Senate

Wednesday, May 12, 2021 at 3:30 PM
Zoom

AGENDA

NOTE: Members who wish to have items moved from the Consent to the Regular Agenda should contact the University Secretariat before the Senate meeting. Members may also request to have items moved when the Agenda is presented for approval.

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A. OPEN SESSION

OPENING REMARKS

1. APPROVAL OF AGENDA – OPEN SESSION

CONSENT

2. MINUTES OF PREVIOUS MEETING – APRIL 14, 2021 (OPEN SESSION)

REGULAR

3. BUSINESS ARISING

4. ENQUIRIES

5. COMMUNICATIONS

6. REPORT FROM GRADUATE COUNCIL

For Approval
1. Curriculum Revisions - Faculty of Engineering
2. Curriculum Revisions - Faculty of Humanities

For Information
3. Faculty of Business
4. Faculty of Engineering
5. Faculty of Humanities
6. Faculty of Social Sciences
7. Graduate Calendar Administrative Section Revisions
8. New Awards

4 - 48 Graduate Council Report (APPROVAL/INFORMATION)

7. REPORT FROM UNDERGRADUATE COUNCIL

For Approval
1. Revisions to Certificate and Diploma Programs

2. Establishment of New Certificate and Diploma Programs
3. Closure of Certificate and Diploma Programs
4. Discontinuance and Removal of the Certificate of Completion Parchment
5. Addenda to Curriculum Revisions for Inclusion in the 2021-2022 Undergraduate Calendar

For Information
6. Terms of Awards
7. New Certificate of Attendance Programs
8. New Certificate of Completion Programs
9. Revisions to Certificate of Completion Programs
10. Addenda to Curriculum Revisions for Inclusion in the 2021-2022 Undergraduate Calendar
11. Revised 2021-2022 Sessional Dates

49 - 174 Undergraduate Council Report (APPROVAL/INFORMATION)

8. REPORT FROM THE FACULTY OF ENGINEERING

175 - 225 a. Engineering By-Laws - tracked version (APPROVAL IN PRINCIPLE)
b. Engineering By-Laws - clean version

9. REPORT FROM THE UNIVERSITY PLANNING COMMITTEE

For Approval
1. Proposal for the Establishment of the Centre for Excellence in Protective Equipment and Materials (CEPEM)
2. Proposed Revisions to the Guidelines for the Governance and Review of Research Institutes, Centres, and Groups

226 - 264 University Planning Committee Report (APPROVAL)

10. REPORT FROM THE COMMITTEE ON APPOINTMENTS

For Approval
1. SPS A5 Revisions
2. ToR Revisions
3. Establishment of the Douglas Holder/PHRI Chair in Interventional Cardiology

265 - 288 Committee on Appointments Report (APPROVAL)

11. OTHER BUSINESS

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Fax 905.521.0689
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REPORT TO SENATE
from
GRADUATE COUNCIL

For Approval

I. Curriculum Revisions - Faculty of Engineering (attachment I)

At its meeting on April 20th, Graduate Council approved, for recommendation to Senate, the addition of a new research field in Smart Systems Engineering for the Department of Engineering Physics and new stream in Process Systems for the M.Eng in Systems and Technology offered by the School of Engineering Practice and Technology.

It is now recommended,
that Senate approve the revisions, for inclusion in the *2021-2022 Graduate Calendar*, as recommended by the Faculty of Engineering and set out in the attached.

II. Curriculum Revisions - Faculty of Humanities (attachment II)

At the same meeting Graduate Council approved the addition of a new dual degree stream for the Classics M.A. and a change to the program name for the M.A. and Ph.D. Graduate Diploma from Gender Studies and Feminist Research. The programs will now be called Gender and Social Justice.

It is now recommended,
that Senate approve the revisions, for inclusion in the *2021-2022 Graduate Calendar*, as recommended by the Faculty of Humanities and set out in the attached.

For Information

III. Faculty of Business

At the same meeting Graduate Council approved changes ot the requirements for the Analytics Specialization in the MBA program, to better align with the standard for other specializations in the program and a change to the elective options for the Blended-Learning Part-time MBA.

IV. Faculty of Engineering

At the same meeting Graduate Council approved the following changes proposed by the Faculty of Engineering:

- Changes to calendar copy for clarity and to remove ambiguities for the M.Eng and M.A.Sc. degrees and a change to course requirements at the Ph.D. level to better align with the rest of the Faculty for Engineering Physics.
- A change to the comprehensive requirements for Materials Science and Engineering to move from a two-part examination plus a research proposal examination to a single part comprehensive examination and a research proposal examination and a change to calendar copy to remove redundant information.

- A change to the calendar copy for the M.A.Sc. and Ph.D. in Electrical and Computer Engineering to ensure that the description of course requirements is clearer, particularly as it relates to the number of 600-level courses allowed and courses outside the department.
- A change to the course requirements for the Master of Engineering Design, consisting of an increase to the number of technical courses required for one of their streams, to ensure consistency.

V. Faculty of Humanities

At the same meeting Graduate Council approved a number of changes to calendar copy for the Gender Studies and Feminist Research (now Gender and Social Justice), to clarify current admission practices, existing requirements, to be consistent with other programs in the faculty with respect to the labelling of their research project, and to add a new arts-based research/research creation option to their existing project options.

Changes to the calendar copy and course requirements for the MCM program were also approved. The copy will now refer to units rather than credits to align with university terminology. Course requirements were adjusted to increase the number of required courses for the Public Relations Core and to adjust the list of required versus electives courses.

VI. Faculty of Social Sciences

At the same meeting Graduate Council approved changes proposed by the School of Social Work to revise the calendar copy and to add an additional course as an option for students to complete their requirements for their Masters degree and their Graduate Diploma in Critical Leadership in Social Services and Communities.

VII. Graduate Calendar Administrative Section Revisions

At the same meeting a number of changes to the administrative sections of the Graduate Calendar were approved. A summary of the changes is below and the full track-changes document is available at the following link:

https://macdrive.mcmaster.ca/d/ec31e54ff7974dda8074/

Sessional dates

Text was added to clarify that students taking courses outside of their home program are subject to the rules of the program in which its offered.

1.1. Programs of Study

The new Master of Public Policy was added to listing.

2.1.12 English Language Requirements

A duplicate reference to English language tests removed.

2.2 Application for Admission

Corrected use of ‘visa’ in favour of ‘study permit’.

2.3 Transfer/Advance Credit and Determination of course Equivalency

Updates include a correction to name of form to be used and additional clarity around the process.

2.5.1 Continuity of Registration

Language was added to note that some programs may include a scheduled break, referring people to program-specific section of the calendar to confirm.

2.5.3 Regulations for Full and Part-time Status
Text was added to clarify that part-time status may impact international students ability to fill conditions of their study permit and to note that part-time registration at McMaster and another institution is generally not allowed.

2.5.5. Enrolment – International Students on Study Permits
Updates include corrections to language and clarification of the process throughout this section.

2.5.7 Leaves of Absence
Text was added to clarify which form was to be used and to clarify how a leave might impact an international student.

2.6.4 Course Requirement and Designations
Change is a clarification to form to be used for course designation.

2.6.5 Courses Taken at Another Institution
Adjustments were made in this section to clarify current practice, including the form to be used - clarification to form to be used and to note that an official transcript is required.

2.6.10 Incomplete Grades
Text was changed to make it clear that an F would be applied if an incomplete is not cleared by the deadline.

3.1 General Regulations on Supervision
Text was added to note the times in which a non-graded supervisory committee meeting might be called.

3.2.5 Submitting a Final and Approved Thesis
A reference about the option to have a thesis bound was removed.

3.3.2 Program Progression
The term counts for Overtime and Out of time was added.

3.3.3. Thesis Defence
The text was adjusted in light of online defences, removing references to leaving rooms.

3.3.4 Project
There was an adjustment to the text to note that projects can be treated as courses or milestones, reflecting current practice.

4.1.1. Payment of Fees
A minor adjustment was made to remove the reference to paying for the ‘full year’ and changing it to be clear that they have to pay by the deadline.

4.1.2 Non-payment of fees or charges
A reference to at the end of the academic year’ was removed as there can be consequences for non-payment at different times.

5.10 Inter-University Cooperation – OVGS

Text was added noting an official transcript is required, reflecting current practice.

6.1.1 General Regulations
Text was added to clarify that if a student chooses to revise their consent, they have to contact the scholarships team in SGS.

6.2.1 Internal Awards
Updated text to note students apply through Awardspring and removed references to the general bursary.

6.2.2 External Awards Tenable at the University
Removed text noting that applicants must be invited by departments to submit application

VIII. New Awards

At the same meeting, Graduate Council approved the following new award:

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.

[Note: A complete file for the information items listed above is available in the Graduate Council office, cbryce@mcmaster.ca.]

McMaster University **SCHOOL OF GRADUATE STUDIES**

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

**Note – items for Senate consideration are highlighted in gray

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

**Note – items for Senate consideration are highlighted in gray

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 Department conducts research in five designated fields:

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

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

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

Nuclear Engineering covers a wide range of areas related to long-term development of nuclear applications, such as power reactors, medical radio-isotope production, materials research, nuclear imaging, and nuclear waste management. For its experimental research, the Department has access to on-campus facilities, such as the McMaster Nuclear Reactor (MNR), the Centre for Advanced Nuclear Systems (CANS), hot cells, thermalhydraulic test loops, a nuclear chemistry lab, and several accelerators

and sources, including a D-D fusion neutron source. The theoretical research areas include nuclear reactor physics, plant thermalhydraulics, actinide transport, safety system performance. CANDU reactors, generation-IV Small Modular Reactor (SMR) designs, and fusion technology. In addition to the facilities within Engineering Physics, there are several collaborations with other McMaster Engineering Departments as well as with other Canadian and international institutions in Nuclear Engineering. The NSERC/UNENE Chair and Associate Chair in Nuclear Safety Analysis are also located at McMaster University.

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

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

Research Facilities

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

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

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

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

University Network of Excellence in Nuclear Engineering (UNENE)

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

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

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

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

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

Enquiries: 905 525-9140 ext. 20168
Fax: 905 527-8409
Email: unene@mcmaster.ca
Websites: http://www.unene.ca
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. At least three of these half courses must be from Engineering Physics; The remaining half courses must be technical courses for which the candidate must obtain permission from the Department Associate Chair (Graduate). In addition, the candidate must complete the course ENG PHYS 733 (six units), an on-campus research project of four months duration to be pursued under the supervision of a faculty member in the Department. The subject area is to be chosen in consultation with the Department Associate Chair (Graduate) and the supervising faculty member. The project requires full-time attention and as such the student is expected not to take any other courses while undertaking the project. The project will normally take place during the summer term. The total unit count required for completion of the program is 30.

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

Transfer to the Ph.D.

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

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

Engineering Physics, M.A.Sc.

Master's Degree

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

M.A.Sc. Degree

Course Requirements

A candidate for the M.A.Sc. degree is required to complete a minimum of three half courses and a thesis; one of the three half courses may be at the 600-level; another one may be a non-technical course with written approval from the Supervisor. In addition to the minimum of three half courses, M.A.Sc. candidates are required to complete the seminar half course ENG PHYS 702. A minimum grade of B− must be obtained for all courses. The thesis topic is chosen in consultation with the Supervisor and must result in a written thesis.

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

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

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

Transfer to the Ph.D.

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

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

Engineering Physics, Ph.D.

Ph.D. Degree

Course Requirements

The general regulations for the degree Doctor of Philosophy appear earlier in the Calendar. Students with a Master's degree (from McMaster or elsewhere) are required to take two half courses, both at the 700 level. Students transferring from the M.A.Sc. program at McMaster to the Ph.D. program without completing the Master's degree or students entering the Ph.D. program directly from a Bachelor's degree without beginning an M.A.Sc. must complete a minimum of one additional half course at the 700 level beyond the M.A.Sc. requirement. In addition to the aforementioned courses, all Ph.D. candidates are required to have completed the mandatory seminar half course ENG PHYS 702. A minimum grade of B− must be obtained for all courses.

Comprehensive Examination

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

Thesis Proposal

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

Industrial Ph.D. Option

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

Engineering Physics Courses

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

Courses

The following 600-level courses are offered for graduate credit and are also available to senior undergraduate students:

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

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

ENG PHYS 702 / Graduate Seminars
ENG PHYS 704 / Selected Topics in Engineering Physics
ENG PHYS 705 / III-V Materials and Devices
ENG PHYS 706 / Toward a New Era of Nuclear Energy: Messages from Fukushima
ENG PHYS 707 / Nuclear Fuel Cycle and Radioactive Waste Management
ENG PHYS 708 / Quantum Materials, Devices, and Systems
ENG PHYS 709 / Advanced Topics in Biophotonics
ENG PHYS 710 / Nuclear Reactor Dynamics and Control
ENG PHYS 713 / Nuclear Safety Analysis and Reactor Accidents
ENG PHYS 714 / Nuclear Reactor Safety Design
ENG PHYS 715 / Advanced Nuclear Reactor Thermalhydraulics
ENG PHYS 716 / Nuclear Reactor Heat Transport System Design
ENG PHYS 718 / Reactor Heat Transport System Simulation and Analysis

ENG PHYS 721 / Optical Amplifiers and Lasers
ENG PHYS 723 / Semiconductor Diode Laser Physics
ENG PHYS 724 / Materials Characterization by Electron/Ion Microscope
ENG PHYS 726 / Optoelectronic Device Physics
ENG PHYS 727 / Advanced Reactor Physics and Analysis
ENG PHYS 729 / Thin Film Growth and Deposition
ENG PHYS 730 / Thin Film Characterization
ENG PHYS 733 / Research Project in Engineering Physics
ENG PHYS 734 / Nonlinear Optics
ENG PHYS 743 / Functional Materials
ENG PHYS 752 / Advanced MEMS Fabrication and Microfluidics
ENG PHYS 777 / Advanced Photovoltaics
ENG PHYS 782 / Solid-State Electronics
ENG PHYS 783 / Nuclear Fuel Engineering
ENG PHYS 784 / Nuclear Fuel Management

Additional Nuclear Engineering Courses

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

Materials Science and Engineering
MATLS 6D03 / Corrosion

Mechanical Engineering
MECH ENG 706 / Advanced Heat Transfer
MECH ENG 707 / Analytical Solutions in Transport Phenomena
MECH ENG 708 / Two-Phase Flow and Heat Transfer
MECH ENG 723 / Flow Induced Vibrations

Medical Physics and Applied Radiation Sciences
MED PHYS 6R03 / Radiation and Radioisotope Methodology
MED PHYS 771 / Isotopes In-Vivo
MED PHYS 772 / Medical Health Physics
MED PHYS 775 / Advanced Radiation Physics
MED PHYS 776 / Introduction to Operational Health Physics

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

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

Electrical and Computer Engineering

ECE 740 / Semiconductor Device Theory and Modeling
ECE 741 / Analog Integrated Circuits
ECE 750 / Advanced Engineering Electromagnetics
ECE 754 / Modeling and Simulation of Photonic Devices

Physics and Astronomy

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

Additional Smart Systems Engineering Courses

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

School of Engineering Practice and Technology

SEP 786 / Artificial Intelligence and Machine Learning Fundamentals
SEP 787 / Machine Learning: Classification Models
SEP 789 / Deep Learning and Its Applications

Mechanical Engineering

MECH ENG 735 / Additive Manufacturing

Additional Biomedical Engineering Courses

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

Biomedical Engineering

BIOMED 706 / Biomedical Engineering II (Core)

Mechanical Engineering

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

Electrical and Computer Engineering

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

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 EXISTING 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

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	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 SECTION 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 EXISTING REQUIREMENT/PROCEDURE:

Admission Requirements for the MA program:

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.

Program Requirements:

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 12 graduate courses and a M.A. thesis. 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

McMaster University **SCHOOL OF GRADUATE STUDIES**

**Note - Items for Senate consideration are highlighted in gray

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	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 SECTION 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

**Note - Items for Senate consideration are highlighted in gray

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.

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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 experi 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 should 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 three core courses 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
    - 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.
    - 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.

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.

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REPORT TO SENATE
from the
UNDERGRADUATE COUNCIL

FOR APPROVAL

I Revisions to Certificate and Diploma Programs

a. Diploma in Accounting

At its April 20. 2021, the Undergraduate Council reviewed revisions to the Diploma in Accounting. Details of the revisions are contained within the circulated report.

It is now recommended,
that Senate approve revisions to the Diploma in Accounting, as set out in the attached.

