a good work ethic, and a potential for collaboration with others and participation in research activities that will be of benefit to the community at large.

Munn OGS

Current Terms: Established in 2003 by Dr. R. Edward Munn (class of '41) to contribute to the funding of Ontario Graduate Scholars at McMaster University within the Faculty of Science and the Faculty of Social Sciences. Preference will be given to a student pursuing graduate studies in the School of Geography and Geology with a specialization in environmental issues.

TFOC Approved Term Change: Established in 2003 by Dr. R. Edward Munn (class of '41) to contribute to the funding of Ontario Graduate Scholars at McMaster University within the Faculty of Science and the Faculty of Social Sciences. Preference will be given to a student pursuing graduate studies in the School of Earth, Environment & Society with a specialization in environmental issues.

The Mary Margaret Scammell Travel Scholarship

Current Terms: The Mary Margaret Scammell Travel Scholarship was established in 1994 by family and friends in memory of Mary Scammell, this scholarship currently valued at $600 will is awarded by the School of Graduate Studies on the nomination of the Department of Religious Studies. This award is available to students registered in or admitted to a McMaster graduate program in Religious Studies to help support travel costs associated with thesis research or language study.

TFOC Approved Term Change: The Mary Margaret Scammell Travel Scholarship was established in 1994 by family and friends in memory of Mary Scammell. This scholarship will be awarded by the School of Graduate Studies on the nomination of the Department of Religious Studies. This award is available to students registered in or admitted to a McMaster graduate program in Religious Studies to help support travel costs associated with thesis research or language study.

FINAL ASSESSMENT REPORT

Institutional Quality Assurance Program (IQAP) Review

Astrobiology

Date of Review: February 4th and 5th 2020

In accordance with the University Institutional Quality Assurance Process (IQAP), this final assessment report provides a synthesis of the external evaluation and the internal response and assessments of the collaborative specialization (M.Sc. and Ph.D) in Astrobiology. This report identifies the significant strengths of the program, together with opportunities for program improvement and enhancement, and it sets out and prioritizes the recommendations that have been selected for implementation.

The report includes an Implementation Plan that identifies who will be responsible for approving the recommendations set out in the Final Assessment Report; who will be responsible for providing any resources entailed by those recommendations; any changes in organization, policy or governance that will be necessary to meet the recommendations and who will be responsible for acting on those recommendations; and timelines for acting on and monitoring the implementation of those recommendations.

Executive Summary of the Review

In accordance with the Institutional Quality Assurance Process (IQAP), Astrobiology submitted a self-study in January 2020 to the Vice-Provost and Dean of Graduate Studies to initiate the cyclical program review of its collaborative specialization. The approved self-study presented program descriptions, learning outcomes, and analyses of data provided by the Office of Institutional Research and Analysis. Appendices to the self-study contained all course outlines associated with the program and the CVs for each full-time member in the department.

Two arm's length external reviewers and one internal reviewer were endorsed by the Dean, Faculty of Science, and selected by the Vice-Provost and Dean of Graduate Studies. The review team reviewed the self-study documentation and then conducted a site visit to McMaster University on February 4th and 5th, 2020. The visit included interviews with the Provost and Vice-President (Academic); Vice-Provost and Dean of Graduate Studies, Associate Dean, Grad Studies and Research, Director and meetings with groups of current students, faculty and support staff.

The Director and the Dean of the Faculty of Science submitted responses to the Reviewers' Report (April 2020 and September 2020). Specific recommendations were discussed, and clarifications and corrections were presented. Follow-up actions and timelines were included.

Strengths

- The students have considerable success with obtaining positions in Ph.D. programs, industry, and at NASA.
- This is a well-functioning program that attracts excellent students and results in excellent and highly-visible science.
- The students form a collaborative community, as evidenced by their initiation of a joint research project.
- The report gives a very positive review of the curriculum and notes that it provides a very well-rounded experience to the students.

Areas for Enhancement or Improvement

- Consider how to further encourage cross-laboratory research opportunities for students
- Consider whether a small financial incentive can be provided to encourage additional faculty to take students on the program.
- The report suggests several areas for potential faculty hires that would benefit the Astrobiology program.

Summary of the Reviewers' Recommendations with the Department's and Dean's Responses

Recommendation	Proposed Follow-Up	Responsibility for Leading Follow-Up	Timeline for Addressing Recommendation
1. Consider a formal, but optional, requirement for a cross-laboratory and/or collective research project and a mechanism for forming collaborations and identifying student opportunities. Consider allowing students to fulfil the additional course in a discipline outside their core area of expertise requirement with a collaboration in a lab outside their discipline.	It will be necessary to make changes in the graduate calendar that describe the requirement for the course outside the discipline. This report suggests allowing the cross-laboratory research project as a means of fulfilling this requirement. The suggestion is reasonable, but it now needs careful consideration by the faculty concerned.	The current OI Director will circulate a draft of the proposed calendar changes and will convene a meeting of faculty to agree a final version of these changes.	The meeting is scheduled for May 6th 2020

2. Consider ways in which organizational administrative tasks remain outside the responsibilities of graduate students.	We find this comment puzzling as there are relatively few admin jobs done by students. The scheduling of the Journal Club has been organized by students; however, this is also the case for other journal clubs in different research areas. Students have also helped with social media and talking with new student applicants. Two of the students are part of the Faculty of Science Student Ambassadors Program. These activities are encouraged by the Faculty and seem appropriate.	The OI Director has already discussed this point informally with several students to understand how they feel. There was recognition that being involved with organizing the Journal Club seemed appropriate. The other activities are all voluntary. The OI director will make sure that students feel recognized for doing these things and will try to ensure that jobs are spread among the students and do not always fall to the same people.	Discussions already held, and further discussion with students when responsibilities are assigned for 2020-21 academic year.
3. Work to enable international student collaboration and exchange, as the international astrobiology community has extensive opportunities for McMaster students available.	A agreement of collaboration with Heidelberg was made several years ago and we have not yet made use of this opportunity for student exchanges. The OI also has many connections with other institutions (e.g. collaborators on previous grant proposals) who could in principle take McMaster students. In practice, considerable travel and accommodation costs would be required if students were to make visits for sufficient time to make useful research progress. OI currently runs travel	The current travel grant system is on hold until the COVID situation is resolved. This will be announced by the current or incoming OI Director as soon as travel becomes possible. Supporting research visits for students seems like a beneficial use of OI funds, but this needs to be negotiated by the incoming OI Director and the Faculty of Science at the time of the appointment of the new Director.	Summer /Fall 2020

	grants for students to attend conferences, but greater resources would be required for longer research visits.		
4. Encourage home departments to hire in Exoplanet Detection and Planetary Geosciences.	We agree that faculty hire in Origins-related subjects would be very beneficial for the Astrobiology program and the OI in general. The two subject areas mentioned in the report would be possible areas of recruitment; however, other areas are equally possible (e.g. Extremophiles, Microbial Ecosystems, In Vitro Evolution, and Prebiotic Chemistry). There has been no recent discussion of faculty hiring priorities by the OI faculty as a group because there is no current means by which Institutes can recommend areas for faculty hiring. The suggestion of "encouraging home departments" to recruit in Origins areas is very unlikely to work. The system needs to be changed in order to allow hiring proposals that are led by the institutes.	It would be appropriate for the incoming director to initiate a discussion of faculty hiring priorities among OI members in order to come to a consensus on what topics are most supported. The incoming director should try to negotiate changes in the faculty hiring procedure so that a topic supported by a consensus of OI members could be put forward to the committee on faculty hiring. A possible way forward that would benefit the graduate program and the OI tremendously is to recruit a "Chair of Astrobiology" at a senior level, who would assume responsibility for the graduate program and become the OI Director. We note, however, that a new director is already required to be appointed in July 2020.	Summer/ Fall 2020
5. As part of the recruitment process (through the website and via initial emails), encourage prospective	The OI Director is currently responding to students as they make inquiries, as are the directors of the departmental graduate	The current and incoming Directors will work with the team for development of the new web site.	Spring/Summer 2020

students to apply for NSERC fellowships.	programs. An update of the OI website is definitely overdue. There is a current team from Faculty of Science working on this. We agree that the information on the current website regarding student recruitment and student fellowships needs improvement.		

Faculty Response:

The Dean noted they were pleased to see that the reviewers had recognized the successful operations of the graduate program in Astrobiology. The success of this interdisciplinary program is evident from the high-quality training of students from several participating departments and creating a collaborative research atmosphere at McMaster. The report highlights that the program provides a framework for astrobiological training in Canada, on par with the best programs at other institutions in the world. It also notes that students have taken the initiative of collaborating with available faculty.

The recommendations of the review team have been reviewed by the program leadership. The response report contains follow up actions and timelines and the Dean was satisfied with the proposed plan. One of these involves allowing students to take additional courses outside of their core areas of expertise. This matter will be addressed through curriculum changes. The Director of the Origins Institute (OI) will be meeting with all stakeholders to develop a plan for approval by the Faculty of Science Graduate Curriculum, Policy, and Study Committee.