II Establishment of New Certificate and Diploma Programs

At the same meeting, the Undergraduate Council approved the establishment of the following Certificate and Diploma programs. Details are outlined within the circulated report.

a. Certificate of Professional Learning in Retirement Community Management
b. Diploma in Business Administration with a Concentration in Retirement Community Management
c. Certificate of Professional Learning in Canadian Housing
d. Certificate of Professional Learning in Nutrition, Health and Wellness
e. Health and Wellness Coaching Diploma
f. Health Information Fundamentals Certificate
g. Health Ventures Certificate of Professional Learning

It is now recommended,
that Senate approve the establishment of the Certificate and Diploma Programs as set out in the attached.

III Closure of Certificate and Diploma Programs

At the same meeting, the Undergraduate Council approved the closure of the following program. Details are outlined within the circulated report.

a. Closure of Health Information Management Programs

It is now recommended,
that Senate approve the closure of the Health Information Management Diploma and the Health Information Plus Diploma effective May 2021, as set out in the attached.

IV Discontinuance and Removal of the Certificate of Completion Parchment

At the same meeting, the Undergraduate Council approved discontinuance and removal of the Certificate of Completion parchment. Details are outlined within the circulated report.

It is now recommended,
that Senate approve the discontinuance and removal of the Certificate of Completion parchment found on page 15 of the Certificate and Diploma Policy, effective May 12, 2021.

V Addenda to Curriculum Revisions for Inclusion in the 2021-2022 Undergraduate Calendar

At the same meeting, the Undergraduate Council reviewed and approved the following curriculum revisions for inclusion in the 2021-2022 Undergraduate Calendar.

Faculty of Engineering
Faculty of Science

It is now recommended,
that Senate revisions to Application Procedures for inclusion in the 2021-2022 Undergraduate Calendar, as recommended by the Faculty of Engineering, and set out in the attached.

It is now recommended,
that Senate approve major revisions to the Honours Biochemistry Programs for inclusion in the 2021-2022 Undergraduate Calendar, as recommended by the Faculty of Science, and set out in the attached.

It is now recommended,
that Senate approve major revisions to the Honours Biochemistry –Biomedical Research Specialization (B.Sc.) Program for inclusion in the 2021-2022 Undergraduate Calendar, as recommended by the Faculty of Science, and set out in the attached.

FOR INFORMATION

VI Terms of Award

At the same meeting, the Undergraduate Council reviewed for approval: a) five new awards, b) twelve new bursaries and c) three changes to award terms.

a) New Awards

The Sonia Sennik Resilience Scholarship
The George Breckenridge Memorial Academic Grant
The Ashok Hingorani Academic Grant
The Hatch Engineering Scholarship
The D. Keith MacDonald Earth Sciences Undergraduate Scholarship

b) New Bursaries

The Bachelor of Health Sciences Class of 2011 Bursary
The Adam Chiaravalle Sustainability Bursary
The Griffin Bursary
The Nancy Elizabeth Hinich Entrance Bursary
The McMaster Ismaili Alumni Bursary
The Julie Patel Indigenous & Racialized Bursary
The Kenneth J. Ward Memorial Bursary for New Canadians
The Wasmund Family Indigenous Bursary
The Steve and Tina Wilson Family Foundation Technology Bursar
The Dr. Paul R. Nicholas / Cosmetic Surgery Clinic MD Bursary
The Joel Siegel Memorial MD Bursary
The Kenneth J. Ward Memorial Bursary

c) Changes to Award Terms

The Audrey Diemert Memorial Book Prize
The Katherine M. Collyer McNally Bursary
The Richard Konrad Bursaries

VII New Certificate of Attendance Programs

At the same meeting, the Undergraduate Council received, for information, five new certificate of attendance programs.

a. Pragmatic Quality & Regulatory Approaches for Medical Devices
b. Clinical Fundamentals for Non-Clinicians: The Care of the Mind and the Nature of Public Health
c. Clinical Fundamentals for Non-Clinicians: The Care of the Health of the Body
d. Navigating Healthcare Procurement
e. MedTech Innovation: The Fundamentals

VIII New Certificate of Completion Programs

At the same meeting, the Undergraduate Council received, for information, two new certificate of completion programs.

a. Research on Aging and Engagement with Older Adults
b. Knowledge Translation and Community Engagement

IX Revisions to Certificate of Completion Programs

At the same meeting, the Undergraduate Council received, for information, revisions to two certificate of completion programs.

a. Essentials (Professional Development Program)
b. Executive Management Program

X Addenda to Curriculum Revisions for Inclusion in the 2021-2022 Undergraduate Calendar

At the same meeting, the Undergraduate Council reviewed for approval, curriculum revisions from the following:

Faculty of Engineering
Faculty of Health Sciences

XI Revised 2021-2022 Sessional Dates

At the same meeting, the Undergraduate Council received, for information, the Revised 2021-2022 Sessional Dates.

Documents detailing items for information are available for review on the Secretariat's website.

Senate: May 12, 2021

McMaster University | DeGroote SCHOOL OF BUSINESS EDUCATION WITH PURPOSE
Office of the Dean

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Hamilton, ON L8S 4M4

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DATE: March-27-21

TO: Certificate & Diploma Committee

FROM: Dr. Sue McCracken, DeGroote School of Business

RE: Course Revisions for

ACC 926 Intermediate Financial Accounting I
ACC 931 Auditing
ACC 937 Taxation I
ACC 938 Taxation II

I have reviewed the course revision submissions for ACC 926 Intermediate Financial Accounting I, ACC 931 Auditing, ACC 937 Taxation I, and ACC 938 Taxation II presented by McMaster Continuing Education (MCE). I have determined that the revisions meet all the criteria set out by the Undergraduate Council in its guidelines for Certificates and Diplomas, and support them on behalf of the DeGroote School of Business

The proposed changes to ACC 926 Intermediate Financial Accounting I, ACC 931 Auditing, ACC 937 Taxation I, and ACC 938 Taxation II will continue to meet the Undergraduate Council's criteria for academic credit towards the Diploma in Accounting and the Certificate in Advanced Accounting.

Sincerely,

Susan McCracken

Susan McCracken| Associate Dean (Academic), PhD, FCPA, FCA
Professor in Accounting and Financial Management Services
DeGroote School of Business | McMaster University
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McMaster University | CONTINUING EDUCATION

Certificate & Diploma Committee: Course Revision

Department & Program Information (complete all fields):	
Department:	Continuing Education
Program Name:	Diploma in Accounting
Name of Representative:	Anne Dwyer
Nature of Submission:	Course Revision – For Approval
Effective Date:	September 1, 2021
Submission Date:	March 12, 2021

Current Course Details (complete all fields):

Course Title: ACC 926 Intermediate Financial Accounting I

Course Description:
ACC 926 Intermediate Financial Accounting I is the first of two intermediate financial accounting courses that expand on the knowledge acquired in the Introductory Accounting course.

Students will study and review the accounting process, function, and reporting as it relates to the significant asset accounts of the balance sheet and related significant income statement accounts. While the course is concerned primarily with the theory underlying the material covered, it also considers the real-life applications to current reporting requirements. This course addresses how Canadian practice evolves in response to updates in IFRS and private entity GAAP standards.

ACC 926 Intermediate Financial Accounting I concentrates on four major topic areas:

1. Financial Reporting
2. Financial Statements and Revenue Recognition
3. Current and Financial Assets
4. Capital Assets

Course Learning Objective(s):
Students will examine, discuss and assess the current financial accounting reporting applications under Generally Accepted Accounting Principles (GAAP) as it relates to the valuation of assets. Specific course objectives are:

1. Describe the main components of the conceptual framework for financial reporting
2. Discuss how the conceptual framework for financial reporting is used to guide the decisions of standard-setting bodies and professional practice
3. Assess the impact of accounting policy choices on financial statements
4. Prepare financial statements in accordance with generally accepted accounting principles

5. Account for investments in debt and equity investments using various accounting models
6. Account for impairment of long-lived tangible and intangible assets along with goodwill

Is this course currently offered? Yes

Existing Course Code: ACC 926

Course Unit Value: 3 units

List Course Pre-requisites (if applicable):
ACC 925 Introductory Financial Accounting or equivalent. Some basic knowledge in Excel is strongly encouraged.

Course Revisions:

Revised Course Title: No change

Revised Course Description: Revisions are highlighted.
ACC 926 Intermediate Financial Accounting I is the first of two intermediate financial accounting courses that expand on the knowledge acquired in the Introductory Accounting course. Students will study and review the accounting process, function, and reporting as it relates to the significant asset accounts of the balance sheet and related significant income statement accounts. While the course is concerned primarily with the theory underlying the material covered, it also considers the real-life applications to current reporting requirements. This course addresses how Canadian practice evolves in response to updates in IFRS and private entity GAAP standards.

The course concentrates on five major topic areas:
1. Financial Reporting and Emerging Issues
2. Financial Statements and Revenue Recognition
3. Current and Financial Assets
4. Capital Assets
5. Goodwill and intangible Assets

Revised Course Learning Objective(s): Two new learning outcomes are highlighted.

Upon successful completion of this course, students will have demonstrated knowledge and understanding of:
1. describe the main components of the conceptual framework for financial reporting
2. discuss how the conceptual framework for financial reporting is used to guide the decisions of standard-setting bodies and professional practice
3. identify the key internal controls that form part of the entity's financial reporting infrastructure
4. assess the impact of accounting policy choices on financial statements
5. prepare financial statements in accordance with generally accepted accounting principles
6. account for investments in debt and equity investments using various accounting models
7. account for impairment of long-lived tangible and intangible assets along with goodwill
8. explain the role and impact of technology on the accounting environment

Revised Course Content (major topics): New topics are highlighted.

Module 1: The Accounting Standards, Conceptual Framework for Financial Accounting, Ethics & Trends

- Accounting Standards
- Generally Accepted Accounting Principles
- Ethics and Accounting
- Challenges and Opportunities for the Accounting Profession and Current trends in Technology
- Conceptual Framework
- Qualitative Characteristics of Useful Information
- Elements of Financial Statements
- Foundational Principles
- Financial Reporting Issues
- IFRS/ASPE Comparison

Module 2: The Canadian Financial Reporting Environment

- Financial Statements and Financial Reporting
- Measuring Financial Statement Elements
- Present Value Application
- IFRS/ASPE Comparison

Module 3: Review of Accounting Information System and Cycle

- Review of Accounting System
- Accounting Cycle Steps
- Adjusting Entries
- Ownership structure and Financial Statements
- The Closing Process
- Information Systems impact on the Accounting Environment

Module 4: Reporting Financial Performance

- Business Models and Performance management
- Quality of Earnings/Information
- Measurement of Income
- Discontinued Operations
- The Statement of Income and the Statement of Comprehensive Income
- The Statement of Retained Earnings and the Statement of Changes in Equity
- Disclosure and Analysis
- IFRS/ASPE Comparison

Module 5: Statement of Financial Position and Cash Flow Statement

- Usefulness of the Statements of Financial Position and Cash Flows from a Business Perspective
- Usefulness and Limitations of the Statement of Financial Position
- Classification in the Statement of Financial Position
- Statement of Financial Position required Disclosures
- Purpose, Classification and Preparation of Statement of Cash Flows
- IFRS/ASPE Comparison
- Ratio Analysis

Module 6: Revenue Recognition

- Fundamentals of Sales Transactions
- The Asset-Liability Approach to Revenue Recognition: An Overview of the Five-Step Process
- Determine initial & subsequent measurement of contract obligations
- Earnings Approach to Revenue Recognition
- Other Revenue Recognition Issues
- Presentation and Disclosure of Revenue
- IFRS/ASPE Comparison
- Accounting for Long-term contracts

Module 7: Cash and Receivables

- Cash and Accounts Receivable
- Cash
- Recognition and Measurement of Accounts Receivable
- Impairment of Accounts Receivable
- Notes and Loans Receivable
- Derecognition of Receivables
- Presentation, Disclosure, and Analysis of Receivables
- IFRS/ASPE Comparison
- Appendix 7A—Methods for Controlling Cash

Module 8: Inventory

- Understanding Inventory
- Recognition of Physical Goods Included in Inventory and Inventory Errors
- Measurement and Inventory Accounting Systems
- Measurement and Cost Formulas
- Measurement and the Lower of Cost and Net Realizable Value (LC&NRV) Principle and exceptions to using this principle
- Measuring Inventory Using Estimates
- Presentation, Disclosure, and Analysis
- IFRS/ASPE Comparison
- Appendix 8B: Accounting Guidance for Specific Inventory

Module 9: Investments

- Different types of Financial Asset investments in Equity and Debt Instruments
- Measurement Models used to Account for Investments
- Measurement—Impairment Models
- Strategic Investments—Investments in Associates
- Strategic Investments—Investments in Subsidiaries
- Presentation, Disclosure, and Analysis
- IFRS/ASPE Comparison

Module 10: Property, Plant and Equipment

- Definition and Recognition of Property, Plant, and Equipment (PPE)

- Cost Elements included in the measurement of PPE
- Measurement after Acquisition
- Costs Incurred after Acquisition
- IFRS/ASPE Comparison
- Appendix 10A: Capitalization of Borrowing Costs
- Appendix 10B: Revaluation: The Proportionate Method

Module 11: Depreciation, Impairment and Disposition

- Depreciation
- Depreciation—Methods of Allocation and Calculation
- Depletion of Mineral Resources Other Depreciation Issues
- Adjustments to Depreciation
- Impairment
- Held for Sale and Derecognition
- Presentation, Disclosure, and Analysis
- IFRS/ASPE Comparison
- Appendix 11A: Depreciation and Income Tax

Module 12: Intangible Assets & Goodwill

- The Business Importance and Characteristics of Goodwill and Intangible Assets
- Recognition and Measurement of Intangible Assets at Acquisition and Internally Developed
- Recognition and Measurement of Intangible Assets after Acquisition
- Specific Intangibles
- Impairment, Derecognition
- Goodwill—Recognition and Measurement
- Goodwill—Impairment
- Presentation, Disclosure, and Analysis
- IFRS/ASPE Comparison

Rationale for Revision:
The proposed updates to the course are necessary to meet revised Chartered Professional Accountants (CPA) competencies. The key update is the addition of DAIS (Data Analytics and Information Systems) competencies and topics.

McMaster University | CONTINUING EDUCATION

Certificate & Diploma Committee: Course Revision

Department & Program Information (complete all fields):	
Department:	Continuing Education
Program Name:	Diploma in Accounting
Name of Representative:	Anne Dwyer
Nature of Submission:	Course Revision – For Approval
Effective Date:	September 1, 2021
Submission Date:	March 11, 2021

Current Course Details (complete all fields):

Course Title: ACC 931 Auditing

Course Description: This course is an introduction to the field of auditing, which is broadly defined as a systematic process of objective accumulation and evaluation of evidence regarding written assertions about economic actions and events in order to determine the degree of correspondence between those assertions and established criteria (Applicable Financial Reporting Framework which is GAAP. The Canadian Auditing Standards (CAS) apply to all audits of financial statements.

As this is an introductory auditing course, the focus will be on the identification of key terminology and concepts as well as an overview of auditing in the context of a general business environment. A secondary focus will be on a rudimentary examination of the audit process and identification of the various roles that auditors can assume.

Course Learning Objective(s): Upon completion of this course, students will:

- Present a general overview of the role of auditing and assurance in society.
- Explain how the preparation or use of accounting information is influenced by different stakeholder needs, and related ethical considerations.
- Explain the roles and responsibilities of professional accountants to protect the public interest in regards to financial information, including the applicable generally accepted auditing standards, professional ethics codes of conduct, and auditors' legal liability.
- Explain the reasonable assurance, audit risk and materiality concepts.
- Describe what an independent assurance engagement involves and the conditions required for a public accountant to accept and perform one.
- Apply auditing concepts and techniques to develop an appropriate plan for a financial statement audit

• Explain how the auditor's understanding of business information systems and internal control concepts

and techniques is used in audit risk assessment and planning.

• Relate weaknesses in internal control to risks of material misstatements in financial statements.

• Explain how to execute a financial statement audit plan that reduces the risk of material misstatement to

an appropriately low level and how to document the audit work.

• Determine how to evaluate financial statement audit findings and communicate these to stakeholders

• Apply the foundation knowledge required for advanced study in auditing.

• Understand other types of assurance and non-assurance engagements undertaken by professional accountants.

Is this course currently offered? Yes

Existing Course Code: ACC 931

Course Unit Value: 3 units

List Course Pre-requisites (if applicable): ACC 927 Intermediate Financial Accounting II, ACC 928 Introductory Management Accounting & ACC 932 Management Information or equivalencies. Basic knowledge in Excel is strongly encouraged.

Cross-listed courses (if applicable):

Course Revision (complete applicable fields):

Revised Course Title: N/A

Revised Course Description: Description reworded, so as to be clearer and more specific as to what is covered. This course provides the foundational knowledge required in audit and assurance. The course begins with the purpose and basis for audits to be performed. It continues with a focus on the overarching standards and requirements of both firms and individual auditors in carrying out their work, considering public trust, stakeholders, and ethics. As the course continues, each phase of the audit process is reviewed and application is made to variety of business scenarios and accounting cycles. Key concepts are reviewed throughout the course as applicable to each phase including risk assessment, materiality, controls, evidence-gathering, substantive testing, sampling, and audit data analytics. Additionally, the course provides an overview of other assurance engagements. The course concludes with the final stage of auditing, that is, to formulate an audit opinion, create the audit report, and communicate with those charged with governance.

Revised Course Learning Objective(s):

Upon completion of this course, students will:

1) explain the general audit and assurance framework and the need for auditing, including interpretation and application of standards and direction that guides professional conduct, independence considerations, legal implications and ethics,

2) identify and evaluate considerations for client acceptance and audit planning, including the materiality for the engagement and assess the risk of material misstatement at the financial statement and assertion levels,

3) evaluate adequate design of internal controls using established frameworks, including control activities in both non-computerized and technology-based processes,

4) design an audit plan/strategy that includes substantive audit procedures, sampling, evidence gathering techniques, and the timing of audit activities,

5) implement audit plan strategies by evaluating sample programs for specific accounting cycles,

6) demonstrate the use and impact of data analytics and current technological advances in auditing, as well as the impact the use of technology by businesses has in providing assurance,

7) explain the factors to be considered in completing the audit prior to issuing a report, as well as the need to exercise quality control throughout the engagement,

8) conclude on the appropriate approach to final audit reporting, including the basis and arrival for an overall opinion, and

9) describe other types of assurance and non-assurance engagements undertaken by professional accountants in Canada.

Revised Course Content (major topics):

Module 1: Introduction to Auditing

- The Demand for Audit and Other Assurance Services
- Audit Quality
- The Evolving Practice of Assurance

Module 2: Ethics, Liability and Independence Considerations

- Professional Ethics and Legal Liability
- Audit Independence and Professional Behaviour Requirements

Module 3: Auditor and Management Responsibilities

- Audit Responsibilities and Objectives
- Management Responsibilities and Assertions
- Linking Assertions to Audit Objectives

Module 4: Audit Evidence

- Audit Evidence
- Introduction to Audit Data Analytics and the use of technology in auditing

Module 5: Client Acceptance, Planning and Materiality

- Factors for consideration in Client Acceptance
- Audit Planning and Materiality
- Assessing the Risk of Material Misstatement

Module 6: Identifying and Assessing Internal Control

- Internal Control
- Assessing Control Risk
- Designing Tests of Control

Module 7: Audit Strategy and Program Development

- Determining the Audit Strategy
- Developing an Audit Program

Module 8: Audit Sampling and the Use of Data Analytics

- Audit Sampling Concepts and Techniques
- Sampling Risk
- Data Analytics' Impact on the Use of Sampling

Module 9: Auditing Business Cycles Part 1

- Auditing Business Cycles: Part 1
- Auditing Revenue
- Accounts Receivable Testing
- Auditing Acquisition and Payment Cycle

Module 10: Auditing Business Cycles Part 2

- Auditing Business Cycles: Part 2
- Auditing Inventory and Distribution
- Auditing HR and Payroll
- Auditing Capital Acquisition and Repayment
- Auditing Cash Balances

Module 11: Completing the Audit and Forming an Opinion

- Completing the Audit
- Audit Opinion and Reporting

Module 12: Other Assurance and Non-Assurance Service

- Other Assurance and Nonassurance Services

Rationale for Revision: Updating course to meet revised Chartered Professional Accountants (CPA) competencies. The key update is the addition of DAIS (Data Analytics and Information Systems) competencies and topics.

McMaster University | CONTINUING EDUCATION

Certificate & Diploma Committee: Course Revision

Department & Program Information (complete all fields):	
Department:	Continuing Education
Program Name:	Diploma in Accounting
Name of Representative:	Anne Dwyer
Nature of Submission:	Course Revision – For Approval
Effective Date:	September 1, 2021
Submission Date:	March 12, 2021

Current Course Details (complete all fields):

Course Title: Taxation I

Course Description: ACC 937 Taxation I is an introductory course that focuses on the basic concepts of taxation for individuals and corporations. Students will gain an understanding of the Canadian tax system and be able to identify the individuals who are liable for Part I Tax according to the provisions of the Income Tax Act. Experience will be gained in the calculation of net income for tax purposes (Division B income), taxable income (Division C income) and tax payable, again for both individuals and corporations. While both public and private corporations are explored, private corporations are studied in more detail with a particular focus on the integration between a private corporation and its shareholders. An element of tax planning will be introduced when appropriate, though this topic will be explored in more depth in Taxation II.

Course Learning Objective(s):

Upon successful completion of this course, students will have demonstrated knowledge and understanding of:

1. The history, characteristics, structure, and administration of the Income Tax Act
2. The concepts of tax evasion, tax avoidance, and tax planning
3. The importance of Section 3 in the determination of Division B and Division C income
4. The calculation of employment income and business income
5. The concepts of employee, salesperson on commission, and self-employed contractor
6. The capital cost system and the calculation and treatment of capital cost allowance, eligible capital property, capital gains, capital losses, recapture and terminal losses
7. The various sources of property income and how to calculate the inclusions and deductions for the same
8. Other income/loss sources included in 3(a) or 3 (b) and Other deductions allowed at 3(c)

9. The deductions available to individuals in the calculation of taxable (Division C) income including a sound understanding of loss carryovers

10. The calculation of tax payable for individuals, including the application of tax rates and calculation of tax credits

11. The calculation of taxable income and tax payable for corporations

12. The concept of integration between a corporation and its shareholders

Is this course currently offered? Yes

Existing Course Code: ACC 937

Course Unit Value: 3 units

List Course Pre-requisites (if applicable): ACC 927 or equivalent. Some basic knowledge in Excel is strongly encouraged. Be advised: Students who do not meet the prerequisites will be required to withdraw. In such cases, CCE's withdrawal/refund policies will apply.

Cross-listed courses (if applicable):

Course Revision (complete applicable fields):

Revised Course Title: N/A

Revised Course Description: Only minor changes to wording of description, for clarification purposes, as highlighted below

ACC 937 Taxation I is an introductory course that focuses on the basic concepts of taxation for individuals and an introduction to corporations. Students will gain an understanding of the Canadian tax system and be able to identify the individuals who are liable for Part I Tax according to the provisions of the Income Tax Act. Experience will be gained in the calculation of net income for tax purposes (Division B income), taxable income (Division C income) and tax payable for individuals. Although basic calculations of tax pertaining to private and public corporations are explored, private corporations are studied in more detail with a particular focus on the Small Business Deduction. An element of tax planning will be introduced when appropriate, though this topic will be explored in more depth in Taxation II.

Revised Course Learning Objective(s): Upon completion of this course, students will:

1) understand the history, characteristics, structure, and administration of the Income Tax Act (ITA),

2) determine whether a person is liable for Canadian income tax according to the residency rules,

3) explain the concepts of tax evasion, tax avoidance, and tax planning,

4) recognize the importance of ITA Section 3(a), 3(b), 3(c), 3(d) in the determination of Division B income,

5) calculate an employment income and business income,

6) describe the concepts of employee, salesperson on commission, and self-employed contractor,

7) explain the capital cost system and the calculation and treatment of capital cost allowance (CCA), eligible capital property, capital gains, capital losses, recapture and terminal losses,

8) identify the various sources of property and income to calculate the inclusions and deductions for the same,

9) recognize the general rules and special provisions for the taxation of Capital Gains and Capital Losses including the Principle Residence Exemption, Capital Gain Reserves, and Personal Use Property,

10) explain the rules relating to Non-Arm's Length Transfers and Other Special Circumstances,

11) identify the various sources of other income and deductions to calculate them in accordance with ITA section 3,

12) determine the deductions available to individuals in the calculation of taxable (Division C) income including a sound understanding of loss carryovers

13) calculate tax payable for individuals, including the application of tax rates and calculation of tax credits,

14) perform the basic calculation of taxable income and tax payable for corporations considering the Small Business Deduction (SBD) for private corporations,

15) explain the concept of GST/HST, when an individual or entity is required to register, and how to calculate remittances,

16) explain the importance of reliable tax data obtained from transaction processing systems and technologies used in the field of taxation, and

17) identify current trends, and recent updates, in taxation applicable to individuals.

Revised Course Content (major topics): Newly added topics, as highlighted below:

Module 1: Introduction to the Income Tax System & Administrative Procedures

- History of the Income Tax Act and the Canadian tax System
- Structure and Interpretation of the Income Tax Act
- Rights and Obligations of the Taxpayer
- Tax Evasion, Tax Avoidance, and Tax Planning
- Net Income for Tax Purposes (Division B under ITA Section 3)

Module 2: Liability for Tax

- Definition of Person under the ITA
- Factors used to Determine Residency Status of a Person under the ITA
- Residency and Liability for Part I tax
- Tax Liability of Non-Residents and Part-Year residents
- The Effects of an Existing International Tax Treaty on the Tax Liability of an Individual

Module 3: Employment Income

- Provisions of the ITA that Relate to Employment Income
- Employees and Self-Employed Individuals

- What Amounts must be Included in Employment Income
- How Employment Deductions are Calculated

Module 4: Business Income

- Provisions of the ITA that Relate to Business Income
- Criteria for Determining whether a Gain is One of Capital or Business Income
- The Underlying Distinction between Business Income and Property Income
- The Rules Outlining Amounts to be Added and Deducted from Business Income for Tax Purposes

Module 5: Capital Cost Allowance

- Provisions of the ITA that Relate to Depreciable Property, Including Intangibles
- The Similarities and Differences between the Accounting and Tax Deductions as They Relate to Depreciable and Capital Property
- Classification of Various Types of Capital Assets
- Tax Implications of Capital Asset Purchase and Disposals

Module 6: Property Income

- Provisions of the ITA that Relate to Property Income
- Eligible and Ineligible Dividends
- Concept of Integration
- Rules Relating to Inclusion of Interest Income for a Corporation, Trust, and Individuals
- Interest Deductibility

Module 7: Capital Gains

- Provisions of the ITA that Relate to Capital Property
- Capital Gains, Capital Losses, and the Taxation Impacts
- Capital Gain Reserves
- Principle Residence Exemption
- Personal Use Property

Module 8: Non-Arm's Length Transfers

- Provisions of the ITA that Relate to Non-Arm's Length Transactions
- Related Individuals
- Tax Implications of Transactions between Related Individuals

Module 9: Other Income & Deductions

- Provisions of the ITA that Relate to Income and Other Deductions
- Pension Income
- Registered Savings Plans

- RRSP Limits
- Moving Expenses
- Childcare Expenses
- Child Support vs. Spousal Support

Module 10: Taxable Income & Tax Payable for an Individual

- Provisions of the ITA that Relate to Personal Tax Credits
- Net Income for Tax Purposes and Taxable Income
- Taxable Income
- Refundable and Non-Refundable Tax Credits
- Tax Payable/Refundable
- Minimum Tax

Module 11: Introduction to Taxable Income & Tax Payable for a Corporation

- Provisions of the ITA that Relate to Corporations
- Net Income for Tax Purposes and Taxable Income
- Basic Tax Payable for Corporations
- Small Business Deduction (SBD)

Module 12: Goods and Services Tax (GST)/Harmonized Sales Tax (HST) & Technology Trends

- Basic Provisions of the Excise Tax Act (ETA)
- GST/HST Implications for Various Goods and Services
- Data Analytics as it Relates to Taxation
- Technology Trends in the Field of Taxation

Rationale for Revision: Updating course to meet revised Chartered Professional Accountants (CPA) competencies. The key update is the addition of DAIS (Data Analytics and Information Systems) competencies and topics.

McMaster University | CONTINUING EDUCATION

Certificate & Diploma Committee: Course Revision

Department & Program Information (complete all fields):	
Department:	Continuing Education
Program Name:	Diploma in Accounting
Name of Representative:	Anne Dwyer
Nature of Submission:	Course Revision – For Approval
Effective Date:	September 1, 2021
Submission Date:	March 12, 2021

Current Course Details (complete all fields):

Course Title: Taxation II

Course Description: This course continues the examination of the theory and application of the Income Tax Act particularly as it relates to corporations.

Course Learning Objective(s): This is the second of two introductory courses in federal income tax law which are designed to achieve the following objectives:

1. to calculate a corporate tax return and to explain the theoretical concepts behind the specific provisions of the Income Tax Act (ITA),
2. to apply the ITA in practical problems and case settings,
3. to interpret the ITA, taking into account the specific wording of the provisions, judicial decisions and the Canada Revenue's Agency's position, and
4. to introduce basic tax planning concepts through problem application in specific areas, including the use of a corporation to manage earnings, the purpose of corporate rollovers, the application of non-resident tax, and tax planning on the death of a taxpayer
5. to calculate the ACB and income distributions of partnerships
6. to explain the purpose and use of trusts

Is this course currently offered? Yes

Existing Course Code: ACC 938

Course Unit Value: 3 units

List Course Pre-requisites (if applicable): ACC 937 and ACC 927 or equivalencies. Some basic knowledge in Excel is strongly encouraged. Be advised: Students who do not meet theprerequisites will be required to withdraw. In such cases, CCE's withdrawal/refund policieswill apply

Cross-listed courses (if applicable):

Course Revision (complete applicable fields):

Revised Course Title: N/A

Revised Course Description: No change to course description

This course continues the examination of the theory and application of the Income Tax Act particularly as it relates to corporations.

Revised Course Learning Objective(s): No changes to objectives covered; however, it has been noted that LO 5-8 were missing from outline under CLO.

Upon completion of this course, students will:

1) calculate a corporate tax return and to explain the theoretical concepts behind the specific provisions of the Income Tax Act (ITA), independence considerations, legal implications and ethics,

2) apply the ITA in practical problems and case settings,

3) interpret the ITA, taking into account the specific wording of the provisions, judicial decisions and the Canada Revenue's Agency's position,

4) apply basic tax planning concepts to problems in specific areas, including shareholder-manager remuneration, and tax planning for the owner-manager,

5) calculate the tax effects of the purchase and sale of a business, including various asset and share transactions,

6) identify the tax effects of corporate distributions, asset sales, and wind-up,

7) explain the basics of tax deferred transactions, and, utilize ITA s.85 to calculate the affects of a transfer of property to a corporation,

8) explain the basics of tax deferred transactions using ITA s.51, 86, 85.1 to calculate the effects of amalgamations, wind-ups, and estate freeze transactions,

9) calculate the ACB and income distributions of partnerships,

10) explain basic tax planning on the death of a taxpayer, and

11) explain the purpose and use of trusts.