The issue of administrative load on students is being resolved through discussions. The Dean had not heard any concerns in the past and feel that the proposed solution is reasonable. Two of the recommendations, i.e., international student collaborations and faculty hiring, will require a careful review of options, opportunities and taking a balanced approach. Research-related travel of students in Science units is typically supported by two sources of funding: supervisor's research grants and graduate scholarship fund. Astrobiology students are eligible to receive financial support through both these sources. Additional opportunities, such as MITACS training, McMaster SGS Grant in Aid, and Michael Smith Foreign Study Supplements, are also available.

The Faculty of Science has an established and collaborative process for the proposal, review and recommendation of faculty hires. Specifically, there is a central Faculty Academic Appointments Committee with representation from each Department that receives and reviews applications for faculty appointments on a yearly basis. The criteria considered include both potential alignment with Departmental and interdisciplinary graduate programs (including Astrobiology) and with the mandates of the Faculty's Institutes and Centres (including the Origins Institute). It is incumbent on the members

of the Astrobiology program to articulate their aspirations for faculty positions and to advocate for those to be considered in the Departmental submissions, where hires are made. The proposed consideration of a chair in astrobiology funded through philanthropic sources is an excellent one that should also be proposed as part of the requests for funding priorities circulated widely in the Faculty.

The Faculty of Science is committed to providing the Astrobiology program adequate support to continue to train students and enhance their research and training mission.

Quality Assurance Committee Recommendation

That the Quality Assurance Committee recommend that the Astrobiology Program should follow the regular course of action with an 18-month progress report and a subsequent full external cyclical review to be conducted no later than 8 years after the start of the last review.

FINAL ASSESSMENT REPORT

Institutional Quality Assurance Program (IQAP) Review

Biochemistry, M.Sc. and Ph.D.

Date of Review: June 22nd and 23rd

In accordance with the University Institutional Quality Assurance Process (IQAP), this final assessment report provides a synthesis of the external evaluation and the internal response and assessments of the graduate programs delivered by Biochemistry. This report identifies the significant strengths of the program, together with opportunities for program improvement and enhancement, and it sets out and prioritizes the recommendations that have been selected for implementation.

The report includes an Implementation Plan that identifies who will be responsible for approving the recommendations set out in the Final Assessment Report; who will be responsible for providing any resources entailed by those recommendations; any changes in organization, policy or governance that will be necessary to meet the recommendations and who will be responsible for acting on those recommendations; and timelines for acting on and monitoring the implementation of those recommendations.

Executive Summary of the Review

In accordance with the Institutional Quality Assurance Process (IQAP), the Biochemistry program submitted a self-study in February 2020 to the Vice-Provost and Dean of Graduate Studies to initiate the cyclical program review of its graduate programs. The approved self-study presented program descriptions, learning outcomes, and analyses of data provided by the Office of Institutional Research and Analysis. Appendices to the self-study contained all course outlines associated with the program and the CVs for each full-time member in the department.

Two arm's length external reviewers and one internal reviewer were endorsed by the Dean, Faculty of Health Sciences, and selected by the Vice-Provost and Dean of Graduate Studies. The review team reviewed the self-study documentation and then conducted a site visit to McMaster University on June 22nd and 23rd, 2020. The visit included interviews with the Vice-Provost and Dean of Graduate Studies, Executive Vice-Dean and Associate Vice-President (Health Sciences), Associate Dean, Grad Studies and Research Health Sciences, Chair of the department and meetings with groups of current students, faculty and support staff.

The assistant dean of the department and the Dean of the Faculty of Health Sciences submitted responses to the Reviewers' Report (July 2020). Specific recommendations were discussed and clarifications and corrections were presented. Follow-up actions and timelines were included.

Strengths

- Size of program and program growth, especially when normalized to number of core faculty: ~135 students, 23 core faculty
- Favorable ratio of PhD:MSc students (2:1), reflective of research intensity
- Track record of student success in major national scholarship competitions (eg. CGS-M, CGS-D, Vanier)
- Exceptional number and quality of student-led publications
- Reputation and funding levels of core faculty
- Strong recruitment of graduate students nationally (and internationally)
- Robust system of program governance

Areas for Enhancement or Improvement

- Graduate courses: Although satisfaction of students enrolled in specific graduate courses was very high, there was a desire for a "core curriculum" that emphasizes skills broadly applicable to the diverse fields of research of the Department, and a move away from "Special Topics" courses that, while of high quality, were of limited relevance to many students.
- Mental health: Some students expressed dissatisfaction with mental health resources available on campus. A more structured framework for helping students navigate available mental health resources within and outside of the University was recommended. It was felt that such a resource would be of value to all FHS students (or even all SGS students more broadly) and might best be coordinated centrally.
- Career Preparedness: Students expressed a desire for expansion of program initiatives focused on career preparedness, especially careers outside of academia.
- Data Tracking: The reviewers felt that a more robust system to track graduates (eg. the PhD Exit Survey) would be of significant value.
- Administrative Support: It was clear to reviewers that given the size of the program, additional administrative support is required to alleviate the overwhelming workload currently carried by our sole staff member, Graduate Officer, Ms. Kush.

Summary of the Reviewers' Recommendations with the Department's and Dean's Responses

Recommendation	Proposed Follow-Up	Responsibility for Leading Follow-Up	Timeline for Addressing Recommendation
We recommend that the Graduate Program proceed with plans to implement a core curriculum of four courses including the	Program will proceed with plans to implement a four-course core curriculum. We will ensure that the	Dr. Miller will oversee core curriculum changes and monitor enrollment pressure on BIOCHEM 732.	Special Topics courses have been suspended beginning in Fall 2020 Term.

new Modern Techniques and Technologies course and a Career Preparedness course. As part of this recommendation, the capacity of BIOCHEM 732 (Scientific Writing) in particular should be expanded and offered in each semester to ensure all new students have access.	structure of this new curriculum allows an opportunity for all interested students to enrol in BIOCHEM 732 (Scientific Writing) – which is a new and very popular course.	Dr. Leigh Wilson (MILO) will be primarily responsible for development of the new career-focused course in consultation with Dr. Miller A coordinator for the new Modern Biochemical Techniques/Technologies course will be identified in the Fall term. This individual will develop the new course curriculum with Dr. Miller.	New Careers course to be offered in Winter 2021 term. BIOCHEM 732 to be offered annually beginning in the 2020/21 academic year.
As part of the Career Preparedness plan, we recommend that a speaker from industry or other suitable non-academic career path, be invited once per semester on a trial basis, to present in the departmental seminar series with provision of ample opportunity for students to meet with these individuals to discuss their career.	Non-academic speakers will be invited to present in the BBS Seminar series (and/or the BBS Research Symposium) at least twice annually, with "lunch-and-learn" sessions scheduled to facilitate interaction with students.	Dr. Sloboda (Associate Chair, Research) coordinates the seminar series and will be responsible for implementation with Dr. Miller.	The COVID-19 pandemic has necessitated a remote seminar series for the foreseeable future. Nevertheless, we will implement this initiative remotely beginning in the 2020/21 academic year.
Given the continued expansion of the Biochemistry Graduate Program, we recommend that resources be made available from the Faculty of Health Sciences to hire a part-time employee (at a	Discussions will be initiated between the Department, Dr. Hanna, and FHS senior leadership to find the resources required to support an additional 0.5 FTE whose role will be to provide administrative support	Dr. Coombes (Chair) and Ms. Dawn Lilley (Director of Administration) will be responsible for follow up with FHS leadership.	Discussions will be initiated in Fall 2020 with the intention of securing resources and completing hiring in 2021.

minimum at 0.5 FTE) to assist Lisa Kush with the administrative management of the Biochemistry Graduate Program.	for the Biochemistry Graduate Program.		
We recommend that the exit surveys for the graduating students are completed each year and the data are provided to the Department of Biochemistry and Biomedical Sciences	PhD exit surveys are administered by SGS. It is therefore not clear whether missing data reflects a failure to administer the survey in the years mentioned by the reviewers, or simply a lack of completion. It is also unclear how much follow-up there is to encourage completion by SGS. The Program feels that there would be significant value in having more detailed information about our graduates post-graduation. However, Ms. Kush is already overburdened as noted above. It is feasible that the department could implement an internal data-gathering procedure for graduates under the purview of a new 0.5 FTE graduate administrative assistant, as noted in the reviewer recommendations.	Administration of PhD exit surveys falls under the purview of SGS. If resources can be secured for an addition 0.5FTE, Dr. Miller and Ms. Lilley will develop a plan for gathering data from our graduates which can become part of the new employee's job description.	Contingent upon hiring a new 0.5FTE. Implementation no earlier than 2021/22 academic year.

Development of a more explicit mental health resources document/map to increase student awareness and guide students to the appropriate supports based on their specific needs.	The Program will undertake a specific consultation with our graduate student body in order to better understand their specific perceptions around mental health needs/shortfalls. This consultation will inform a resource mapping/flow chart to be developed in consultation with FHSGS, Student Wellness (and potentially SGS, if interested).	Dr. Miller will coordinate consultation with the study body. Subsequent resource development efforts will be done in consultation with Dr. Hanna and relevant experts from Student Wellness.	Consultation and resource development will begin in the 2020/2021 academic year, with a plan to implement/distribute the resource in 2021/2022

Faculty Response

The Executive Vice-Dean and Associate Vice-President Academic and the Vice-Dean and Associate Dean of Graduate Studies thanked the reviewers for their thorough, thoughtful, and constructive review of the Masters and PhD programs in Biochemistry at McMaster University. They appreciated that the reviewers identified strengths of the program including the depth in the lineup of highly qualified and well-funded faculty supervisors, the demonstrated research productivity of the students and their proven success in competitive scholarship competitions. The reviewers note that the program's international reputation for excellence is a valuable recruitment tool.

They reviewed the program's response to the review and strongly supported Dr. Matt Miller's detailed plan for addressing the recommendations. While recognizing that the Biochemistry program has moved in a planful way toward a research-intensive program with few required courses, they support the program's proposal to consider a renewal of the core course curriculum, as well as enhanced offerings related to career development. In regard to the availability of mental health supports, they agreed with Dr. Miller's observation that such supports are the responsibility of the central university, but that students can be better directed to what is available. They appreciated that the reviewers recognized the stalwart work of Ms. Kush as the program administrator and agree that better direction to students about appropriate sources of support may help with managing Ms. Kush's workload. In the Faculty of Health Sciences, program costs are resourced from the educational revenues to the sponsoring departments, and so the feasibility of increased administrative support should be considered within the budget and priorities of the Department of Biochemistry.

Quality Assurance Committee Recommendation

That the Quality Assurance Committee recommend that the Biochemistry M.Sc. and Ph.D. programs should follow the regular course of action with an 18-month progress report and a subsequent full external cyclical review to be conducted no later than 8 years after the start of the last review.

FINAL ASSESSMENT REPORT

Institutional Quality Assurance Program (IQAP) Review

Health Science Education, M.Sc.

Date of Review: April 27ᵗʰ and 28th

In accordance with the University Institutional Quality Assurance Process (IQAP), this final assessment report provides a synthesis of the external evaluation and the internal response and assessments of the Health Science Education M.Sc.. This report identifies the significant strengths of the program, together with opportunities for program improvement and enhancement, and it sets out and prioritizes the recommendations that have been selected for implementation.

The report includes an Implementation Plan that identifies who will be responsible for approving the recommendations set out in the Final Assessment Report; who will be responsible for providing any resources entailed by those recommendations; any changes in organization, policy or governance that will be necessary to meet the recommendations and who will be responsible for acting on those recommendations; and timelines for acting on and monitoring the implementation of those recommendations.

Executive Summary of the Review

In accordance with the Institutional Quality Assurance Process (IQAP), the Health Science Education program submitted a self-study in February 2020 to the Vice-Provost and Dean of Graduate Studies to initiate the cyclical program review of its graduate program. The approved self-study presented program descriptions, learning outcomes, and analyses of data provided by the Office of Institutional Research and Analysis. Appendices to the self-study contained all course outlines associated with the program and the CVs for each full-time member in the department.

Two arm's length external reviewers and one internal reviewer were endorsed by the Dean, Faculty of Health Sciences, and selected by the Vice-Provost and Dean of Graduate Studies. The review team reviewed the self-study documentation and then conducted a remote review on April 27ᵗʰ and 28ᵗʰ, 2020. The visit included interviews with the Provost and Vice-President (Academic); Vice-Provost and Dean of Graduate Studies, Associate Dean, Grad Studies and Research, Assistant Dean of the program and meetings with groups of current students, full-time faculty and support staff.

The Assistant Dean of the program and the Dean of the Faculty of Health Sciences submitted responses to the Reviewers' Report (May 2020). Specific recommendations were discussed and clarifications and corrections were presented. Follow-up actions and timelines were included.

In their report (May 2020) the Review team noted the following strengths and areas for enhancement:

Strengths

- A commitment to positive student experience and student centeredness.
- The high quality of courses, an excellent caliber of instruction, and the national and international reputations of many of the Program's educators.
- The largely asynchronous delivery of online content, which promotes learning accessibility for learners with diverse professional and personal responsibilities.
- The breadth of inter-disciplinarity and inter-professionalism throughout the program, in terms of both faculty and learners, and the strong inter-professional communication and collaboration that results.
- Staff and faculty responsiveness and nimbleness in meeting individual learner needs.
- Strong emphasis on continuous quality improvement and assurance throughout the program, at the level of the courses, assignments, annual academic events, and overall curriculum.
- The nimbleness and responsiveness of the Graduate Officer (Radomirovic).
- The procedural and content leadership of the Assistant Dean (Grierson).

Areas for Enhancement or Improvement

- A limited scope of course offerings, which reflect faculty expertise and focus primarily on disciplines oriented towards individual learning.
- Relatively insular governance and administrative structures with contributing members situated primarily in the Faculty of Health Sciences and HSED Program respectively.
- Limited explicit attention to potential issues related to Equity-Diversity-Inclusion.
- Limited tracking and engagement of alumni
- The academic output of the students in the program is limited.

Summary of the Reviewers' Recommendations with the Department's and Dean's Responses

"Specific follow up in a specific timeframe" details are hyperlinked to the chart for maximal clarity.

Recommendation	Proposed Follow-Up	Responsibility for Leading Follow-Up	Timeline for Addressing Recommendation
1. Add Education Foundations Component	- HS EDUC 700 will be reformed to include these components. - Appropriate faculty contributors will be identified and recruited	Grierson, HSED Curriculum Committee, Monteiro, Bayer, Radomirovic	May 27th, 2020 through June 11th, 2021, and beyond.
2. Recruit Internationally	- Enhance marketing at international conferences - Enhance marketing through global professional networks	Grierson, Sherbino	Beginning September 2021 and thereafter.
3. Revisit the requirement to be a clinician to access the course-based route	-Adjust policy to include access to non-clinician students that have professionally relevant work in a health professional education field.	Grierson, HSED Admissions Chair (Vanstone), Radomirovic	Completed: May 2020
4. Revisit admissions requirements with an eye to EDI.	- Form a Working Group to address 4 objectives related to promoting EDI via admissions	- Grierson, Vanstone	- July 2020 through January 2021, and beyond
5. Potential supervisors provide input regarding admissions of students into the thesis stream	- This recommendation reflects a practice that is already in operation for the HSED program	N/A	N/A
6. Consider how critical social sciences and humanities perspectives could be integrated.	- HS EDUC 700 will be reformed to include these components. - Appropriate faculty contributors will be identified and recruited	Grierson, HSED Curriculum Committee, Monteiro, Bayer, Radomirovic	May 27th, 2020 through June 11th, 2021, and beyond.
7. Include alumni as instructors and/or mentors.	-Develop an HSED mentorship program opportunity that is aligned with MERIT membership program. The program will offer resource and direction to move mentors through a staged progression of larger teaching roles.	Grierson, Sherbino, Chan	-The mentorship opportunity will be in place prior to the residency (HSEDUC 700) that starts the 2020/21 academic year (June 3rd 2021).
8. Explore opportunities to identify and communicate with students who may be struggling or falling behind.	- Continue discussions with the Vice Dean, HSGS (Hanna) and the FHS Professionalism Chair (Walton) regarding supporting early-career health professional students that struggle to balance graduate work and clinical practice. -Program-facilitated course monitoring process to be initiated.	Grierson	- Conversations regarding support for early career health professionals are ongoing. These conversations will be intensified over the Summer 2020 term - Program-facilitated process for student monitoring: Fall 2020 term.
9. Upgrade the program coordinator to a program manager	-Review the responsibilities of Graduate Officer and ensure appropriate role is designated	Grierson, Bjilic, Troy-Hempey	July 2020
10. Develop redundancy in leadership	-Dissociate role of Curriculum Committee Chair from that of Assistant Dean, HSED -Develop an Assistant Director Role	Grierson, HSED Curriculum Committee, Bjelic, Troy-Hempey	-Discussions about Chair position: Fall Curriculum Committee Meeting (September 2020) - Discussions re: Assistant Director position: July 2020
11. Integrate some expertise in other areas of education	- HS EDUC 700 will be reformed to include these components. - Appropriate faculty contributors will be identified and recruited	Grierson, HSED Curriculum Committee, Monteiro, Bayer, Radomirovic	May 27th, 2020 through June 11th, 2021, and beyond.
12. Develop part-time thesis option to alleviate the need to provide a stipend.	-HSED offers a part-time thesis pathway for eligible applicants. Stream monitoring continues - Alleviation of financial support for thesis student is not a current goal.	Grierson	Ongoing
13. Invite stakeholders from outside of the program to participate in the Design Thinking Evaluation	-Stakeholder engagement is already a key feature of the Design Thinking Evaluation project.	Bayer	Ongoing
14. Consider broadening curriculum committee membership to allow a less insular structure	-In conjunction with our response to recommendation 10, we will seek members from outside of the HSED faculty	Chair, HSED Curriculum Committee	September 2020 – January 2021
15. Increased collaboration with Program for Faculty Development	-Develop PFD-supported mentorship program	Grierson, Sherbino, Chan	- June 3rd 2021)

Recommendation 1

Consider adding an educational foundations component to the program. This might address philosophy, history, sociology, anthropology, equity, politics, and international perspectives on education. This would address some of the areas of improvement with respect to issues of EDI, and social constructivist perspectives.