Revised Course Content (major topics): No changes – Topics have been reorganized/regrouped

Module 1: Computation of Taxable Income and Tax After General Reductions for Corporations

- Basic Provisions of the ITA that Relate to Corporations
- Net Income for Tax Purposes and Taxable Income

- Basic Tax Payable for Corporations
- General Rate Reduction
- Abatement for Income Earned in a Province
- Foreign Tax credits for Corporations

Module 2: Integration for Business and Investment Income of a private corporation

- Basic Provisions of the ITA Related to Corporations
- Integration of Income
- Corporate Association Rules
- Small Business Deduction for Private Corporations
- Tax Payable and Refundable Tax on Investments of a CCPC
- Incorporating Investment Income – Advantages and Disadvantages

Module 3: Shareholder-Manager Remuneration (PART 1)

- Basic Provisions of the ITA that Relate to Shareholders
- Corporate Shareholder-Managers
- Tax Implications of Various Types of Compensation
- Shareholder Benefits and Loans

Module 4: ax Planning for the Owner-Manager (PART 2)

- Income Splitting between the Owner-Manager and a Corporation
- The Use of a Holding Company
- Salary versus Dividends
- Tax on Split Income (TOSI)

Module 5: Purchase and Sale of a Business – Share Transactions

- Basic Provisions of the ITA that Relate to the Sale of a Business
- Lifetime Capital Gains Exemption (LCGE)
- Qualified Small Business Corporation Share (QSBC)
- Purification of a Corporation

Module 6: Corporate Distributions, Asset or Share Sales, Winding-up (PART 1)

- Basic Provisions of the ITA that Relate to Corporate Distributions
- Tax Paid or Tax-Free Components of Corporate Surpluses
- Adjusted Cost Base of Shares
- Capital Dividend Account (CDA) & Refundable Dividend Tax on Hand (RDTOH)
- Sale of the Assets of a Corporation

Module 7: Corporate Distributions, Asset or Share Sales, Winding-up (PART 2)

- Winding up a Corporation

- Deemed Dividend on Wind-up of a Corporation
- Redemption, or Cancellation of Shares
- Sale of Shares of a Corporation
- Comparison of the Sale of Assets vs. Sale of Shares

Module 8: Tax Deferred Transaction: Section 85 Rollover on a Transfer to a Corporation

- Basic Provisions of the ITA that Relate to Transfer of Property to a Corporation
- Transfer of Property to a Corporation Using ITA s.85
- Elected Amounts of the Transfer of Property
- Transfer of Shares to a Corporation

Module 9: Tax Deferred Transactions, and, Estate Freeze Transactions

- Basic Provisions of the ITA that Relate to Tax Deferred Transactions, and, Estate Freeze Transactions
- Rollovers Involving Corporations and their Shareholders
- Reorganization of Capital using ITA s.86
- Estate Freeze Transactions

Module 10: Partnerships

- Basic Provisions of the ITA that Relate to Partnerships
- Nature of Partnership
- Partnership Income
- Partnership Interest and Adjusted Cost Base

Module 11: Trusts

- Basic Provisions of the ITA that Relate to Trusts
- Nature of a Trust
- Types of Trusts
- Income Distributions to a Beneficiary

Module 12: Death of a Taxpayer

- Basic Provisions of the ITA that Relate to the Death of a Taxpayer
- Tax Filings Required at Death
- Income and Capital Gains at Death
- Graduated Rate Estates

Rationale for Revision: Updating course to meet revised Chartered Professional Accountants (CPA) competencies. The key update is the addition of DAIS (Data Analytics and Information Systems) competencies and topics.

CONTINUING EDUCATION | McMaster University

McMaster Continuing Education Academic Program Submission – For Approval

Department & Program Information (complete all fields):	
Program Name:	Retirement Community Management
Academic Credential:	Certificate of Professional Learning
Name of Representative:	Lorraine Carter
Effective Date:	September 1, 2021
Date of Submission:	April 6, 2021
Academic Merit (complete all fields; write "not applicable" as needed):	
Program Overview:	The Retirement Community Management program is based on collaboration between McMaster Continuing Education (MCE) and the Ontario Retirement Communities Association (ORCA). This collaboration focuses on establishing an academic program to provide education and skill development for individuals seeking new employment opportunities within retirement communities and senior living facilities. ORCA identifies that employment in retirement communities may fall within five categories: • Frontline Staff (E.g., Personal Support Worker, Dietary Aide, Housekeeper, Receptionist, etc.) • Managers (E.g., Manager of Food Services, Recreation Manager, Marketing Manager, Environmental/Maintenance Manager, etc.) • General Manager • Corporate/Head Office The positions of managers, general managers and corporate staff require skills in business, marketing, finance, food and nutrition, human resources and an understanding of senior living and aging. The demand for skilled workers to supervise, manage and operate retirement communities will increase with the aged population. Employment in this field may be of interest to individuals seeking a second career, or career progression within hospitality, personal support, social services, business.

	This program is designed for individuals with a background in business, human resources management and/or hospitality management. The program of study will focus on industry-specific courses to supplement their previous education and training in business operations and management. The Retirement Community Management program consists of three, academic credit courses specific to the industry. Individuals must complete all three courses to receive the Certificate of Professional Learning. For individuals with no or limited experience in the areas mentioned above, the courses from this program will be offered as a concentration for MCE's Business Administration diploma program (refer to the submission document for Business Administration with a Concentration in Retirement Community Management). MCE will continue to collaborate with ORCA for the recruitment of subject matter experts and instructors for the development and facilitation of the program courses.
Learning Objectives:	Upon completion of the program, students will: • Outline the importance of long-term care, senior living facilities and retirement community residences within social services and healthcare • Explain governmental laws and policies associated with the operations of a retirement community residence • Assess appropriate plans and strategies for facility management relevant to the design, safety, and environmental requirements • Identify the psychological, physiological, social and spiritual needs of seniors • Analyze health and wellness program plans including food and nutrition, fitness and wellness • Develop and assess management strategies specific to the operations of retirement communities including staffing, finance, sales and quality improvement The following objectives will be threaded within each course: • Demonstrate an awareness of ethical practices and professional standards applicable to retirement community living and the professional associations • Exemplify the skills, attitudes and behaviours required to work and collaborate with people and develop personal management skills • Employ effective communication practices

Meeting Learning Objectives:	The Retirement Community Management program will use a series of courses to achieve the stated program objectives. Individual course objectives are mapped to the overall program objectives. The delivery format and teaching methods are structured to have a maximum effect on achieving the learning objectives.
Program Admission Requirements:	The program will not require an application for admission. The following statement for recommended program requirements will be posted to MCE's website: In compliance with the Certificates and Diploma admission policy from Undergraduate Council, students who wish to enter the Retirement Community Management program should meet the following requirements based on their education and work experience: 1) Be a mature student as defined in the Undergraduate Calendar of McMaster University; or be deemed an exceptional case by Continuing Education 2) Be comfortable using word processing software, spreadsheets, and web browsing tools 3) Follow University guidelines for English Language Proficiency requirements: Completion of TOEFL exam with a minimum acceptable score of IBT: 86 overall with a minimum score of 20 on each of the four components (Reading, Writing, Speaking, Listening), valid for 2 years
Program Pre-requisites (if applicable):	It is recommended for students to have a background in business, human resources management, or hospitality management, or work experience in the industry. Students will be required to have the necessary computer, software programs and access to the internet to complete all courses.
Program Completion Requirements:	To qualify for a Certificate of Professional Learning, students must complete three courses, 9 units of study.
Program Delivery Format:	Program courses will be delivered online. The online format will include instructor lectures, presentations, group discussions, and practical application activities.
Student Evaluations (Grading Process):	Each course will include several evaluation components. The evaluations will consist of assignments, case studies, presentations, individual or group projects, class participation, or a combination thereof. Where appropriate, evaluations will be structured to evaluate participants' level of competency in achieving overall learning objectives. Grading will adhere to McMaster's academic grading scale.
Course Evaluation:	For each course, students will complete an evaluation to assess content, delivery, materials, method of evaluation and instruction.
Course Instruction:	Instructors for courses will be selected from a pool of qualified external professionals. In compliance with *McMaster's Senate and*

	Undergraduate Council Guidelines for Certificates and Diplomas, the selection will be based on academic background and/or experience within the field. Instructors must have a Master's Degree (or equivalent) and significant professional experience and teaching within the field.
Credit Towards Degree Programme Studies:	The academic credit courses included in the program may be used for credit towards undergraduate degree studies following the normal academic rules as specified by the Faculty offering the degree.
Program Advanced Standing:	No transfer credit will be permitted for the Certificate of Professional Learning. Students may apply their completed Certificate of Professional in Retirement Community Management to the Business Administration program as a concentration.

Statement of Financial Viability:

I have reviewed the business case and financial projections which include enrolment projections and costs. Sources of revenue for this program include tuition and supplementary fees (MAPS). Expenses are typical and include significant upfront development and marketing costs, as well as typical ongoing delivery costs (such as payment of facilitators, honoraria for other guest facilitators, materials, advertising and administration).
Lorraine Carter, Director, McMaster Continuing Education

Statement of Administrative Responsibilities:

Statement of Faculty Alignment:
The staffing and systems infrastructure to support the following functions already exists within McMaster Continuing Education. Costs will be fully covered by tuition, except the first year of the program, when the startup will be subsidized by MCE.

Continuing Education program responsibilities:

- budget development and monetary responsibilities
- program and course development
- course registrations/administration
- supervision of instructors to ensure all required policies and practices are adhered to and course are taught according to program requirements and standards
- Marketing and Promotions

The DeGroote School of Business will act as an academic liaison and is charged with the responsibility of on-going academic review and assessment of the curriculum. The Faculty's letter of support is included at the end of this document.

Course List

Course Name	Required/Elective	Unit Value	Term
Healthy Aging: Health, Wellness and Nutrition	**Required**	**3.0**	**Fall 2021**

Course Description:
Study the relationship between nutrition, aging and wellness. The course will explore foundational concepts of healthy aging including the demographics of Canada's aging population, the physiology

of aging and the nutritional needs of older adults. The focus will be placed on the design and implementation of food and nutrition, fitness, health and wellness programming within retirement community residences. Proposed topics: • demographics of aging • physiology of aging • nutrition requirements of older adults • nutrition screening and assessment • nutritional implications of disease (e.g. cardiovascular, respiratory, gastrointestinal, endocrine) • nutritional implications of cognitive disorders • malnutrition and obesity • nutritional support for older adults			
Residential Site Operations	**Required**	**3.0**	**Fall 2021**
Course Description: This course examines the management of the physical site operations of a retirement residence. Focus is placed on the physical structures, heating systems, safety measures and controls and maintenance management. Principles of risk management, resourcing, operations budgeting and leadership will be presented using case studies and industry best practices. Proposed topics: • overview of design principles • facility operations • environmental controls • resource management • health and safety • policies and regulations • managing risk			
Retirement Community Management	**Required**	**3.0**	**Fall 2021**
Course Description: Effective management of a retirement community facility involves an extensive understanding of resource management: staffing, inventory, finances, and data. This course will examine best practices for managing an organization according to policies and legislative requirements in Canada. Students will analyze proven strategies to effectively plan, implement and lead the organization. Proposed topics: • federal and provincial laws and regulations • resource budgeting: inventory, supplies, staffing • financial planning and reporting • marketing and sales • quality and process improvement • communication • leadership strategies			

McMaster University | DeGroote School of Business
Education with Purpose
Office of the Dean

DeGroote School of Business, Room 239
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degroote.mcmaster.ca

DATE: March-28-21

TO: Certificate & Diploma Committee

FROM: Dr. Sue McCracken, Associate Dean (Academic), DeGroote School of Business

RE: Proposal for Retirement Community Management, Certificate of Professional Learning

I have reviewed the Retirement Community Management program submission presented by McMaster Continuing Education (MCE). I have determined that it meets all relevant criteria set out by the Undergraduate Council in its guidelines for Certificates and Diplomas, I am pleased to support this submission on behalf of the DeGroote School of Business

At my request, this program proposal was reviewed by Marvin Ryder His conclusion is that the objectives of the proposed program are viable. The courses included in the program will fulfil the stated objectives, and the program meets the Undergraduate Council's criteria for the designation of Certificate of Professional Learning. I concur with Marvin Ryder's assessment.

The DeGroote School of Business is pleased to support McMaster Continuing Education in the delivery of the Retirement Community Management program to meet the needs of people wanting to work in this industry. We continue to support MCE as their academic affiliates, providing both this initial review and overview of ongoing curriculum issues. Additionally, we have provided MCE with guidelines for possible use of advanced standing rules for students entering our degree programs using credit from completion of this program.

Sincerely,

Susan McCracken| Associate Dean (Academic), PhD, FCPA, FCA
Professor in Accounting and Financial Management Services
DeGroote School of Business | McMaster University
1280 Main Street West, Hamilton Ontario L8S 4M4
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CONTINUING EDUCATION | McMaster University

McMaster Continuing Education Academic Program Submission – For Approval

Department & Program Information (complete all fields):	
Program Name:	Business Administration with a Concentration in Retirement Community Management
Academic Credential:	Diploma
Name of Representative:	Lorraine Carter
Effective Date:	September 1, 2021
Date of Submission:	April 6, 2021
Academic Merit (complete all fields; write "not applicable" as needed):	
Program Overview:	The Business Administration with a Concentration in Retirement Community Management program is based on collaboration between McMaster Continuing Education (MCE) and the Ontario Retirement Communities Association (ORCA). This collaboration focuses on establishing an academic program to provide education and skill development for individuals seeking new employment opportunities within retirement communities and senior living facilities. ORCA identifies that employment in retirement communities may fall within five categories: • Frontline Staff (E.g., Personal Support Worker, Dietary Aide, Housekeeper, Receptionist, etc.) • Managers (E.g., Manager of Food Services, Recreation Manager, Marketing Manager, Environmental/Maintenance Manager, etc.) • General Manager • Corporate/Head Office The positions of managers, general managers and corporate staff require skills in business, marketing, finance, food and nutrition, human resources and an understanding of senior living and aging. Due to Canada's aging demographics, the demand for skilled workers to supervise, manage and operate retirement communities will rise as well. Employment in this field may be of interest to individuals seeking a second career, or career progression within hospitality, personal support, social services, business.

	The program is designed for individuals with limited experience in the fundamentals of business. Students will complete the five core courses of MCE's Business Administration program and then complete four courses specific to Retirement Community Management. The program will provide students with the foundational skills required for supervisory and managing roles within the industry such as marketing and sales, communication, finance, organizational behaviour and business foundations. The four courses in the concentration will build upon these skills with study in the specifics of managing a retirement community organization. MCE will continue to collaborate with ORCA for the recruitment of subject matter experts and instructors for the development and facilitation of the program courses.
Learning Objectives:	Upon completion of the program, students will: Business Administration (Core courses): • Demonstrate awareness of organizational structure and the interconnections between the functions of accounting, marketing and communication • Understand the skills, attitudes and behaviours required to work with people and develop personal management skills • Use effective business communication • Recognize the impact of current political and economic environments on business • Contribute to the research, analysis and evaluation of information within an organization • Propose creative and critical solutions that align with business Retirement Community Management (Concentration courses): • Outline the importance of long-term care, senior living facilities and retirement community residences within social services and healthcare • Explain governmental laws and policies associated with the operations of a retirement community residence • Assess appropriate plans and strategies for facility management relevant to the design, safety, and environmental requirements • Identify the psychological, physiological, social and spiritual needs of seniors • Analyze health and wellness program plans including food and nutrition, fitness and wellness • Develop and assess management strategies specific to the operations of retirement communities including staffing, finance, sales and quality improvement

	• Apply data analysis and visualization techniques for quality and process improvement The following objectives will be threaded within each course: • Demonstrate an awareness of ethical practices and professional standards applicable to retirement community living and the professional associations • Exemplify the skills, attitudes and behaviours required to work and collaborate with people and develop personal management skills • Employ effective communication practices
Meeting Learning Objectives:	The Business Administration with a Concentration in Retirement Community Management program will use a series of courses to achieve the stated program objectives. Individual course objectives are mapped to the overall program objectives. The delivery format and teaching methods are structured to have a maximum effect on achieving the learning objectives.
Program Admission Requirements:	The program will not require an application for admission. The following statement for recommended program requirements will be posted to MCE's website: In compliance with the Certificates and Diploma admission policy from Undergraduate Council, students who wish to enter the Retirement Community Management program should meet the following requirements based on their education and work experience: 1) Be a mature student as defined in the Undergraduate Calendar of McMaster University; or be deemed an exceptional case by Continuing Education 2) Be comfortable using word processing software, spreadsheets, and web browsing tools 3) Follow University guidelines for English Language Proficiency requirements: Completion of TOEFL exam with a minimum acceptable score of IBT: 86 overall with a minimum score of 20 on each of the four components (Reading, Writing, Speaking, Listening), valid for 2 years
Program Pre-requisites (if applicable):	Students will be required to have the necessary computer, software programs and access to the internet to complete all courses.
Program Completion Requirements:	To qualify for the diploma in Business Administration with a Concentration in Retirement Community Management, students must complete 9 courses (27 units) of study.
Program Delivery Format:	Program courses will be delivered online. The online format will include instructor lectures, presentations, group discussions, and practical application activities.