Proposed Follow-up: Currently, the Program's first residency week (HS EDUC 700) focuses on building up students' competence in managing their self-directed online learning experience, helping them build communities of scholarship, and introducing them to the courses and academic pathways that they may choose to take throughout the Program.

In addition to these goals, one of the stated learning objectives for HS EDUC 700 is that at the completion of the week, students will be able *"to articulate an understanding of the Health Professions Education field, the scope of relevant issues, and the relevance of study within this field to their professional work, which includes: a) recognizing the features and theories of inter-professional health professions education, and to be able to integrate these into their own experience as inter-professional learners within the Program; b) acknowledging the importance of cultural humility (i.e., humbly positioning oneself as a learner with respect to understanding the experiences of others) when interacting within the diverse cultural milieu of health professions education scholarship; and c) understanding the importance of developing a robust command of the HPE literature and skill in academic writing, critical thinking, and scholarly presentation.*

With this objective in mind, HS EDUC 700 presents a natural opportunity to begin our response to this recommendation. The Residency Week already addresses this objective with sessions dedicated to inter-professionalism, equity in education, and unique perspectives on education practice (i.e., humanities-based approaches). We will work to enhance the breadth of these offerings such that the week begins to take the form of an intensive, introductory workshop in education foundations. In particular, we will be mindful to build depth of content in the foundational areas listed above (philosophy, history, sociology, anthropology, equity, politics, and international perspectives on education) and others while also maintaining a focus on preparing students for the online learning environment.

In making this change, Residency Week 1 (HS EDUC 700) will:

1. Serve as a strong foundation for students that choose to build knowledge and expertise in these areas through the pedagogical and education research sessions that support the newly designed capstone portfolio. In mentioning the capstone portfolio, we also wish to draw attention to the seminar series that comprises one arm of this assemblage of academic activities. Several of the listed education foundations are fundamental to topic and perspectives that are shared through this series. Accordingly, we anticipate that student participation in these sessions will enhance their learning with respect to these foundations.
2. Enhance student ability to understand the way in which the content associated with each of their core and elective courses has roots in pertinent education foundations. In this way, we anticipate greater demonstrations of critical integration between the specific course-level perspectives (i.e.,

pertaining to competence assessment) and the general theories that underpin education programming (i.e., the history of outcomes-based curricula).

3. Afford the Program the opportunity to appraise the feasibility of creating a full course in education foundations. While such a course would certainly be a natural fit into our graduate programming, we recognize a need to consider its interaction with current course content, its impact on academic planning, and the faculty expertise needed to deliver such a course. Through a staged approach that begins with the Residency Week, we will be able to determine the most relevant topics for inclusion and to build relationships with faculty that are positioned to offer expertise to our program. Notably, this workshop (and any subsequent course) will require the expertise of faculty that are not currently involved in the Program. In order to recruit faculty with this expertise, the HSED Program will:

   a. Canvas the Faculty of Health Sciences, MacPherson Institute, and wider McMaster University communities for appropriate Faculty members willing to participate in the HSED Program. Consideration will need to be given to the way in which we present HSED involvement as valuable to contributing faculty.

   b. Lobby the McMaster Education Research, Innovation, and Theory (MERIT) Program to consider this expertise as they move through current searches for 2 new faculty members. The Assistant Dean, HSED anticipates serving on these search committees.

Responsibility for Leading Follow-up:

1. The HSED Curriculum Committee will be responsible for developing a new alignment of learning objectives, teaching and learning activities, and assessments that will form the foundation of a revised HS EDUC 700 Curriculum, which contains explicit attention to enhancing student learning in education foundations. Currently, Residency Week 1 curriculum development is led by committee members Dr. Sandra Monteiro, Dr. Ilana Bayer, and Dr. Lawrence Grierson. We will strike a sub-committee that includes additional HSED members and individuals from outside of the Program to assist in this development.

2. The Assistant Dean, HSED (GRIERSON) will be responsible for identifying and recruiting faculty contributors to this initiative.

3. Identified faculty contributors will be responsible for developing and delivering the education foundations content during Residency Week 1 and/or any subsequent course.

4. The HSED Curriculum Committee will be responsible for evaluating the effectiveness of the revised Residency Week curriculum and determining the value and a viability of building and delivering an Education Foundations course.

5. The Assistant Dean, HSED (GRIERSON) and HSED Graduate Officer (RADOMIROVIC) will be responsible for managing any administrative processes associated with the new development (for e.g., drafting and submitting Curriculum Change Forms where necessary).

6. The HSED Program Staff will be responsible for supporting the development of courseware and the technical operations associated with the dissemination of materials and delivery of content.

Timeline for Addressing Recommendation: The proposed timeline for addressing this recommendation is as follows:

- The Assistant Dean, HSED will begin identifying and recruiting potential faculty contributors in concert with submission of this report (May 27th, 2020). This will begin with outreach to the MERIT and MacPherson Institute communities.
- An HSED Curriculum Committee sub-committee, which will work to determine the content and form of the new Residency Week 1 activities, will be formed at the next Curriculum Committee meeting: September 15th, 2020.
- The sub-committee plans for a revised HS EDUC 700 curriculum will be reviewed and approved by the HSED Curriculum Committee during its Winter term meeting: January 12th, 2021
- Revised HS EDUC 700 content and course material will be ready for presentation to the HSED Curriculum Committee Meeting during its Spring meeting: May 11th, 2021
- The curriculum will be delivered during the Summer 2021 offering of Residency Week 1 (tentatively: June 7th – June 11th, 2021).
- Evaluation and appraisal of the education foundations component will occur in concert with the Summer 2021 offering, and will continue throughout the academic year, and subsequent residency week offerings until a determination of its adequacy or need for expansion can be determined.

Recommendation 2
Explore the possibility of offering the HSED internationally, or perhaps recruiting more internationally.

Proposed Follow-up: The HSED Program is an international program. We have students in current cohorts enrolled from United States, United Kingdom, Brazil, Pakistan, Saudi Arabia, and Thailand. However, the majority of our students are domestic, which reflects not only our recruitment efforts but also an adherence to an admission strategy that is contemplative of our ability to matriculate larger cohorts each year and the Weighted Graduate Units process that determines aspects of the Program's funding corridor. At this time, we feel that we have established a sufficient and sustainable base of faculty support and course content to begin expanding recruitment efforts and enrolling more students.

Typically, recruitment has happened in concert with major health professions education conferences in Canada and the United States (for e.g., CCME, AAMC, ICRE). We feel that we have reached a level of saturation with these audiences and will move forward with marketing efforts that will expand recruitment of a more professionally diverse and international cohort of students. In particular, we will ensure that our Program has a marketing presence at future international health professions education and general education conferences (for e.g., Association of Medical Educators of Europe; the Ottawa Conference; EduLearn). We will also be purposeful in our marketing attendance at conferences directed to educators from a wide variety of health professions (i.e., nursing, occupational therapy, dentistry, etc.).

Furthermore, we will make formal recruitment efforts through our professional networks with collaborators in the Netherlands, Australia, Saudi Arabia, and the United States in hopes of recruiting more international students.

Responsibility for Leading Follow-up: The Assistant Dean, HSED (GRIERSON) will work with the Assistant Dean, MERIT (SHERBINO) to identify an appropriate list of academic gatherings for marketing efforts and those academic partnerships globally where directed marketing efforts may take place. Dr. Grierson will then spearhead the initiation of these marketing efforts

Timeline for Addressing Recommendation: The COVID-19 pandemic casts some doubt on the timeline for future in-person conference activities. We will monitor this situation and begin these efforts in earnest when conferences resume and/or will take advantage of virtual conference interactions that may be available. Contact with global partners will begin in concert with the commencement of the 2020-2021 academic calendar, in September 2021.

[**Return to Chart**]

Recommendation 3
Revisit the requirement to be a clinician to access the course-based route

Proposed Follow-up: We agree with the Reviewers' comment that the policy that reserves course-based completion pathway to clinicians is overly restrictive. We will adjust this policy such that a broader group of individuals may access this route. We will maintain a focus, however, on admitting individuals into this stream for whom broad coverage of education content is relevant for their professional work. Our goal in this regard is to ensure that any policy revision does not create a situation whereby our course-based Program is open to recent undergraduates looking for graduate training to supplement applications into other fields. Accordingly, the new policy will still contemplate the way in which this stream is appropriate for professionals working in the health education field, but will not be exclusive to clinicians and clinical educators. This change will permit professionals in relevant program coordinator and project management roles to benefit from this education pathway.

Responsibility for Leading Follow-up: The Assistant Dean, HSED (GRIERSON) will discuss this policy change with the HSED Admissions Chair (VANSTONE). The Graduate Officer (RADOMIROVIC) will ensure that all program documentation, front-facing web materials, and articulations of policy at the Graduate Studies levels are updated.

Timeline for Addressing Recommendation: Immediately. This policy has already been discussed and approved.