Student Evaluations (Grading Process):	Each course will include several evaluation components. The evaluations will consist of assignments, case studies, presentations, individual or group projects, class participation, or a combination thereof. Where appropriate, evaluations will be structured to evaluate participants' level of competency in achieving overall learning objectives. Grading will adhere to McMaster's academic grading scale.
Course Evaluation:	For each course, students will complete an evaluation to assess content, delivery, materials, method of evaluation and instruction.
Course Instruction:	Instructors for courses will be selected from a pool of qualified external professionals. In compliance with *McMaster's Senate and Undergraduate Council Guidelines for Certificates and Diplomas,* the selection will be based on academic background and/or experience within the field. Instructors must have a Master's Degree (or equivalent) and significant professional experience and teaching within the field.
Credit Towards Degree Programme Studies:	The academic credit courses included in the program may be used for credit towards undergraduate degree studies following the normal academic rules as specified by the Faculty offering the degree.
Program Advanced Standing:	As per the current policies for the Business Administration diploma, students may transfer up to two courses (6 units) to the program. Approved course transfers are based on the following requirements: • courses must have an 80% overlap in content/curricula and a similar number of classroom or contact hours • courses must have been taken within the last five years • courses must have been taken from an accredited academic institution and listed on an official transcript with a grade • a final grade of "C-" or better to be eligible Students who completed MCE's business administration diploma (general or other concentrations) may not apply those courses to this diploma program. These students will be directed to enrol in the Retirement Community Certificate of Professional Learning. Students who completed MCE's business administration certificate program may apply the five core courses to this diploma and proceed to complete the retirement community management concentration courses.
Statement of Financial Viability:	
I have reviewed the business case and financial projections which include enrolment projections and costs. Sources of revenue for this program include tuition and supplementary fees (MAPS). Expenses are typical and include significant upfront development and marketing costs, as well as typical ongoing delivery costs (such as payment of facilitators, honoraria for other guest facilitators, materials, advertising and administration). - *Lorraine Carter, Director, McMaster Continuing Education*	

Statement of Administrative Responsibilities:

Statement of Faculty Alignment:
The staffing and systems infrastructure to support the following functions already exists within McMaster Continuing Education. Costs will be fully covered by tuition, except the first year of the program, when the startup will be subsidized by MCE.

Continuing Education program responsibilities:

- budget development and monetary responsibilities
- program and course development
- course registrations/administration
- supervision of instructors to ensure all required policies and practices are adhered to and course are taught according to program requirements and standards
- Marketing and Promotions

The DeGroote School of Business will act as an academic liaison and is charged with the responsibility of on-going academic review and assessment of the curriculum. The Faculty's letter of support is included at the end of this document.

Course List

Course Name	Required/Elective	Unit Value	Term
BUS 825 Business Foundations	**Required**	**3.0**	**Fall 2021**

Course Description:
Business Administration Foundations explores the functional areas of management including finance, human resources, marketing, operations and general management. It provides context for students to u nderstand the themes of change, international business, ethics and social responsibility, small business growth, information and communication technology, and quality to understand contemporary Canadia n business practices and processes.

BUS 850 Business Communications	**Required**	**3.0**	**Fall 2021**

Course Description:
Canada's business environment requires that business people communicate effectively, persuasively and ethically in written, verbal and interpersonal communications. During this course, students will learn how to plan, write and review a variety of business communications vehicles from presentations to letters to informational reports and business proposals.
Using a combination of teaching methods – lectures, discussion, small group, in-class writing and editing projects, and in-class tutorials, this course will help develop participant's critical thinking and analysis, research, writing, editing and presentation skills. Special emphasis will be placed on developing appropriate business language skills (spelling, grammar, punctuation, voice and tone).

BUS 860 Foundations of Business Finance	**Required**	**3.0**	**Fall 2021**

Course Description:
An understanding of financial literacy is essential to anyone who is tasked with reviewing or analyzing financial data to make business decisions. This practical course covers the basic concepts and

applications in financial accounting, managerial accounting and managerial finance, and it is geared toward people whose primary responsibility is managerial in nature (non-financial). The interpretation of financial information rather than the steps to generate it, will guide the students' learning.			
MKT 819 Introduction to Marketing	**Required**	**3.0**	**Fall 2021**
Course Description: Marketing impacts every aspect of our lives. Where we shop, how we eat, what we drive and even where we live, can be influenced by marketing. Introduction to Marketing is a survey course that introduces learners to the basic concepts of marketing, viewed within a corporate framework. During the course, we study the modern marketplace and discuss the impact of the environmental factors that shape marketing and influence the type of products that companies market. Topics include the development of new products, identifying market segments and targeting consumer groups, pricing strategies, brand equity, distribution channel and promotional activities.			
HRM 821 Organizational Behaviour	**Required**	**3.0**	**Fall 2021**
Course Description: This course provides an overview of human behaviour in the workplace and its influence on organizational effectiveness. Topics include personality, perception, motivation, decision-making, team dynamics, communication, organizational politics, conflict, leadership, organizational design, and change.			
Healthy Aging: Health, Wellness and Nutrition	**Required**	**3.0**	**Fall 2021**
Course Description: Study the relationship between nutrition, aging and wellness. The course will explore foundational concepts of healthy aging including the demographics of Canada's aging population, the physiology of aging and the nutritional needs of older adults. The focus will be placed on the design and implementation of food and nutrition, fitness, health and wellness programming within retirement community residences. Proposed topics: • demographics of aging • physiology of aging • nutrition requirements of older adults • nutrition screening and assessment • nutritional implications of disease (e.g. cardiovascular, respiratory, gastrointestinal, endocrine) • nutritional implications of cognitive disorders • malnutrition and obesity • nutritional support for older adults			
Residential Site Operations	**Required**	**3.0**	**Fall 2021**
Course Description: This course examines the management of the physical site operations of a retirement residence. Focus is placed on the physical structures, heating systems, safety measures and controls and maintenance management. Principles of risk management, resourcing, operations budgeting and leadership will be presented using case studies and industry best practices.			

Proposed topics:

- overview of design principles
- facility operations
- environmental controls
- resource management
- health and safety
- policies and regulations
- managing risk

Retirement Community Management	**Required**	**3.0**	**Fall 2021**

Course Description:
Effective management of a retirement community facility involves an extensive understanding of resource management: staffing, inventory, finances, and data. This course will examine best practices for managing an organization according to policies and legislative requirements in Canada. Students will analyze proven strategies to effectively plan, implement and lead the organization.
Proposed topics:

- federal and provincial laws and regulations
- resource budgeting: inventory, supplies, staffing
- financial planning and reporting
- marketing and sales
- quality and process improvement
- communication
- leadership strategies

Data Analysis for Quality and Process Improvement	**Required**	**3.0**	**Fall 2021**

Course Description:
This course will examine the exploration of data relevant to the management and operations of retirement community organizations. The course will present the analytics life cycle in the context of planning to solve a business problem and how to use data for quality metrics and process improvements. Common data visualization tools and techniques will be explored and used as students learn best practices for the presentation and communication of analytical solutions and insights.

McMaster University | DeGroote School of Business
Education with Purpose
Office of the Dean

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(905) 526-0852
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DATE: March-28-21

TO: Certificate & Diploma Committee

FROM: Dr. Sue McCracken, Associate Dean (Academic), DeGroote School of Business

RE: Proposal for Diploma in Business Administration with a Concentration in Retirement Community Management

I have reviewed the Business Administration with a Concentration in Retirement Community Management Diploma program submission presented by McMaster Continuing Education (MCE). I have determined that it meets all relevant criteria set out by the Undergraduate Council in its guidelines for certificates and diplomas. I am pleased to support the program on behalf of the DeGroote School of Business.

This program proposal was reviewed by Marvin Ryder His conclusion is that the objectives of the proposed program are viable. The courses included in the program will fulfil the stated objectives and the program meets the Undergraduate Council's criteria for the designation of "Diploma". I concur with Marvin Ryder's assessment.

The DeGroote School of Business is pleased to support McMaster Continuing Education in the delivery of the Business Administration with a Concentration in Retirement Community Management program to meet the needs of people wanting to work in this industry. We will continue to support MCE as their academic affiliate, providing both this initial submission review and overview of ongoing curriculum issues. Additionally, we have provided MCE with guidelines for possible use of advanced standing rules for students entering our degree programs using credit from completion of this program.

Sincerely,

Susan McCracken

Susan McCracken| Associate Dean (Academic), PhD, FCPA, FCA
Professor in Accounting and Financial Management Services
DeGroote School of Business | McMaster University
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Education with Purpose
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CONTINUING EDUCATION | McMaster University

Continuing Education Academic Program Submission – For Approval

Department & Program Information	
Program Name:	The Canadian Housing Certificate of Professional Learning
Academic Credential:	Certificate of Professional Learning
Name of Representative:	James Dunn
Effective Date:	2021-09-01
Date of Submission:	2021-03-19
Academic Merit	
Program Overview:	This Certificate of Professional Learning will provide an overview of housing policy, programs and institutional arrangements and grounding in the fundamentals and history of housing in Canada's market-based system. The courses will also explore the intersection of housing with other disciplines such as where housing and health outcomes meet. "Housing" is not a field of study at Canadian universities, therefore, many universities do not provide fundamentals courses on housing policy and Canada's housing system. There is an urgent need, though, to train students and those already in the workforce in the nuances of Canada's housing sector. Learners must complete three courses to obtain the certificate: • The Fundamentals of Housing Policy and Governance • Housing and Health • Special Topics in Canadian Housing (e.g. Housing and Aging, Homelessness, The Economics of Good Housing, Sustainable Housing in Canada)
Learning Objectives:	Upon completion of the program, learners will be able to: • Examine why and how governments have become involved in housing; • Demonstrate a critical understanding of the social, economic and political context in which housing is delivered locally and nationally; • Analyze major issues in housing past and present;

	• Compare and contrast housing policy and provision nationally and internationally; • Understand how to find data to assist in analyzing housing-related research questions.
Meeting Learning Objectives:	The Canadian Housing program will use a series of courses to achieve the stated program objectives. Individual course objectives are mapped to the overall program objectives. The delivery format and teaching methods are structured to have a maximum effect on achieving learning objectives.
Program Admission Requirements:	The program will be open enrolment; no application required.
Program Pre-requisites (if applicable):	Recommended program requirements will be posted to Continuing Education's website: "In compliance with the Certificates and Diploma, admission policy from Undergraduate Council, students who wish to enter the program should meet the following requirements based on their education and work experience: 1) Be a mature student as defined in the Undergraduate Calendar of McMaster University; or be deemed an exceptional case by the Continuing Education 2) Be proficient with basic computer program applications, such as Word, Excel 3) Follow University guidelines for English Language Proficiency requirements: Completion of TOEFL exam with a minimum acceptable score of IBT: 86 overall with a minimum score of 20 on each of the four components (Reading, Writing, Speaking, Listening), valid for 2 years.
Program Completion Requirements:	To qualify for a Certificate of Professional Learning, students must complete 3 courses (9 units) of study.
Program Delivery Format:	Program courses may be delivered online and/or in a blended format. All formats will include instructor lectures and/or presentations, group discussions, and practical application activities. Each Course will be a minimum of 36 hours delivered over an 8-week session (approximately 4.5 hours per week).
Student Evaluations (Grading Process):	Each course will include several evaluation components. The evaluations will consist of assignments, case studies, presentations, application activities, individual or group projects, class participation, or a combination thereof. Where appropriate, evaluations will be structured to evaluate learners' level of competency in achieving overall learning objectives. Grading will adhere to McMaster's academic grading scale.
Course Evaluation:	For each course, students will complete an evaluation to assess content, delivery, materials, method of evaluation and instruction.

Course Instruction:	Instructors for courses will be selected from a pool of qualified internal and external professionals and academics. In compliance with McMaster's Senate and Undergraduate Council Guidelines for Certificates and Diplomas, the selection will be based on academic background and/or experience within the field. Instructors must have a Master's degree (or equivalent) and significant professional experience and teaching within the field.
Credit Towards Degree Programme Studies:	The academic credit courses included in the program may be used for credit towards undergraduate degree studies following the normal academic rules as specified by the Faculty offering the degree.
Program Advanced Standing:	No transfer credits will be permitted for the Certificate of Professional Learning.

Statement of Financial Viability

I have reviewed the business case and financial projections which include enrolment projections and costs. Sources of revenue for this program include tuition and supplementary fees (MAPS). Expenses are typical and include significant upfront development and marketing costs, as well as typical ongoing delivery costs (such as payment of facilitators, honoraria for other guest facilitators, materials, advertising and administration).

- *Lorraine Carter, Director, McMaster for Continuing Education*

Statement of Administrative Responsibilities

Statement of Faculty Alignment:
The staffing and systems infrastructure to support the following functions already exists within Continuing Education. Costs will be fully covered by tuition, except the first year of the program, when the startup will be subsidized by Continuing Education.
Continuing Education program responsibilities:

- budget development and monetary responsibilities
- program and course development
- course registrations/administration
- supervision of instructors to ensure all required policies and practices are adhered to and course are taught according to program requirements and standards
- Marketing and Promotions

The Faculty of Social Sciences will act as an academic liaison and is charged with the responsibility of on-going academic review and assessment of the curriculum. The Faculty's letter of support is included at the end of this document.

Listing of Courses

Course Name	Required/Elective	Unit Value	Term
The Fundamentals of Housing Policy and Governance	**Required**	**3**	**Fall 2021, 12 weeks 3h/wk**

Course Description: This course will examine the rationale for housing policy, the constitutional context and changing role of government levels, the nature of housing markets and housing need, policy and program alternatives used in Canada and their outcomes and how housing policy relates to urban and neighbourhood policy and social and economic policy. The course commences with a

brief examination of the rationale and basis for housing policy. From there we will trace the evolution of housing policy since its formal emergence in the early post-war period and over the subsequent 70 years to the present. The course will then engage students in a range of current issues, review potential data sources to support sound policy analysis and compare and contrast the state of policy in Canada with that in other countries.			
Housing and Health	**Required**	**3**	**Spring 2022, 12 weeks 3h/wk**
Course Description: This course considers the broad area of housing and public health, one of the core areas of public health research and intervention. Learners will explore the range of factors, acting at different levels, directly and indirectly, through which housing affects health. In public health terms, housing affects health in a myriad of relatively minor ways, in total forming one of the key social determinants of health. Learners will consider how the improvement of housing and neighbourhoods has been a core activity of public health and a central component in tackling poverty. Investment in housing can be more than an investment in bricks and mortar: It can also form a foundation for the future health and well-being of the population.			
Selected Topics in Housing	**Required**	**3**	**Summer 2022, 12 weeks 3h/wk**
Course Description: This course will provide an exploration of selected topics in housing. Topics may vary from year to year but could include: Housing and Aging, Sustainable Housing, Housing in the North, Big Data and Housing.			

McMaster University | SOCIAL SCIENCES

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DATE: March-31-21

TO: Certificate & Diploma Committee

FROM: Dr. Tracy Prowse, Faculty of Social Sciences

RE: Canadian Housing Program, Certificate of Professional Learning

I have reviewed the proposal for the Canadian Housing program presented by McMaster Continuing Education (MCE). I have determined that it meets all relevant criteria set out by Undergraduate Council in its guidelines for Certificates and Diplomas. Therefore, I endorse this submission with the support of the Faculty of Social Sciences.

At my request, this program proposal was reviewed by Dr. James Dunn. His conclusion is that the objectives of the program are viable. The courses in the program will fulfil the stated objectives, and the program meets Undergraduate Council's criteria for the designation of Certificate of Professional Learning.

The Faculty of Social Sciences is pleased to support a program such as Canadian Housing that will meet the needs of people wanting to work in this field. As the academic affiliate, the Faculty of Social Sciences supports this program by carrying out this review and providing assistance with curriculum issues. Additionally, we have provided MCE with guidelines pertaining to advanced standing rules for students entering our degree programs with credits from this program.

Sincerely,

Tracy Prowse

Dr. Tracy Prowse
Associate Dean Academic
Faculty of Social Sciences

CONTINUING EDUCATION | McMaster University

McMaster Continuing Education Academic Program Submission – For Approval

Department & Program Information (complete all fields):	
Program Name:	Nutrition, Health and Wellness
Academic Credential:	Certificate of Professional Learning
Name of Representative:	Lorraine Carter
Effective Date:	September 1, 2021
Date of Submission:	April 6, 2021
Academic Merit (complete all fields; write "not applicable" as needed):	
Program Overview:	The health and wellness industry has experienced steady growth in the last ten years as Canadian's become more aware of nutrition, food security, wellness and overall health. The health and wellness industry is projected to maintain this steady increase for the next few years. Demographics trends and an aging population are factors associated with the demand for health and wellness products and services. Furthermore, government initiatives and programming will continue to emphasize living a healthy lifestyle. Employment for professionals with health, nutrition and wellness training is located within: • health/nutrition/wellness retailers • community centres • long term care homes • senior living facilities • fitness centres • business/corporate offices • wellness centres • healthcare facilities • weight loss services • private consulting • foodservice industry The focus of the program is to provide a foundational education in the areas of nutrition, healthy living and wellness. The program will consist of 5 elective courses. Three new courses will be developed to address the specific learning requirements for nutrition and health.

	The remaining two courses will be pulled from the retirement community management program and human resources management. The program will be open enrolment and students are required to complete three courses (9 units) to receive the Certificate of Professional Learning.
Learning Objectives:	Upon completion of the program, students will: • Identify key nutrients and how they work in the body and discuss nutritional needs throughout the life cycle • Describe the role of foods and nutrients in energy balance, weight control, and physical activity • Outline various aspects of wellness (physical, mental, social and environmental, financial, occupational) • Explain how appropriate physical activity, fitness, and active living strategies and programming impacts the personal and community health, fitness, and well-being • Examine the key social, cultural and economic, physical and behavioural factors that determine health and wellness necessary for program planning and development • Analyze health and wellness program plans and strategies to support a healthy lifestyle The following objectives will be threaded within each course: • Demonstrate an awareness of ethical practices and professional standards applicable to standard professional roles within the health and wellness industry • Exemplify the skills, attitudes and behaviours required to work and collaborate with people and develop personal management skills • Employ effective communication practices
Meeting Learning Objectives:	The Nutrition, Health and Wellness program will use a series of courses to achieve the stated program objectives. Individual course objectives are mapped to the overall program objectives. The delivery format and teaching methods are structured to have a maximum effect on achieving the learning objectives.
Program Admission Requirements:	The program will not require an application for admission. The following statement for recommended program requirements will be posted to MCE's website: In compliance with the Certificates and Diploma admission policy from Undergraduate Council, students who wish to enter the Nutrition, Health and Wellness program should meet the following requirements based on their education and work experience: 1) Be a mature student as defined in the Undergraduate Calendar of McMaster University; or be deemed an exceptional case by Continuing Education

	2) Be comfortable using word processing software, spreadsheets, and web browsing tools 3) Follow University guidelines for English Language Proficiency requirements: Completion of TOEFL exam with a minimum acceptable score of IBT: 86 overall with a minimum score of 20 on each of the four components (Reading, Writing, Speaking, Listening), valid for 2 years
Program Pre-requisites (if applicable):	Students will be required to have the necessary computer, software programs and access to the internet to complete all courses.
Program Completion Requirements:	To qualify for a Certificate of Professional Learning, students must complete three courses, 9 units of study.
Program Delivery Format:	Program courses will be delivered online. The online format will include instructor lectures, presentations, group discussions, and practical application activities.
Student Evaluations (Grading Process):	Each course will include several evaluation components. The evaluations will consist of assignments, case studies, presentations, individual or group projects, class participation, or a combination thereof. Where appropriate, evaluations will be structured to evaluate participants' level of competency in achieving overall learning objectives. Grading will adhere to McMaster's academic grading scale.
Course Evaluation:	For each course, students will complete an evaluation to assess content, delivery, materials, method of evaluation and instruction.
Course Instruction:	Instructors for courses will be selected from a pool of qualified external professionals. In compliance with *McMaster's Senate and Undergraduate Council Guidelines for Certificates and Diplomas,* the selection will be based on academic background and/or experience within the field. Instructors must have a Master's Degree (or equivalent) and significant professional experience and teaching within the field.
Credit Towards Degree Programme Studies:	The academic credit courses included in the program may be used for credit towards undergraduate degree studies following the normal academic rules as specified by the Faculty offering the degree.
Program Advanced Standing:	No transfer credit will be permitted for the Certificate of Professional Learning.
Statement of Financial Viability:	
I have reviewed the business case and financial projections which include enrolment projections and costs. Sources of revenue for this program include tuition and supplementary fees (MAPS). Expenses are typical and include significant upfront development and marketing costs, as well as typical ongoing delivery costs (such as payment of facilitators, honoraria for other guest facilitators, materials, advertising and administration). *-Lorraine Carter, Director, McMaster Continuing Education*	

Statement of Administrative Responsibilities:

Statement of Faculty Alignment:
The staffing and systems infrastructure to support the following functions already exists within McMaster Continuing Education. Costs will be fully covered by tuition, except the first year of the program, when the startup will be subsidized by MCE.

Continuing Education program responsibilities:

- budget development and monetary responsibilities
- program and course development
- course registrations/administration
- supervision of instructors to ensure all required policies and practices are adhered to and course are taught according to program requirements and standards
- Marketing and Promotions

The Faculty of Science will act as an academic liaison and is charged with the responsibility of on-going academic review and assessment of the curriculum. The Faculty's letter of support is included at the end of this document.

Course List

Course Name	Required/Elective	Unit Value	Term
Nutrition Fundamentals	**Elective**	**3.0**	**Fall 2021**

Course Description:
Discover the fundamental principles of nutrition and its impact on our daily lives. The course provides an overview of nutrients and how they work in the body. Topics will include vitamins and minerals, carbohydrates, lipids and proteins), metabolism, digestion, absorption and energy balance. An examination of how fitness, diet and wellness connect for making healthy decisions and achieving health goals.
Proposed topics:

- overview of nutrition
- digestion, absorption, and transport
- carbohydrates, lipids and proteins
- nutrients for bone health
- metabolism
- energy balance
- weight management
- fitness: physical activity and nutrients
- impact of diet on overall health and wellness

Nutrition, Fitness and Healthy Living	**Elective**	**3.0**	**Fall 2021**

Course Description:
The course examines the concepts, and the relationship between, nutrition, fitness, health and wellness. The impact of establishing a healthy lifestyle according to the determinants of health and wellness is discussed. Focus is placed on the key factors and considerations necessary to plan, create and implement a fitness and healthy living program for individuals and community groups. Students should have a foundational level of knowledge in nutrition before enrolling in this course.
Proposed topics:

- overview of nutrition

- determinants of health
- physical activity
- frameworks for understanding and attaining behaviour change
- developing a health and wellness plan
- community health and wellness program development

Nutrition for the Lifecycle	**Elective**	**3.0**	**Fall 2021**

Course Description:
Explore the impact of nutrition on people through the various stages of the life cycle. This course will examine the nutritional needs necessary to promote healthy diets and lifestyles at particular life stages. An evaluation of how individual, family, community and societal factors affect overall nutrition and nutritional planning. Students should have a foundational level of knowledge in nutrition before enrolling in this course.
Proposed topics:

- nutrition basics
- nutrition requirements, conditions and interventions for life cycle:
  - preconception nutrition
  - pregnancy
  - infant
  - toddler and pre-school nutrition
  - child and pre-adolescent
  - adolescent
  - adult
  - older adult

HRM 941 Workplace Health and Wellness	**Elective**	**3.0**	**Fall 2021**

Course Description:
This course will focus on health and wellness concepts, program management strategies, interventions, and perspectives on wellness in the workplace. We will examine why workplace wellness programs make sense as a return on investment for employers and provide insight into the process of designing, managing, and evaluating a wellness program. We will explore strategies that impact health and wellness and identify the types of interventions used to operationalize a workplace wellness program.
Course topics:

- Introduction to Health and Wellness
- Establishing and Designing a Wellness Program
- Physical Wellness
- Mental Wellness
- Social and Environmental Wellness
- Financial Wellness
- Intellectual and Occupational Wellness
  Absence Management

Healthy Aging: Health, Wellness and Nutrition	**Elective**	**3.0**	**Fall 2021**

Course Description:
Study the relationship between nutrition, aging and wellness. The course will explore foundational concepts of healthy aging including the demographics of Canada's aging population, the physiology of aging and the nutritional needs of older adults. The focus will be placed on the design and

implementation of food and nutrition, fitness, health and wellness programming within retirement community residences.

Proposed topics:

- demographics of aging
- physiology of aging
- nutrition requirements of older adults
- nutrition screening and assessment
- nutritional implications of disease (e.g. cardiovascular, respiratory, gastrointestinal, endocrine)
- nutritional implications of cognitive disorders
- malnutrition and obesity
- nutritional support for older adults

McMaster University | CONTINUING EDUCATION

DATE: March-26-21

TO: Certificate & Diploma Committee

FROM: Dr. Michael Farquharson, Associate Dean (Academic), Faculty of Science

SUBJECT: Proposal for Nutrition, Health and Wellness, Certificate of Professional Learning

I have reviewed the Nutrition, Health and Wellness program submission presented by McMaster Continuing Education (MCE). I have determined that it meets all relevant criteria set out by the Undergraduate Council in its guidelines for Certificates and Diplomas. I am pleased to support this submission on behalf of the Faculty of Science.

This program proposal was reviewed by Dr. Trevor King. His conclusion is that the objectives of the proposed program are viable. The courses included in the program will fulfil the stated objectives, and the program meets the Undergraduate Council's criteria for the designation of Certificate of Professional Learning. I concur with Trevor King's assessment.

The Faculty of Science is pleased to support McMaster Continuing Education in the delivery of the Nutrition, Health and Wellness program to meet the needs of people planning to work in this industry. We continue to support MCE as their academic affiliates, providing both the initial submission review and overview of ongoing curriculum issues. Additionally, we have provided MCE with guidelines for possible use of advanced standing rules for students entering our degree programs using credit from completion of this program.

Sincerely,

Dr. Michael Farquharson
Associate Dean (Academic)
Faculty of Sciences

Cc: Lorraine Carter, Director, CE
Dan Piedra, Assistant Director, CE

CONTINUING EDUCATION | McMaster University

McMaster Continuing Education Academic Program Submission – For Approval

Department & Program Information (complete all fields):	
Program Name:	Health and Wellness Coaching
Academic Credential:	Diploma
Name of Representative:	Lorraine Carter
Effective Date:	September 1, 2021
Date of Submission:	April 6, 2021
Academic Merit (complete all fields; write "not applicable" as needed):	
Program Overview:	Within the health and wellness industry, the position of a health and wellness coach is emerging as a specific career option. A health coach's primary function is to assist people to gain the knowledge, skills, tools and confidence to take responsibility for their diet and lifestyle helping them to reach their health goals. A health and wellness coach will work with clients to promote healthy living practices using motivational counselling techniques and strategies. According to a study by Gordon, N. F., et al (2016), the authors concluded that well-designed lifestyle health coaching programs have an important and positive effect on non-communicable disease prevention and these wellness programs will become part of clinical health services. At present, Health Canada does not regulate health and wellness coaches. This led to the creation of the Health Coach Alliance (HCA). The HCA was formed in 2016 to provide professional standards, education and regulation to Canada's health coaching industry. MCE intends to submit the Health and Wellness Coaching program for HCA's review. If approved, graduates of the program will be able to register with the HCA and hold the designation of Registered Health Coach. The Health Coach program is designed to meet the 200 hours of study as outlined by the HCA. To meet HCA's curriculum guidelines, an 8-course diploma is proposed. The program will focus on four main areas of study: nutrition and health, behaviour therapy and motivating for change, health coach principles and practices and program development. The program will blend theory with practice for students to acquire the foundational knowledge of the coaching role and its relationship with clients as well as

	to meet the 30 hours of case study and/or client sessions required for an approved HCA program. Two courses of the program will be shared with the Nutrition, Health and Wellness program. Two elective course options are shared with the Business Administration and Human Resources Management programs. The remaining 5 courses will be newly developed for this program. The program will be open enrolment and students are required to complete 8 courses (24 units) of study to graduate from the program.
Learning Objectives:	Upon completion of the program, students will: • Identify key nutrients and how they work in the body and discuss nutritional needs throughout the life cycle • Describe the role of foods and nutrients in energy balance, weight control, and physical activity • Outline various aspects of wellness (physical, mental, social and environmental, financial, occupational) • Explain how appropriate physical activity, fitness, and active living strategies and programming impacts the personal and community health, fitness, and well-being • Explore the social and behavioural factors that contribute to health and wellness decisions and behaviours • Demonstrate appropriate behaviour change approaches and strategies • Exhibit motivating and coaching methods to promote health and wellness • Analyze health and wellness program plans and strategies to support a healthy lifestyle • Research, plan and design a health and wellness plan and/or program suitable to an individual or group and examine effective program evaluation methods and tools The following objectives will be threaded within each course: • Demonstrate an awareness of ethical practices and professional standards applicable to standard professional roles within the health and wellness industry • Exemplify the skills, attitudes and behaviours required to work and collaborate with people and develop personal management skills • Employ effective communication practices
Meeting Learning Objectives:	The Health and Wellness Coaching program will use a series of courses to achieve the stated program objectives. Individual course objectives are mapped to the overall program objectives. The delivery format and teaching methods are structured to have a maximum effect on achieving the learning objectives.

Program Admission Requirements:	The program will not require an application for admission. The following statement for recommended program requirements will be posted to MCE's website: In compliance with the Certificates and Diploma admission policy from Undergraduate Council, students who wish to enter the Health and Wellness Coaching program should meet the following requirements based on their education and work experience: 1) Be a mature student as defined in the Undergraduate Calendar of McMaster University; or be deemed an exceptional case by Continuing Education 2) Be comfortable using word processing software, spreadsheets, and web browsing tools 3) Follow University guidelines for English Language Proficiency requirements: Completion of TOEFL exam with a minimum acceptable score of IBT: 86 overall with a minimum score of 20 on each of the four components (Reading, Writing, Speaking, Listening), valid for 2 years
Program Pre-requisites (if applicable):	Students will be required to have the necessary computer, software programs and access to the internet to complete all courses.
Program Completion Requirements:	To qualify for a Diploma in Health and Wellness Coaching, students must complete 8 courses, 24 units of study.
Program Delivery Format:	Program courses will be delivered online. The online format will include instructor lectures, presentations, group discussions, and practical application activities.
Student Evaluations (Grading Process):	Each course will include several evaluation components. The evaluations will consist of assignments, case studies, presentations, individual or group projects, class participation, or a combination thereof. Where appropriate, evaluations will be structured to evaluate participants' level of competency in achieving overall learning objectives. Grading will adhere to McMaster's academic grading scale.
Course Evaluation:	For each course, students will complete an evaluation to assess content, delivery, materials, method of evaluation and instruction.
Course Instruction:	Instructors for courses will be selected from a pool of qualified external professionals. In compliance with *McMaster's Senate and Undergraduate Council Guidelines for Certificates and Diplomas,* the selection will be based on academic background and/or experience within the field. Instructors must have a Master's Degree (or equivalent) and significant professional experience and teaching within the field.
Credit Towards Degree Programme Studies:	The academic credit courses included in the program may be used for credit towards undergraduate degree studies following the normal academic rules as specified by the Faculty offering the degree.

Program Advanced Standing:	Students may be eligible to transfer up to 9 units of study to the Health and Wellness Coaching program. Approved course transfers are based on the following requirements: • courses must have an 80% overlap in content/curricula and a similar number of classroom or contact hours • courses must have been taken within the last five years • courses must have been taken from an accredited academic institution and listed on an official transcript with a grade • a final grade of "C-" or better to be eligible Students who complete the Nutrition, Health and Wellness Certificate of Professional Learning program may apply the three shared courses (9 units) to the Health and Wellness Coaching program: • Nutrition Fundamentals • Nutrition, Fitness and Healthy Living • Workplace Health and Wellness

Statement of Financial Viability:

I have reviewed the business case and financial projections which include enrolment projections and costs. Sources of revenue for this program include tuition and supplementary fees (MAPS). Expenses are typical and include significant upfront development and marketing costs, as well as typical ongoing delivery costs (such as payment of facilitators, honoraria for other guest facilitators, materials, advertising and administration).

-Lorraine Carter, Director, McMaster Continuing Education

Statement of Administrative Responsibilities:

Statement of Faculty Alignment:

The staffing and systems infrastructure to support the following functions already exists within McMaster Continuing Education. Costs will be fully covered by tuition, except the first year of the program, when the startup will be subsidized by MCE.

Continuing Education program responsibilities:

- budget development and monetary responsibilities
- program and course development
- course registrations/administration
- supervision of instructors to ensure all required policies and practices are adhered to and course are taught according to program requirements and standards
- Marketing and Promotions

The Faculty of Science will act as an academic liaison and is charged with the responsibility of on-going academic review and assessment of the curriculum. The Faculty's letter of support is included at the end of this document.

Course List

Course Name	Required/Elective	Unit Value	Term
Nutrition Fundamentals	**Required**	**3.0**	**Fall 2021**

Course Description:

Discover the fundamental principles of nutrition and its impact on our daily lives. The course provides an overview of nutrients and how they work in the body. Topics will include vitamins and minerals, carbohydrates, lipids and

proteins), metabolism, digestion, absorption and energy balance. An examination of how fitness, diet and wellness connect for making healthy decisions and achieving health goals.