[**Return to Chart**]

Recommendation 4
Revisit admissions requirements with an eye to EDI.

Proposed Follow-up: The HSED Program appreciates the recommendations regarding formal and explicit processes concerning EDI in the admissions and curricular process. We believe that we fundamentally espouse an ethos that is purposeful in promoting equity, inclusivity, and diversity within HSED; but, recognize through this recommendation that, with the exception of dedicated course content, this

philosophy manifests only in an informal way, at the level of the Program culture. To address this we will begin with more formal evocation of these principles in our admissions process. This will begin with the development of an Admissions Committee working group that will address to four objectives pertaining to EDI. These are:

1. To recruit more purposefully individuals from traditionally under-represented groups in health professions education scholarship. We anticipate these groups to reflect representation as a function of health professional affiliation and as a function of identity characteristics. For instance, we may develop marketing efforts designed to recruit potential full-time thesis students associated with the student-led Black Aspiring Physicians of McMaster (BAP-MAC).
2. To identify and develop data sources that will permit the Program to monitor the application pressure and application success of individuals from the identified groups with respect to gaining admission to the HSED Program.
3. To consider mechanisms for operationalized Programmatic funding sources to most appropriately offer financial support and incentive to applicants from the identified groups.
4. To develop education interventions that will support the success of students from the identified groups in the completing the HSED curriculum.

Responsibility for Leading Follow-up: This process will begin through conversation between the Assistant Dean, HSED (GRIERSON) and the HSED Admissions Chair (VANSTONE). Grierson and Vanstone are regular medical education research collaborators who have addressed issues of EDI in merit-based forms of admissions in the scientific literature [See: De Freitas, C., Grierson, L., & Vanstone, M. (2019). When I say… merit. *Medical Education*, 53(9), 858-860.]. Through these initial conversations a process for developing a working group will be established. At this time, we anticipate extending invitations to members of the HSED Admissions Committee and Curriculum Committee, members of the wider FHS and McMaster faculty, and external consultants with particular expertise in issues of EDI and admissions and unique perspective as it pertains to the HSED program. In particular, we anticipate extending invitations to the Chair, Diversity and Engagement, Undergraduate MD Program (CAMPBELL) and Director, Indigenous Students Health Sciences Office (SOUCY). With respect to external consultation, we anticipate extending invitations to Chante DeFreitas and Kayonne Christy. DEFREITAS and CHRISTY were both admitted to the HSED program and awarded OGS graduate scholarships within our program. DeFreitas completed the program, *summa cum laude,* and completed thesis work on barriers to students from low-income families in gaining admission to health professional training programs. Christy is co-founder of the BAP-MAC group, and declined the HSED offer, choosing rather to pursue a Master of Sociology at UBC. The HSED Program is prepared to offer financial stipends to engage with external consultants and active students on this matter.

Timeline for Addressing Recommendation: Working group to be established during the Summer 2020 term (approx. July 1st, 2020), with the hopes of developing an implementable plan in advance of the Winter 2021 admissions cycle (January 2021).

[**Return to Chart**]

Recommendation 5

Consider having potential supervisors provide input regarding admissions of students into the thesis stream of the program.

Proposed Follow-up: This is already a fundamental part of the process of matriculating students into the thesis-based stream. Students are required to secure a Supervisory commitment before they can be admitted into thesis studies. The Program office facilitates these relationships for interested students as they develop their packages. Furthermore, potential faculty supervisors are invited to review files for all applicants that have indicated an interest in thesis studies. Faculty that express interest in supervising any of these students are connected to the individuals. The relationship between student and faculty is considered when determining acceptance into the Program.

Responsibility for Leading Follow-up: The Assistant Dean, HSED (GRIERSON) will ensure these processes continue.

Timeline for Addressing Recommendation: The recommendation is already being addressed as suggested.

[**Return to Chart**]

Recommendation 6

Consider how critical social sciences and humanities perspectives could be integrated.

Proposed Follow-up: See response to Recommendation 1. The described response to that recommendation will enhance our ability to integrate social sciences and humanities approaches into our curriculum. Similarly, recruiting Faculty contributors to facilitate the response to Recommendation 1 will provide additional means to add these forms of expertise to our Program.

Responsibility for Leading Follow-up: See described responsibilities for Recommendation 1.

Timeline for Addressing Recommendation: See described timeline for Recommendation 1.

[**Return to Chart**]

Recommendation 7

Consider whether alumni could be more fulsomely integrated into the program as instructors and/or mentors.

Proposed Follow-up: We appreciate this Review comment and are delighted to hear that our alumni are interested in contributing to the Program after graduation. We will work to develop a mentorship opportunity for the HSED Program. We will organize this in a manner aligned with the MERIT membership program that works to build our local community of health professions education expertise. This mentorship will offer instrumental direction and resource to interested alumni as well as opportunities to work with students as they manage their Program requirements. These interactions will be essential at Program outset, during academic planning, and as learners prepare their Capstone Portfolios. We envision

the mentors serving as assignment assessors and, where there is alignment in expertise, as instructors in courses. The mentorship program will also facilitate mentor growth into larger teaching roles (i.e., thesis supervisory committee work; course coordination). Resources for mentors will be developed in concert with MERIT and the FHS Program for Faculty Development (PFD) at McMaster University.

Responsibility for Leading Follow-up: The Assistant Deans of the HSED, PFD, and MERIT programs (GRIERSON, CHAN, SHERBINO) meet regularly to discuss conjoint program operations. Drs. Grierson, Chan, and Sherbino will be responsible for following up on this recommendation.

Timeline for Addressing Recommendation: Given the integrated nature of the 3 programs, the resources currently available in the PFD Program, MERIT's established membership, and the HSED practice of matriculating graduates into the MERIT community, we are well positioned to articulate the foundations of a mentorship program in short order. We anticipate the details of the program to be developed, as we come to understand the interests of alumni, over time. However, we will aim to have the first iteration of a mentorship opportunity for alumni in place in advance of our the 2020-21 offering of HS EDUC 700 (Residency Week 1), which has been modified this year to accommodate the public response to of COVID-19 pandemic. This curricular component is scheduled as a virtual offering for September 7th-8th, 2020. We will build and revise the mentorship program so that it is more integrated and operational in time for the 2021-22 offering residency weeks.

[**Return to Chart**]

Recommendation 8

Explore whether there are other opportunities to identify, and communicate, with students who may be struggling or falling behind.

Proposed Follow-up: Review of our student files indicates that the students most likely to fall behind in our Program are those early in their health professional training career and establishing their clinical practice. Often times, they are concurrently completing another postgraduate degree in a clinical field. These students regularly find themselves with more professional work than anticipated, and are unable to maintain as much progress in HSED as they had anticipated. Interestingly, these students will also be hesitant to declare their challenges with progress, expressing the notion that they need to demonstrate excellence in all facets in order to be perceived favourably in their clinical field. The Program has already initiated discussions with the Vice Dean, HSGS (HANNA) and the FHS Professionalism Chair (WALTON) regarding approaches to identifying and supporting these students. This activity will continue.

There are also opportunities for more active monitoring of student engagement within courses through metrics pertaining to student activity in the course discussion forum that are made available via the Avenue-2-Learn Learning Management System. For the 2020-21 academic year, the HSED Program will commit to reviewing student engagement metrics for all courses at the 1/3 mark of each academic term. These metrics will be assembled and discussed with respective Course Coordinators. Course Coordinators will be encouraged to contact those students for whom engagement levels are concerning to determine whether there are contextual influences that are impacting their ability to participate in the course. These conversations will be a foundation for determining appropriate accommodations to facilitate student

success in the course as well as the Program. After initial discussions, course coordinators will continue to make concerted effort to monitor the subsequent engagement of these students. Students that continue to demonstrate difficulty will be connected with the Assistant Dean, HSED (GRIERSON) for consultation and discussion about academic planning and access to student support resources. Course coordinators will also be reminded to review class activity pertaining to the completion of assignments and performance on evaluations. They will similarly be directed to contact students that are demonstrating challenges in these areas.

Responsibility for Leading Follow-up: The Assistant Dean, HSED (GRIERSON) will be responsible for continuing the current discussions about supporting busy early-career professionals in the Program. Each Course Coordinator will be responsible for increasing monitoring and contact with students demonstrating indicators of disengagement.

Timeline for Addressing Recommendation: Resources will be developed over the Summer 2020 term, and Course Coordinators will receive direction and guidance about enhanced monitoring at the beginning of the forthcoming term (September 2021).

[**Return to Chart**]

Recommendation 9
Consider upgrading the program coordinator to a program manager

Proposed Follow-up: We agree that the current Graduate Officer (RADOMIROVIC) is indispensable to the HSED Program, and we appreciate the Reviewers' recommendation for re-considering her role with the Program. We will begin a review of the roles and responsibilities carried out by the Graduate Officer, the relevant positions in comparable graduate programs in the FHS, and the Officer's personal and professional aspirations. As information is gathered, we will pursue reconfiguration of the position, as necessary, in order to ensure that the Program's needs are appropriately met and that the individuals that provide service to the program are appropriately recognized for their contributions.