Proposed topics:

- overview of nutrition
- digestion, absorption, and transport
- carbohydrates, lipids and proteins
- nutrients for bone health
- metabolism
- energy balance
- weight management
- fitness: physical activity and nutrients
- impact of diet on overall health and wellness

Nutrition, Fitness and Healthy Living	**Required**	**3.0**	**Fall 2021**

Course Description:

The course examines the concepts, and the relationship between, nutrition, fitness, health and wellness. The impact of establishing a healthy lifestyle according to the determinants of health and wellness is discussed. Focus is placed on the key factors and considerations necessary to plan, create and implement a fitness and healthy living program for individuals and community groups. Students should have a foundational level of knowledge in nutrition before enrolling in this course.

Proposed topics:

- overview of nutrition
- determinants of health
- physical activity
- frameworks for understanding and attaining behaviour change
- developing a health and wellness plan
- community health and wellness program development

Behaviour Change for Health and Wellness	**Required**	**3.0**	**Fall 2021**

Course Description:

Learn the theories for behaviour change within the context of health and wellness coaching. Explore the social and behavioural factors that influence a person's health and wellness decision-making and level of activity. This course will explore approaches, strategies and techniques appropriate for facilitating practical behaviour changes to achieve positive results in overall health and wellness. A practical component will be part of this course.

Proposed topics:

- behaviour change theory
- principles of behaviour change
- assessing confidence, importance and readiness
- building confidence
- reducing resistance
- consultation, communication and rapport building
- self-management strategies: managing stress and anxiety

Motivating for Health & Wellness	**Required**	**3.0**	**Fall 2021**

Course Description:

Building on the theory and practice of behaviour change, this course focuses on the principles of motivational interviewing. Various motivational techniques and approaches will be reviewed in terms of promoting positive interactions with the client or group as you collaborate to achieve goals and maintain positive health and wellness behaviours. A practical component will be part of this course.

Proposed topics:

- understanding motivational interviewing
- motivational interviewing approaches and techniques
- facilitating behaviour change
- active listening strategies
- health and wellness decision making
- goal setting
- identifying triggers
- managing stress

Health & Wellness Coaching: Principles and Practices	**Required**	**3.0**	**Fall 2021**

Course Description:

This course presents the fundamental principles and practices of being a health and wellness coach. Based on industry and professional best practices, explore the duties and responsibilities, guidelines, regulations, standards of care and ethics applicable to the role. Develop an understanding of the potential workplace environments for a health and wellness coach and how to engage with professionals in health care and wellness. Professional standards for client engagement and management will be studied. A practical component will be part of this course.

- the role of the coach as a helper, counsellor and motivator
- standards of practice
- ethical guidelines
- coaching skills
- collaborating with professionals
- developing trends in health and wellness

Program Design, Delivery and Evaluation	**Required**	**3.0**	**Fall 2021**

Course Description:

Develop your knowledge and skills for program research, design and delivery of health and wellness programs for the individual, workplace and community. This course will focus on how to bring evidence-based research and practices to support the duties and programming of health and wellness coaches. Tools and techniques for program evaluation will be explored. A practical component will be part of this course.

Proposed topics:

- planning a program /program planning models
- evidence-based planning
- needs assessment
- SMART goal setting
- engaging stakeholders/consultations
- program design and implementation strategies

- evaluation approaches and designs

Coaching Clients with Chronic Conditions	**Required**	**3.0**	**Fall 2021**

Course Description:
A key component of being a health and wellness coach is coaching clients with chronic conditions. This course looks at appropriate approaches, strategies and techniques to assist these clients in your coaching practice. Learn the skills necessary to review the client's health history, current status and the particular factors influencing the client's health and wellness. Focus on motivational communication techniques to establish a positive coach-client relationship and collaborative strategies to create and implement a program plan. A practical component will be part of this course.
Proposed topics:

- understanding chronic conditions (e.g. diabetes, cardiovascular disease, arthritis, cancer, neural disorders, etc.)
- understanding the physical, psychological and social challenges
- recognizing the role of the health and wellness coach in treatment plans and services
- client communication strategies
- motivating the client

BUS 825 Business Foundations	**Elective**	**3.0**	**Fall 2021**

Course Description:
Business Administration Foundations explores the functional areas of management including finance, human resources, marketing, operations and general management within contemporary Canadian business practices and processes. It provides context for students to understand the themes of change, international business, ethics and social responsibility, small business growth, information and communication technology, and quality.
Course topics:

- the Canadian business system
- small business, entrepreneurship and ownership
- role of government and business ethics
- organizational structure
- management function in organizations
- marketing
- making financial decisions
- factors in HR management
- operations management
- communications

HRM 941 Workplace Health and Wellness	**Elective**	**3.0**	**Fall 2021**

Course Description:
This course will focus on health and wellness concepts, program management strategies, interventions, and perspectives on wellness in the workplace. We will examine why workplace wellness programs make sense as a return on investment for employers and provide insight into the process of designing, managing, and evaluating a wellness program. We will explore strategies that impact health and wellness and identify the types of interventions used to operationalize a workplace wellness program.

Course topics:

- Introduction to Health and Wellness
- Establishing and Designing a Wellness Program
- Physical Wellness
- Mental Wellness
- Social and Environmental Wellness
- Financial Wellness
- Intellectual and Occupational Wellness
- Absence Management

McMaster University | CONTINUING EDUCATION

DATE: March-26-21

TO: Certificate & Diploma Committee

FROM: Dr. Michael Farquharson, Associate Dean (Academic), Faculty of Science

RE: Proposal for Health and Wellness Coaching, Diploma

I have reviewed the Health and Wellness Coaching program submission presented by McMaster Continuing Education (MCE). I have determined that it meets all relevant criteria set out by the Undergraduate Council in its guidelines for Certificates and Diplomas. I am pleased to support the program on behalf of the Faculty of Science.

This program proposal was reviewed by a faculty member. The faculty member concluded that the objectives of the proposed program are viable. The courses included in the program will fulfil the stated objectives and the program meets the Undergraduate Council's criteria for the designation of "Diploma". I concur with this assessment.

The Faculty of Science is pleased to support McMaster Continuing Education in the delivery of the Health and Wellness Coaching program to meet the needs of people planning to work in this industry. We will continue to support MCE as their academic affiliate, providing both this initial submission review and an overview of ongoing curriculum issues. Additionally, we have provided MCE with guidelines for the possible use of advanced standing rules for students entering our degree programs using credit from completion of this program.

Sincerely,

Dr. Michael Farquharson
Associate Dean (Academic)
Faculty of Sciences

Cc: Lorraine Carter, Director, MCE
Dan Piedra, Assistant Director, MCE

CONTINUING EDUCATION | McMaster University

Continuing Education Academic Program Submission – For Approval

Department & Program Information (complete all fields):	
Program Name:	Health Information Fundamentals
Academic Credential:	Certificate
Name of Representative:	Nathalie Vallee, Program Manager
Effective Date:	2021-05-01
Date of Submission:	2021-03-11
Academic Merit (complete all fields; write "not applicable" as needed):	
Program Overview:	The proposed *Health Information Fundamentals (HIF)* program is a pathway that is designed to better align with student and industry needs for certified professionals and to appeal to people from other educational backgrounds who wish to transition to the Health Information Management (HIM) profession. *Health Information Fundamentals* is designed to provide the core competencies, and skill sets that every HIM professional needs. The curriculum will cover the following competency areas: information governance, data quality, clinical knowledge, analytics, privacy and technology. This program follows a different path than a full diploma or degree and is designed for applicants who hold, or who are pursuing a degree and who wish to work in management and analytics roles within the HIM industry. This revised approach's key benefit is the reduced time to prepare for the certification examination and to achieve the Canadian College of Health Information Management (CCHIM) designation of Certified Health Information Management Professional.
Learning Objectives:	1. Understand the information lifecycle managed within a Canadian Health Care Policy and Procedural System, its relationship to data governance and the importance of records and document management policies and processes across the entire continuum of care. 2. Prepare, collect and process health data to be linkable and fit for use in analysis and care 3. Understand the development of data standards and their application within health information management looking specifically at data quality and data conformance

	4. Know the medical terminology used in a healthcare environment, the anatomical body structures and their physiological functions and the pathological conditions, risk factors, diagnostic interventions and treatment options available. 5. Be well-versed in research design and methods, analytics indicators, reporting, advanced analytics, business intelligence, consumer informatics and finance as they relate to the interpretation and analytics of health information. 6. Manipulate health data and statistics for measure and analysis using statistical software systems 7. Understand privacy and health law including definitions of common legal terms and key Canadian federal, provincial, and territorial legislation which affect policies and processes related to health information, security, privacy, confidentiality, external data sharing and access. 8. Understand the maintenance of data in technology systems, the project management concepts related to the system development lifecycle, and the standards related to the exchange of health information within and across systems.
Meeting Learning Objectives:	All course learning outcomes in the program will be mapped to the overall program objectives. The delivery format and teaching methods are structured to have a maximum effect on achieving the learning objectives.
Program Admission Requirements and Pre-requisites	In compliance with the Certificates and Diploma, admission policy from Undergraduate Council, students who wish to enter the program should meet the following requirements based on their education and work experience: 1. Be a mature student as defined in the Undergraduate Calendar of McMaster University; or be deemed an exceptional case by the Centre for Continuing Education 2. English Language Proficiency requirements: Completion of TOEFL exam with a minimum acceptable score of IBT: 86 overall with a minimum score of 20 on each of the four components (Reading, Writing, Speaking, Listening), valid for 2 years 3. The completion of a degree at a recognized university (in any discipline) 4. Completion of the following courses or proof of equivalency as per our transfer of credit policy: o HTH 100: Understanding the Canadian Healthcare System OR work experience in Canadian Healthcare o HTH 200 Medical Terminology o HTH 300 Anatomy & Physiology

	o HTH 116 and 117 Pathophysiology 1 and 2
Program Completion Requirements:	Students who complete all six Health Information Fundamentals courses (18 units) will be granted a Certificate in Health Information Fundamentals.
Program Delivery Format:	Courses will be delivered online. The online delivery formats will include instructor lectures and/or presentations, group discussions, and individual and/or small group practical application activities.
Student Evaluations (Grading Process):	Student evaluation will be based on application activities, individual or group projects, class participation, or a combination thereof. Where appropriate, evaluations will be structured to evaluate participants' level of competency in achieving overall learning objectives.
Course Evaluation:	For each course, students will complete an evaluation to assess content, delivery, materials, method of evaluation and instruction.
Course Instruction:	Instructors for courses will be selected from a pool of qualified external professionals. In compliance with *McMaster's Senate and Undergraduate Council Guidelines for Certificates and Diplomas*, selection will be based on academic background and/or experience within the field. Instructors must have a Master's Degree (or equivalent) and significant professional experience and teaching within the field.
Program Advanced Standing:	Transfer credits will be accepted into this program. Students will need to have obtained a minimum grade of C+ in each course transferred. The courses must have been taken at a recognized post-secondary institution in the last 5 years.
Statement of Financial Viability:	
I have reviewed the business case and financial projections which include enrolment projections and costs. Sources of revenue for this program include tuition and supplementary fees (MAPS). Expenses are typical and include significant upfront development and marketing costs, as well as typical ongoing delivery costs (such as payment of facilitators, honoraria for other guest facilitators, materials, advertising and administration). - *Lorraine Carter, Director, Centre for Continuing Education*	
Statement of Administrative Responsibilities:	
Statement of Faculty Alignment: The staffing and systems infrastructure to support the following functions already exists within Continuing Education. Costs will be fully covered by tuition, except the first year of the program, when the startup will be subsidized by Continuing Education. Continuing Education program responsibilities: • budget development and monetary responsibilities • program and course development • course registrations/administration	

- supervision of instructors to ensure all required policies and practices are adhered to and course are taught according to program requirements and standards
- Marketing and Promotions

The Faculty of Health Sciences will act as an academic liaison and is charged with the responsibility of on-going academic review and assessment of the curriculum. The Faculty's letter of support is included at the end of this document.

Listing of Courses:

Course Name	**Required/Elective**	**Unit Value**	**Term**
Introduction to Health Information Management and Records Management	Required	3 units	Fall 2021
Course Description: This course covers fundamental theories and principles of health information management including data types, data acquisition, data repositories, records management and data collection and use. Principles, frameworks, policies, and processes to manage records and documents will be covered including an overview of documentation legislation, professional practice guidelines for documentation standards, error detection and correction procedures, and acceptability of medical abbreviations and acronyms. Concepts of Electronic Health Record (EHR), Personal Health Record (PHR), Electronic Medical Record (EMR), and Electronic Patient Record (EPR) will be introduced. Students will learn about the overall structure of the Canadian health system and health data and information repositories as well as interactions between the Canadian health system and the Ministries, research, and public health. The course will introduce learners to Clinical Documentation Improvement (CDI) principles and processes.			
Information Governance, Finance and Research	Required	3 units	Winter 2022
Course Description: This course covers three major areas in health information: information governance, finance, and research. Information governance includes information lifecycle management and the relationship between data governance and the HIM lifecycle. Data and information learning will include types of interoperability, the data supply chain, and authoritative sources of routinely collected administrative and population data. Principles, frameworks, policies related to external data sharing and access will be covered. The course will cover provincial funding models, grouping and case weighting strategies, MIS Standards, and resource management. Research learning will include the role of epidemiology, research ethics approval process, qualitative and quantitative approaches and methodologies for research, data collection in research, and data and information collection formats.			
Privacy and Health Law	Required	3 units	Winter 2022 or Spring 2022
Course Description: This course will cover privacy and health law including definitions of common legal terms and key Canadian federal, provincial, and territorial legislation which affect health information and privacy. Learners will be introduced to privacy, security, and confidentiality principles, as they			

relate to various situations such as client privacy, maintaining confidentiality, ensuring security, confidentiality agreements, and external data sharing and access. Key provisions, principles, and definitions address in health information, data protection, and privacy statutes including access, collection, use, disclosure, and custodian/trustee and information manager obligations will be covered. Tools used to assess and manage privacy risk will be discussed.			
Quality in Health	Required	3 units	Winter 2022 or Spring 2022
Course Description: This course will introduce students to quality in health including principles frameworks, policies, and processes to ensure the accuracy, reliability, relevance, timeliness, coherence, clarity, and accessibility of data against standards and quality criteria. Standards development organizations, the Standards Lifecycle, and development and pan-Canadian standards such as SNOMED CT, LOINC, pCLOCD, HL7, ICD-10-CA, and CCI will be covered. Learners will be introduced to quality management practices such as CQI, LEAN, and TQM as well as common principles and practices for the creation of indicators, benchmarks, metrics, and reports. The course will cover clinical indicators (e.g. HSMR and readmission rates) as they relate to their role in monitoring health care quality. Organizational practices for maintaining data quality and data integrity will be discussed. Learners will explore tools used for terminology, nomenclature, classification, abstraction, encoding, and data submission.			
Information Technology	Required	3 units	Winter 2022 or Spring 2022
Course Description: This course will introduce students to different types of healthcare information systems, systems specifications for interoperability, and the flow between these systems. Learners will cover principles, policies, frameworks, and accountability for maintenance of data in technology systems, security of technology platforms, access to systems, and personal health information security. Students will learn about standards for transmission, translation, and transformation of data including consideration of natural language processing and transformation between data standards. The course will include development, functional requirements, and maintenance of an MPI and EMPI and personalized information needs and information-seeking behaviour and the development of consumer health portals. Technologies such as cloud storage, blockchain, virtual care will be highlighted. The IT Procurement process, project management, change management, and systems implementation will be covered. The course will include topics such as data integrity, disaster recovery, cybercrime, ransomware, and hacking.			
Statistics and Analytics	Required	3 units	Winter 2022 or Spring 2022
Course Description: This course will enable learners to apply descriptive statistical theory for continuous and categorical healthcare data including central tendency measures, and hospital statistics. Learners will employ commonly used statistical software systems. Relevant sources of data such as DAD, NACRS, RAI, MIS, etc. will be utilized. The course will introduce common principles and practices to create performance indicators, standards, benchmarks, metrics, reports, etc. including methodology, definitions, and visualization. Graphical and tabular presentation of healthcare			

data to facilitate decision-making will be explored. Learners will examine business intelligence (BI) tools used to locate, store, retrieve, analyze, and present data and information from multiple sources and policies and processes for those BI tools. The course will summarize how BI can be utilized for personal information need and information-seeking behaviour. Principles and practices for applying machine learning, artificial intelligence, predictive analytics, data modelling, patient flow modelling, and dataflow diagrams will be discussed.