Responsibility for Leading Follow-up: The Assistant Dean, HSED (GRIERSON) will lead this review, seeking support from administrative leaders in HSGS and Education Services at McMaster University. In particular, the process will begin via discussion with the HSGS Program Manager (BJELIC) and the Executive Director, Education Services (TROY-HEMPEY) to determine appropriate processes that are consistent with McMaster University's hiring and promotion policies.

Timeline for Addressing Recommendation: Dr. Grierson will initiate these meetings for early July 2020.

[**Return to Chart**]

Recommendation 10
Consider redundancy in leadership to allow for succession and alleviate burden

Proposed Follow-up: The Program will discuss with the Curriculum Committee the dissociation of the role of Curriculum Chair from that of the Assistant Dean, HSED. This arrangement had proved effective

elsewhere in the HSED Program. Specifically, Dr. Meredith Vanstone serves currently as the Admissions Chair for the Program, which frees Dr. Grierson from review of applicant files. This arrangement works well insofar that it allows Dr. Grierson to offer information and direction to candidates without creating conflicts of interest around the admissions process. A similar dissociation of leadership for curriculum would alleviate burden while also providing greater opportunity for other perspectives to come to the fore.

The Program will consider the development of an Assistant Director role for the HSED Program. The potential for such a role will be discussed with Program Manager, HSGS (BJELIC) and Executive Director, Education Services (TROY-HEMPEY) in early July 2020.

Responsibility for Leading Follow-up: The Curriculum Committee will consider the dissociation of the role of Chair, Curriculum Committee and Assistant Dean, HSED. The Assistant Dean, HSED will discuss an Assistant Director role with HSGS Program Manager (BJELIC) and Executive Director, Education Services (TROY-HEMPEY).

Timeline for Addressing Recommendation: The Curriculum Committee will be approached about the Chair position at its next scheduled meeting (September 15th, 2020). The Assistant Dean, HSED will approach HSGS and Education Services in early July 2020 to discuss the possibility of an Assistant Director position in the Program.

[**Return to Chart**]

Recommendation 11
Integrate some expertise in other areas of education

Proposed Follow-up: See response to Recommendation 1. The described response to that recommendation will enhance our ability to integrate social sciences and humanities approaches into our curriculum. Similarly, in recruiting Faculty contributors to facilitate the response to Recommendation 1 will provide additional means to add these expertise to our Program.

Responsibility for Leading Follow-up: See described responsibilities for Recommendation 1.

Timeline for Addressing Recommendation: See described timeline for Recommendation 1.

[**Return to Chart**]

Recommendation 12
Consider a part-time thesis option to alleviate the need to provide a stipend.

Proposed Follow-up: We appreciate the Reviewers' recommendation and understand their desire to promote the alleviation of student stipends through part-time studies. The Program offers a part-time thesis currently, but reserves admission to this stream to those individuals that are not in position to pursue full time theses because they are restricted by full time work responsibilities within the McMaster community. The reason for this is that notions of "thesis" work are rarely aligned with notions of "part

time" studies. The mis-alignment between these two was brought to our attention by the previous Vice Dean, HSGS (HAYWARD), with indication that it may put faculty in difficult positions with respect to the support they provide thesis students during the periods that they are not formally enrolled in studies. Thus, we moved accordingly to dissuade the part-time thesis option.

Tangentially related to this recommendation, the Program has an unfortunate history of admitting full-time thesis students into the Program and not providing any stipend. It has been an explicit effort on behalf of the current Program leadership to ensure that all full time thesis students receive a stipend commensurate with other graduate programs at McMaster University. We feel that this process, while not well received by many faculty, will ensure a higher caliber of thesis student and greater sense of commitment from faculty. Collectively we believe that this will promote better learner success in their program. From this perspective, we anticipate that our new stipend process will encourage students to complete the program in time and will give way to better scholarly outputs associated with thesis completion (i.e., peer reviewed publications).

We will continue to monitor the progress of the limited number of students in the part-time thesis stream, working to identify those features of the program that may be enhanced to create more opportunity in this stream without serving as a work-around for providing the financial support that thesis students need and deserve.

Responsibility for Leading Follow-up: The Assistant Dean, HSED (GRIERSON) will ensure that continuous quality assurance of the full-time and part-time thesis streams is maintained.

Timeline for Addressing Recommendation: Ongoing.

[**Return to Chart**]

Recommendation 13
Consider inviting stakeholders from outside of the program to participate in the Design Thinking Evaluation

Proposed Follow-up: The HSED Design Thinking Evaluation project is a pilot project funded through the MacPherson Institute (MI), which is designed to develop a foundation for understanding online approaches to graduate education across the FHS at McMaster University. Accordingly, a plan for engaging stakeholders is already an inherent feature of the evaluation design.

Responsibility for Leading Follow-up: The MI funding has been awarded to HSED Faculty Member, Dr. Ilana Bayer, who is responsible for all aspects of the Design Thinking Evaluation Project.

Timeline for Addressing Recommendation: Ongoing.

[**Return to Chart**]

Recommendation 14
Considering broadening curriculum committee membership to allow a less insular structure

Proposed Follow-up: We are excited about this recommendation. It will be refreshing to include other perspectives into the Curriculum Committee. We intend to pursue a response to this recommendation in sequence with our response to Recommendation 10. In particular, we will invite the new Chair, Curriculum Committee to include members from outside of the HSED faculty as advisors and contributors to this committee. By allowing the new Chair to make these invitations, we feel that we are responding in a way that captures the essence of a less insular approach to Program governance.

Responsibility for Leading Follow-up: Chair, Curriculum Committee

Timeline for Addressing Recommendation: Considerations for a new Chair, Curriculum Committee will begin September 15th, 2020. We anticipate invitations for membership to be circulated such that a new, outside member may be added to the Curriculum Committee for the January 12th, 2021 meeting.

[**Return to Chart**]

Recommendation 15

Consider increased collaboration with/representation from the Program for Faculty Development to be more integrated with this graduate program. Given Dr. Teresa Chan's role in both programs, we see potential for increased collaboration.

Proposed Follow-up: See response to Recommendation 7

Responsibility for Leading Follow-up: See response to Recommendation 7

Timeline for Addressing Recommendation: See response to Recommendation 7

[**Return to Chart**]

Faculty Response

The Dean thanked the reviewers for their thorough, thoughtful, and constructive review of the Master of Health Science Education Graduate Program and appreciated that the reviewers identified strengths of the program including the student-centered and interprofessional approach, the program's focus on continuous quality improvement, the high caliber of the online courses and participating faculty, and the excellent leadership provided by Dr. Grierson as "a clear driver of success in the program."

They also thanked the reviewers for their thoughtful work in identifying areas for improvement and their specific recommendations. The Dean reviewed the program's response to the review and strongly support Dr. Grierson's detailed plan for addressing the recommendations. In relation to international recruitment, the Faculty will work with the program to ensure that its plans for international enrolment align with the Faculty's overall internationalization and graduate enrolment strategies. The Faculty will also work with Dr. Grierson to ensure that the duties of the program coordinator role are correctly aligned with the appropriate job category, and to consider whether the appointment of an Assistant Director is feasible and required for a program of this scale.

Quality Assurance Committee Recommendation

That the Quality Assurance Committee recommend that the Health Science Education M.Sc. program should follow the regular course of action with an 18-month progress report and a subsequent full external cyclical review to be conducted no later than 8 years after the start of the last review

FINAL ASSESSMENT REPORT

Institutional Quality Assurance Program (IQAP) Review

Health and Radiation Physics and Radiation Sciences Graduate Programs

Date of Review: March 3rd and 4th, 2020

In accordance with the University Institutional Quality Assurance Process (IQAP), this final assessment report provides a synthesis of the external evaluation and the internal response and assessments of the graduate programs delivered by Radiation Sciences. This report identifies the significant strengths of the program, together with opportunities for program improvement and enhancement, and it sets out and prioritizes the recommendations that have been selected for implementation.

The report includes an Implementation Plan that identifies who will be responsible for approving the recommendations set out in the Final Assessment Report; who will be responsible for providing any resources entailed by those recommendations; any changes in organization, policy or governance that will be necessary to meet the recommendations and who will be responsible for acting on those recommendations; and timelines for acting on and monitoring the implementation of those recommendations.

Executive Summary of the Review

In accordance with the Institutional Quality Assurance Process (IQAP), the Radiation Sciences program submitted a self-study in January 2020 to the Vice-Provost and Dean of Graduate Studies to initiate the cyclical program review of its graduate programs. The approved self-study presented program descriptions, learning outcomes, and analyses of data provided by the Office of Institutional Research and Analysis. Appendices to the self-study contained all course outlines associated with the program and the CVs for each full-time member in the department.

Two arm's length external reviewers and one internal reviewer were endorsed by the Dean, Faculty of Science, and selected by the Vice-Provost and Dean of Graduate Studies. The review team reviewed the self-study documentation and then conducted a site visit to McMaster University on March 3rd and 4th, 2020. The visit included interviews with the Provost and Vice-President (Academic); Vice-Provost and Dean of Graduate Studies, Associate Dean, Grad Studies and Research, Director of the program and meetings with groups of current students, full-time faculty and support staff.

The Director of the Program and the Dean of the Faculty of Science submitted responses to the Reviewers' Report (May 2020 and January 2021). Specific recommendations were discussed and clarifications and corrections were presented. Follow-up actions and timelines were included.

Strengths

- As it is currently constructed and operating, the Radiation Sciences Graduate Program provides a strong foundational training and education for its students. Interactions with faculty appear to be extremely productive and collegial. Faculty are accomplished and, in multiple instances, are considered to be internationally recognized leaders in their respective fields. The program has an excellent history in producing HQP and it is the opinion of the reviewers that it can continue in this capacity moving forward. Invested resources at this time are appropriate for the size and scope of the program. There has been renovation of existing space in order to provide for excellent housing of the current trainees and administrative staff.

Areas for Enhancement/Improvement

- (from section 8) The placement of Radiation Sciences underneath the "umbrella" of the Department of Physics appears to have been done for administrative or budgetary simplicity rather than for a reason related to the academic mission. Given the potential growth opportunities for the Department moving forward and an expansion of its current mission and profile, removing the Department from Physics and allowing it to grow with a dedicated leadership and vision (perhaps re-branded as "Radiation Medicine" or something similar) is considered by the reviewers to be an appropriate step at this time.
- (from section 7) There may be an opportunity to re-structure the program as an independent Department (with a modified title: "Radiation Medicine"?), with its own Chair, that specializes in four distinct efforts:
  - Radiation Biology: this would require some investment for succession planning, although there are also outstanding mid-career investigators in place that can lead more innovative approaches into human- and animal-health as well as environmental impacts of radiation exposure. This would be an academic stream leading to traditional graduate outcomes.
  - Health Physics: this might be the most promising effort for Radiation Sciences, as it will culminate in the desired professional Masters program. As this would be an on-line delivery, it would require support for its development and launch, but would be internationally appealing (based on the program history and current international need) and should be revenue generating as it would represent a significant option for continuing development for professionals seeking the opportunity.
  - Clinical Medical Physics (CAMPEP): this also has potential for significant returns on investment, although somewhat more difficult to envision than the Health Physics program discussed above. The Canadian marketplace for CAMPEP is already very crowded, with ~13 graduate programs already accredited, and there is some concern that this number may already be oversaturating the demand in radiation physics. What would make McMaster unique as compared to its competitors? It would also require a significant increase in the research funding of the involved faculty to support the trainees. This could perhaps be buffered if the Health Physics program is revenue generating, but this considered to be of secondary importance to the Health Physics Program.
  - Radiation Physics: this would be the default program within the Department that trains students on the fundamental aspects of the discipline leading to traditional outcomes. This would share some crossover with Radiation Biology, but with obvious differences in the final product.

- (from section 1) The geographic distribution appears to be a concern that will only grow in time. A significant number of students are currently in a position where significant amounts of their time is spent traveling back and forth between main campus and the Cancer Center. This travel is associated with not only their coursework requirements, but also for their TA duties. The amount of time that is essentially lost and utterly unproductive on a weekly basis is considerable and can easily reach 10 hours/week/student based on a rough estimate. This concern is also present for the faculty members in the Department that must move between campuses regularly for curricular delivery, etc.

  McMaster University and the program in Radiation Sciences is at a crossroads with multiple potential pathways. Left alone, with minimal investment and housed underneath the Department of Physics, the program in Radiation Sciences will likely continue to move forward with low student numbers, a reputation that will become increasingly difficult to maintain, and a faculty that will struggle to maintain sufficient funding to attract and retain more PhD students.

  It is recommended that McMaster University engage in a process by which the historic strengths of the program, in combination with the Juravinski Cancer Center and the existing infrastructure in the region are re-evaluated in the context of a broader interdisciplinary academic and continuing professional development mission.

  Can McMaster build on the existing and historic strengths of the program in order to fully integrate the basic sciences established within Radiation Sciences with Oncology, health outcomes, epidemiology, etc.? As noted by one of the reviewers "this is medical physics, where is the integration with the medical programs?" A similar approach can be taken with the program expertise in Radiation Biology, where the impact of radiation on human, animal and environmental health outcomes is a critical area for investigation and McMaster appears to be almost uniquely situated to capitalize on this opportunity.

  The faculty in Radiation Biology have world-class reputations in an area which can be broadly described as Low Dose Radiation Biology. This is a rapidly developing and very important field which, in fact these investigators had a large part in creating with implications in many areas including environmental, ecological, human health and long-term effects of therapy. Research in other areas of Radiation Biology is however still of more than historical importance and it may be that collaborations with Molecular Biologists and research-oriented Radiation Oncologists would be worth exploring.

  From the Continuing Professional Development perspective, it is recommended that the investment into the Masters in Health Physics be continued and, potentially, expanded. This is considered to be an additional area in which McMaster and the region have a competitive advantage over the vast majority of other institutions and that their strong reputation for producing HQP from the program can lead to significant professional and economic benefits. While there is a strong desire on the part of the faculty and students in the program to earn CAMPEP accreditation, and the history of the program and the infrastructure surrounding it certainly makes this appealing, it is unclear that the current funding profile of the faculty will be sufficient to make this investment of time and resources beneficial. It is suggested that this be developed in the aftermath of the Health Physics program, with potential revenue generation buffering the costs associated with additional trainee investment into CAMPEP.
- (from section 3) There was some concern expressed by faculty and students that the first year was very heavy with courses, and that some flexibility would be appreciated so that courses could be selected that are aimed at specific student research areas, and to allow time for research in the lab during the first critical year. The role of and support for the faculty at the

Cancer Center in the evolution of the program needs to be seriously considered. Their involvement will be vital for the program moving forward on multiple fronts, but there appears to be no attention paid to succession planning or support for these members of faculty.

- (from section 4) It is strongly encouraged that more formalized approaches be developed for graduate student presentations of research to broader groups (with the opportunity to receive feedback). Attendance at appropriate clinical Grand Rounds should be strongly encouraged/mandatory.
- (from section 7) More novel areas of investigation such as radiomics, advanced data analytics, AI/machine learning, and direct engagement with the clinical operations were not discussed to a meaningful extent. This is an area for concern as it suggests that there are opportunities on which McMaster may not be capitalizing.

Summary of the Reviewers' Recommendations with the Department's and Dean's Responses

Recommendation	Proposed Follow-Up	Responsibility for Leading Follow-Up	Timeline for Addressing Recommendation
Geographic isolation	a) Shuttle b) Enhanced IT c) Event scheduling	Hunter & JCC faculty Chettle/Rheinstadter	Initial evaluation by Dec 2020
(JCC) faculty research funding	Provide low cost access to research students	Hunter Chettle/Rheinstadter	Initial evaluation by Dec 2020
Deeper links with JCC	CAMPEP may lead to greater engagement	Hunter Rheinstadter/Luke	Present recommendation to Dean of Science by May 2021
Succession planning	New appointment in Medical & Biological Physics New faculty appointments	Luke with P&A in consultation with JCC & other key stakeholders	Initial evaluation by May 2021 Full proposals emerging over 2021-24
Community Engagement	Closer links with current graduate student activities in P&A	Rheinstadter	Emerging discussion & integration during 2020-21 academic year
Radiation Biology succession planning	Discussions between P&A and Biology and between Physics and Radiation Oncology at the JCC	Rheinstadter/Chettle with Dept Biology Hunter with Radiation Oncology	
Professional MSc in Occupational Health Physics	Working group engaged in development	Byun with working group	Submit proposal to Faculty of Science for September 2020, follow established time line

	Consult MacPherson re on-line resources		
CAMPEP costs/benefits	Continued evaluation by working group	Wierzbicki & Hayward with Chettle & Rheinstadter	Seek financial advice from within Faculty of Science by end of June 2020, submit proposal to Faculty of Science by September 2020
1st year course heavy	Move Med Phys 775 from Fall to Winter	Byun	Implement for Winter 2021, evaluate at end 2020-21 academic year
Grad student seminars	Participation in P&A Symposium Day Establish journal clubs	Rheinstadter, JCC faculty, Mothersill/Seymour, Byun	Continue existing participation in P&A Symposium Day Establish or re-emphasise journal clubs by December 2020.
Attendance at Grand Rounds	Encourage attendance at P&A colloquia	Rheinstadter and Radiation Sciences faculty supervisors in Med Phys and Health Phys	Renewed emphasis for start of 2020-21 academic year
Radiomics etc.	Include in criteria for succession planning & search criteria	Luke and P&A search committee	Include in discussions beginning September 2020, hopefully resulting a successful search by July 2021.

Faculty Response

 The Dean thanked the review team for their constructive report on the Radiation Sciences Graduate Program and was pleased to see recognition of both the strong international reputation of the faculty in the program and the quality of the training being provided to the students. This program was rehomed within the Department of Physics and Astronomy after the dismantling of the former Department of Medical Radiation Sciences in 2015. While the reviewers offered the suggestion of developing an entirely new Department to house the program as a means to address its perceived isolation, we agree with the program leadership that keeping it placed within the Faculty of Science makes the most sense at the present time. We will support the program in further developing interdisciplinary partnerships within the Faculty of Science and in strengthening their existing linkages with other Faculties. To address one of the concerns about succession planning, we are currently in the process of searching for a new tenure stream faculty appointment in the area of Medical and Biological Physics for a proposed July 1, 2021 start date.

The recommendations made by the review team for enhancement have been carefully considered by the program leadership, and some of these (related to the course balance of the curriculum and increased engagement of graduate students in seminars/colloquia/grand rounds) have been addressed

already. The geographic isolation is an ongoing challenge, but the program is exploring various ways to deal with this issue. We agree with the reviewers that a major first initiative should be the development of the professional Masters in Occupational Health Physics, and the department is in the final stages of completing their proposal for this program. We also agree that it would be wise to delay the process for gaining CAMPEP accreditation until the new professional Master's program is underway, as revenue from the Health Physics Masters could help buffer the costs associated with the CAMPEP accreditation.

One of the new developments at McMaster which will help guide us in the implementation of initiatives with the Radiation Sciences program is the pending arrival of a new Assistant Vice President (Nuclear) in April, 2021. This is a new position designed to advance McMaster's role as a global leader in nuclear research and we expect that the new VP will work closely with the Radiation Sciences graduate program to both enhance the existing research enterprise and develop/lead new initiatives related to research-driven economic development and commercialization.

The Faculty of Science is committed to supporting the Department of Physics and Astronomy as it moves forward with the action plan associated with this review. Together with the program leadership will work to enhance the many strengths while continuing to reflect on our processes to engage in continued program enhancement.

Quality Assurance Committee Recommendations

That the Quality Assurance Committee recommend that the Radiation Sciences Program should follow the regular course of action with an 18-month progress report and a subsequent full external cyclical review to be conducted no later than 8 years after the start of the last review.

McMaster University
DRAFT Youth in Extended Society Care/Crown Ward Program Briefing Note[1]
Access Strategy
April 2021

Context: In February 2021, McMaster announced a new initiative in collaboration with the Child Welfare Political Action Committee Canada (Child Welfare PAC) committing to providing tuition support for current and former youth in the care of the Children's Aid Society who are pursuing their first undergraduate or graduate degree for up to 20 academically qualified students[2]. This program aligns with and will be housed under McMaster's Access Strategy, launched in 2019, which develops pathways and supports students from a variety of underrepresented groups in accessing university education. This proposed program is a pilot for the first year.

Undergraduate

Eligibility Criteria

- Will or have expired out of extended society care in Ontario (not publicly adopted) in the Greater Golden Horseshoe Area[1] with a minimum of one year in extended society care*.
- Self-identify through the OSAP application process and provide the supporting documentation (Verification of Status with Children's Aid Society Form – OSAP).
- Be a permanent resident, refugee, or citizen of Canada.
- Apply for non-repayable grant funding through full-time or part-time OSAP each academic year. Students are not required to apply for loan funding[2].
- Demonstrate financial need (Eligibility for a minimum of $1.00 of grant funding on OSAP assessment).
- Received an offer of admission to McMaster University and meet the final admission conditions of the offer.

*Students who do not meet these criteria can still apply for other funding opportunities.

Application fees: The Ontario government has a process to refund university application fees for individuals who are or were in extended society care in Ontario and are entering their first postsecondary degree, diploma, or certificate.

Applicant Process

1. Apply for admission to McMaster University, in the program of choice via the 101 (current high school student) or 105 (not a current high school student) OUAC application portals.
2. Self-Identify as a former or current youth in extended society care by completing the Youth in Extended Society Care support application including the Verification of Status with Ontario's Children's Aid Society Form – OSAP form by April 30.

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[1] Using the place of care accommodates students who are not applying to post-secondary programs directly from high school.

[2] For various reasons, individuals who were Crown Wards / Youth in Extended Care may not wish to apply for a loan. This at least grant only eligibility requirement is consistent with other post-secondary institutions in Canada and the prior Ontario government program that ran until 2017.

3. Apply for the Ontario Student Assistance Program (OSAP) for your academic year when it becomes available and submit all required supporting documents including the [Verification of Status with Ontario's Children's Aid Society Form – OSAP](#) form
4. The Aid & Awards team will review the application for completion and advise the Access Program.
5. The Access Program Manager (or delegate) will contact the student to provide non-financial support options like those in the Access Strategy.
6. The Aid & Awards team will contact the student to indicate eligibility before OUAC decision deadlines.
7. Funding is released during the academic year with OSAP confirmation to the student account.

Graduate

Eligibility Criteria

- Expired out of extended society care in Ontario (not publicly adopted) with a minimum of one year in extended society care*.
- Self-identify through the OSAP application process and provide the supporting documentation ([Verification of Status with Children's Aid Society Form – OSAP](#)).
- Be a permanent resident, refugee, or citizen of Canada.
- Apply for non-repayable grant funding through full-time or part-time OSAP each academic year. Students are not required to apply for loan funding[3].
- Demonstrate financial need (Eligibility for a minimum of $1.00 of grant funding on OSAP assessment).
- Received an offer of admission to McMaster University and meet the final admission conditions of the offer.

*Students who do not meet these criteria can still apply for other [funding opportunities](#). In exceptional circumstances, there may be availability for out of province Canadian citizens, permanent residents and refugees for graduate program access.

Applicant Process

1. Be an offer holder for a funded Graduate program at McMaster University.
2. Self-Identify as a former or current youth in extended society care by contacting the Aid & Awards office to submit required forms including the [Verification of Status with Ontario's Children's Aid Society Form – OSAP](#) at least 30 days before program start date.
3. Apply for the Ontario Student Assistance Program (OSAP)[4] including providing [Verification of Status with Ontario's Children's Aid Society Form – OSAP](#)
4. The Aid & Awards team will review the application for completion and advise the Office of Graduate Studies for review.

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[3] For various reasons, individuals who were Crown Wards / Youth in Extended Care may not wish to apply for a loan. This at least grant only eligibility requirement is consistent with other post-secondary institutions in Canada and the prior Ontario government program that ran until 2017.

[4] The OSAP eligibility requirement facilitates the determination of need. It also precludes unfunded programs. OSAP eligibility also allows for the disbursal of income exempt bursary monies.

5. The Aid & Awards team will contact the student to determine the amount of funding needed on a case-by-case basis upon OSAP confirmation. This amount will vary depending on the funding package. Aid & Awards will coordinate payment to the student account.

Current Students

Proposed Process for Current Students - Identified as Crown Wards

1.   Aid & Awards will contact the students to determine if they meet the general eligibility criteria and review their current financial situation.
2.   The Aid & Awards team will contact the student to determine the amount of funding upon OSAP confirmation.

Budget:
Assuming the lowest cost option – B.A. tuition and supplementary fees, the maximum per person cost is $8045 (2020-21 tuition framework). This translates into a minimum of $160,900 (2020-21 tuition framework) for a maximum of 20 students in the system over all careers and years. Depending on the tuition framework decision made, this may be much higher.

The current Aid & Awards and Graduate Studies budgets do not have the capacity to meet this cost as the bursary budget line has remained unchanged with student numbers and need increasing year over year. This will be an ask at budget committee time.

Priority
For the first year of this program, priority should be given to current McMaster students who meet the eligibility criteria. Next, priority will be given to a proportional representation of graduate and undergraduate students. A review committee, like that for the Access Strategy Award process, will select students if the number applying outstrips the spaces available.

Recommendations: In a steady state, 20 students participating in this program over all careers and years, grandfathering those currently at McMaster into the program until graduation on top of the total commitment. For 2021/22, up to five new entrants to the program whether they are students being reinstated or new applicants. Optimally, there will be a balance appropriate to the proportion of undergraduate to graduate students at McMaster, but flexibility is available depending on need. Graduate Studies is examining the use of an Adjusted Need Assessment with the maximum value of the full cost of tuition, supplemental fees/associated fees due to the variance in funding packages. For Undergraduate students, exploratory work is still being done to see how to best advantage crown ward students but regardless of methodology, the maximum will be full tuition.

Institution's Adjusted Need Assessment – for reference

"Where adjusted institutional need assessments are used to compare student costs to resources, the institutions' standardized assessment does not need to be the same as the OSAP assessment but should be reasonable and consistently applied.

Examples of adjustments that institutions may make to cost assumptions, to improve the adequacy of support for students, include:

•   *Adjusted personal and living cost allowances:* Institutions may recognize higher standard living costs for students than the OSAP personal and living allowance.

•   *Residence fees*: Institutions where actual residence fees exceed the OSAP personal and living allowance may recognize actual residence fees for applicants in residence.

•   *Actual Book, Equipment and Supply Costs:* Institutions may recognize actual book, supply, and equipment costs without applying OSAP per category or per term ceilings. This includes field trip/student exchange related costs.

•   *Actual Child Care Expenses:* Institutions may recognize actual Child care expenses without applying OSAP per child maximums;

•   *Actual Mandatory Computer Costs:* Institutions may recognize mandatory computer purchase or lease expenses required by the institution for the student's program of study."

Page 11 and 12, OSAP Bursary Recording System manual, 2020-21 (August 2020).