Canadian College of Health Information Management

2021-02-26

Dr. Lorraine Carter
McMaster University
1280 Main St. W., Hamilton, ON L8S 4L8

Dear Dr. Carter,

On behalf of the Canadian College of Health Information Management (College), please accept this letter of support to McMaster University Centre for Continuing Education (CCE) in the development of a health information fundamentals (fundamentals) certificate-level program.

The College is a national, not-for-profit corporation that sets the accreditation standards for educational institutions and certification standards for health information professionals in Canada. Accreditation demonstrates to the public that a program is aligned to industry standards, as identified through the College's needs assessment and consultation with industry. It is a voluntary, self-regulatory process to recognize those that meet or exceed the standards set for health information education. The purpose of accrediting programs is to ensure continuous quality improvement of the educational content to support the evolving health information profession.

The development of a College-accredited fundamentals program will be the first of its kind in Canada. It will open pathways for degree-graduates, from both within McMaster and outside of, to hold a Certified Health Information Management (CHIM) professional designation. There is recognition that the health information profession will strengthen with the backgrounds of those in business, law, insurance, finance, and more. It is also imperative that cross-sector leaders who make decisions impacting the lives of Canadians' have a fundamental understanding of information governance, data quality, clinical knowledge, analytics, privacy, and technology.

If you require more information about the Canadian College of Health Information Management, please contact me directly at jeff.nesbitt@echima.ca.

Sincerely,

Jeff Nesbitt, BA, MBA
CEO & Registrar
Canadian College of Health Information Management
Canadian Health Information Management Association

cchim.ca

McMaster University | CONTINUING EDUCATION

DATE: March-16-21

TO: Certificate & Diploma Committee

FROM: Dr. Rob Whyte, Faculty of Health Sciences

RE: Proposal for Health Information Fundamentals (HIF) Program

I have reviewed the Health Information Fundamentals (HIF) program submission presented by McMaster Continuing Education (MCE). I have determined that it meets all criteria set out by Undergraduate Council in its guidelines for Certificates and Diplomas. Therefore, I endorse this submission with the support of the Faculty of Health Sciences

This program proposal was reviewed by Dr. Lynn Martin. Her conclusion is that the objectives of the program are viable. The courses in the program will fulfill the stated objectives, and the program meets Undergraduate Council's criteria for the designation of "Certificate"

The Faculty of Health Sciences is pleased to support a program such as Health Information Fundamentals (HIF) that will meet the needs of people wanting to work in this field. As the academic affiliate, the Faculty of Health Sciences supports this program by carrying out this review and providing assistance with curriculum issues. Additionally, we have provided MCE with guidelines pertaining to advanced standing rules for students entering our degree programs with credits from this program.

Sincerely,

Dr. Rob Whyte
Vice-Dean, Education
Faculty of Health Sciences

Cc: Lorraine Carter, Director, MCE
Dan Piedra, Assistant Director, MCE

CONTINUING EDUCATION | McMaster University

Continuing Education Academic Program Submission – For Approval

Department & Program Information (complete all fields):	
Program Name:	Health Ventures
Academic Credential:	Certificate of Professional Learning
Name of Representative:	Sarrah Lal
Effective Date:	September 7, 2021
Date of Submission:	April 6, 2021
Academic Merit (complete all fields; write "not applicable" as needed):	
Program Overview:	Students will engage in a sequence of three courses across the continuum of health innovation, commercialization, and entrepreneurship. The purpose of this program is three-fold for students. First, they learn how to identify and validate opportunities for socioeconomic impact in healthcare. Second, they learn how to validate markets, customers, and concepts. They learn how to assess the feasibility of prototypes, business, and go-to-market strategies as well as fund-raising approaches. Third, they learn how to navigate complexity in the health landscape, with a focus on innovation development, procurement, and implementation/adoption-related change management processes. The sequence of three-course areas is essential to understanding the health innovation process. The courses for this program will be developed and delivered by the Michael G. DeGroote Health Innovation, Commercialization & Entrepreneurship initiative at the Michael G. DeGroote School of Medicine and the Faculty of Health Sciences. McMaster Continuing Education will be involved with the administration of the program. To complete the Certificate of Professional Learning, learners must complete three of four available courses. By design, these will constitute a spiral curriculum. This means that each course emphasizes a distinct, but overlapping, and progressively more challenging set of entrepreneurship competencies. This is an adaptive program in which learners navigate through courses based on their projects and prior experiences.

	• **Course A**: Health Ventures Level 1
	• **Course B**: Innovation Project Course
	• **Course C**, choose **<u>one</u>** of:
	  o Health Ventures Level 2
	  o Complexity Theory in Healthcare
	
	Course C is selected based on the innovation project outcomes from Course B or student preference. There are two scenarios of interest. First, due to Health Ventures Level 2 being a project-based experience that continues from Course A and Course B, there is a risk of the project being deemed as not viable through the entrepreneurship process. Second, students may be more interested in leadership skill development relative to the entrepreneurial process at later stages of innovation development (i.e. Health Ventures Level 2). In either scenario, the opportunity to select between two courses may yield improved personalized learning outcomes while maintaining alignment with overall certificate objectives due to overlap of content between Health Ventures Level 2 (project-based and team focused) and Complexity Theory in Healthcare (case-based and leadership focused).

Learning Objectives:	The learning objectives below are clustered by knowledge domain: innovation approaches, human factors, problem framing, opportunity assessment techniques, solution development, intellectual property, risk analysis & regulatory, the art of communication, raising capital, go-to-market strategy, team & culture, and complexity theory. Upon completion of the program, learners will: **<u>Innovation Approaches</u>** • Discuss current and future trends in health innovation. • Describe needs pull and tech push approaches to innovation, as well as the relevance of each for different types of technologies. • Describe innovation and commercialization models used across various institutions in the U.S. and Canada. • Describe key characteristics of health innovators and entrepreneurs. • Identify key enablers and constraints for health innovation to reach commercialization and/or socioeconomic impact goals. **<u>Human Factors</u>** • Use human-centred design and problem re-framing tools to articulate the purpose behind a proposed solution or problem refinement effort. • Engage in co-development efforts with various stakeholder groups (i.e. patient advisors, clinicians, hospital administrators, etc.) to co-define, co-design and co-activate opportunities for

	health innovation. • Discuss areas where human factors considerations are omitted in the design of health innovation and how to reduce these oversights. • Use frameworks to establish areas of deficiency for health innovation design based on human factors considerations. **Problem Framing** • Identify opportunities for health innovation in various (clinical and non-clinical) settings through need-finding (observation, interaction, research) approaches. • Future-proof innovations by using tools to anticipate and think about what is next in an innovation space (i.e. 5-10 years into the future). • Design surveys focus groups and interviews to engage stakeholder groups in innovation problem validation efforts. • Create primary research methods and develop decision matrices that enable rapid need prioritization efforts. • Use strategic management frameworks in consulting-type discussions with start-up ventures to demonstrate problem framing approaches. **Opportunity Assessment Techniques** • Identify appropriate secondary research sources and develop appropriate primary research approaches to validate the problem/solution space. • Characterize and quantify problems, taking into consideration various stakeholders' power/interest areas. • Develop criteria to screen concepts and projects to accelerate the identification of appropriate innovation opportunities for impact. • Employ market segmentation strategies to characterize a target market and develop personas that describe key stakeholders including buyers. • Conduct customer discovery interviews. • Conduct a competitive analysis to identify differentiators required for sustainable competitive advantage. • Triangulate information from primary and secondary sources to create a unique value proposition. **Solution Development** • Describe different project management approaches that guide an innovation through validation and go-to-market phases. • Evaluate the financial and economic value of an early-stage solution. • Define concepts, prototypes and minimum viable products for various innovation categories.

	• Understand stakeholders, resources, and decision points to be included in the design and development process. • Describe validation activities across the innovation development process. • Develop a target innovation profile using inputs from various sources. • Use the target innovation profile and risk analysis to develop testing requirements. • Create a product development roadmap and project milestones. • Create a prototype that permits usability and value assessment by stakeholders. • Design pilot studies and research projects to validate usability, proof-of-concept, functionality, integration, etc. for technologies of interest in clinical and non-clinical settings. • Differentiate requirements of validation activities for different risk classes of medical devices (per FDA), therapeutics (per FDA) and digital innovations. • Understand key principles of human clinical trial design. • Develop sales strategies to engage audiences during prototype demos, solicit feedback on specific attributes and articulate value for future fund-raising efforts. **<u>Intellectual Property</u>** • Understand basic principles of intellectual property protection mechanisms including patents, copyrights, trademarks, and trade secrets. • Develop an intellectual property strategy with consideration of overall development timelines and objectives. • Perform patent searches to complement competitive landscape analyses and validate white space for innovation of interest. • Discuss regional and global differences in intellectual property considerations as relevant to competitive strategies. **<u>Risk Analysis & Regulatory</u>** • Perform a risk analysis to identify critical challenges related to the business model, financial, technical, project, etc. considerations. • Differentiate requirements of regulatory authorities for different risk classes of medical devices (per FDA), therapeutics and digital innovations. • Understand regulatory pathways and industry standards of interest for medical devices, digital health solutions and other innovations. • Discuss privacy and security considerations based on data and use characteristics. • Explain the high-level structure and function of the health

	system in Canada and the U.S. as well as policies relevant to innovation development. • Discuss regional and global differences in regulatory considerations as relevant to competitive strategies. **The Art of Communication** • Employ sales and marketing strategies to create pitch presentations for various audiences. • Employ effective communication practices, both written and verbal. These will be required during business and technical pitches as well as exploratory phases of innovation development. • Describe key principles of building a trustworthy and credible brand using digital marketing and communications techniques. • Describe how sales techniques can be used to build the interest of customers and payers during the early stages of health innovation. • Demonstrate use of negotiation techniques during simulations of critical conversations for health innovations **Raising Capital** • Describe funding sources and describe how to manage relationships with different funding entities. • Understand types of funding available, sources, and stage-specific considerations. • Determine the business valuation of early-stage and late-stage health ventures through valuation methodologies. • Develop an investor pitch deck using an innovation project. **Go-to-Market Strategy** • Explore 'exit strategy' opportunities including various venture creation, joint ventures, licensing deals, and mixed-strategy approaches. • Describe different business models to generate revenues and become sustainable regardless of the underlying vision for value creation. • Describe how to encourage the adoption of technologies when new mental models are needed or there is a crowded market. • Explore best practices in change management and market entry approaches, to realize value creation. • Create and validate a market entry and business strategy against existing ventures and stakeholder perspectives. • Describe distribution channels, buyer scenarios and processes (e.g. procurement) used in public and private organizations. • Develop a revenue generation strategy to ensure the sustainability of ventures. • Develop pricing models and reimbursement/billing code strategies.

	• Describe components of successful early-stage venture budgets and financial planning/spending. **<u>Team & Culture</u>** • Analyze team skill requirements and describe how/when different contributors, mentors, coaches, and advisors might contribute to your team throughout the innovation development process. • Demonstrate use of conflict resolution and team management skills during simulated team dynamics scenarios. • Demonstrate understanding of how team composition and team-building practices adjust over the innovation project's life span. • Exemplify the skills, attitudes and behaviours required to work and collaborate with people, and develop personal management skills. • Collaborate with peers on real-life health innovation projects, problem-based learning case labs, and short assignments. **<u>Complexity Theory</u>** • Describe theories of complexity thinking with the change management process, the health system and implementation strategies. • Frame problems from multiple perspectives and use strategic management frameworks to evaluate different outcomes. • Differentiate between simple, complicated, complex and chaotic scenarios. • Navigate complexity in various levels of longitudinal simulation-based learning (i.e. case studies). • Reverse-engineer rationale that explains organizational, team and individual adaptive behaviours in response to complex environments. • Describe leadership and management skills required to navigate complex environments, through reflective practice.
Meeting Learning Objectives:	Health Ventures will use a series of courses to achieve the stated program objectives. The delivery format and teaching methods are structured to have a maximum effect on achieving the learning objectives.
Program Admission Requirements:	The program will be open enrolment.
Program Pre-requisites (if applicable):	Recommended program requirements will be posted to McMaster Continuing Education's website: "In compliance with the Certificates and Diploma, admission policy from Undergraduate Council, students who wish to enter the program should meet the following requirements based on their education and work experience:

	1. Be a mature student as defined in the Undergraduate Calendar of McMaster University; or be deemed an exceptional case by the Continuing Education; 2. Be proficient with basic computer program applications, such as Word, Excel; 3. Follow University guidelines for English Language Proficiency requirements: Completion of TOEFL exam with a minimum acceptable score of IBT: 86 overall with a minimum score of 20 on each of the four components (Reading, Writing, Speaking, Listening), valid for 2 years.
Program Completion Requirements:	To qualify for a Certificate of Professional Learning, students must complete three of four available courses (9 units) of study.
Program Delivery Format:	Program courses are delivered online and/or in a blended format. All formats will include instructor lectures and/or presentations, group discussions, and practical application activities. Courses will include an experiential learning component to combine theory with a real innovation project or problem-based learning scenario.
Student Evaluations (Grading Process):	Each course will include several evaluation components. The evaluations will consist of assignments, PBL Case Labs, reflections, several presentations, group projects, class participation or a combination thereof. Evaluations will be structured to evaluate participants' level of competency in achieving overall learning objectives. Grading will adhere to McMaster's academic grading scale.
Course Evaluation:	For each course, students will complete evaluations to assess content, delivery, materials, method of evaluation and instruction.
Course Instruction:	Instructors for courses will be selected by the Michael G. DeGroote Health Innovation, Commercialization & Entrepreneurship initiative. In compliance with McMaster's Senate and Undergraduate Council Guidelines for Certificates and Diplomas, the selection will be based on academic background and/or experience within the field. Instructors must have a Master's Degree (or equivalent) and significant professional experience and teaching within the field.
Credit Towards Degree Programme Studies:	The academic credit courses included in the program may be used for credit towards undergraduate degree studies following the normal academic rules as specified by the Faculty offering the degree.
Program Advanced Standing:	A maximum of one equivalent course (3 units) taken at another institution may be transferred into this program, subject to approval by the Program Manager. Transfer credits will be assessed using the following criteria: • The course must have an 80% overlap in content/curricula and a similar number of classroom or contact hours. • The course must have been taken within the last five years. • The course must have been taken from an accredited academic institution and listed on an official transcript with a grade. • The course final grade must be "C-" or better.

	• Students may apply courses listed under the Innovation Minor at McMaster University, subject to the approval of the Program Director.

Statement of Financial Viability:

I have reviewed the business case and financial projections which include enrolment projections and costs. Sources of revenue for this program include tuition and supplementary fees (MAPS). Expenses are typical and include significant upfront development and marketing costs, as well as typical ongoing delivery costs (such as payment of facilitators, honoraria for other guest facilitators, materials, advertising and administration).

- *Lorraine Carter, Director, Centre for Continuing Education*

Statement of Administrative Responsibilities:

Statement of Faculty Alignment:

The staffing and systems infrastructure to support the following functions already exists within McMaster Continuing Education and the Michael G. DeGroote Health Innovation, Commercialization & Entrepreneurship initiative.

Costs will be fully covered by tuition. During the first year of the program, the start-up will be subsidized by the Michael G. DeGroote Health ICE initiative.

McMaster Continuing Education program responsibilities:

- budget development and monetary responsibilities
- course registrations/administration
- supervision of instructors to ensure all required policies and practices are adhered to and course are taught according to program requirements and standards
- marketing and promotions

The Faculty of Health Sciences will act as an academic liaison and is charged with the responsibility of on-going academic review and assessment of the curriculum. The Faculty's letter of support is included at the end of this document.

Listing of Courses

Course Name	Required/Elective	Unit Value	Term
Health Ventures Level 1	**Required**	**3.0**	**Fall 2021** **Winter 2022**

Do you have a great idea for health innovation? A new solution that changes how something is done? A current or future thesis/capstone project that addresses a big problem? An interest in exploring what it means to build innovation? The Health Venture course will help you develop essential entrepreneurial skills to Define Problems, Design Solutions and Activate Opportunities. Whether you are working on a new digital application, device, therapeutic, process, program, or are simply intrigued by how new innovative technologies are created, all are welcome to this learning experience. This course is case-based and uses both inquiry and problem-based learning approaches to introduce you to a broad range of topics relevant to aspiring health innovators. Key course components: video modules, challenges, PBL Case Labs, reflections, and quizzes. There is no final exam or project. **This is equivalent to the HTH SCI 3PP3 course.**

Innovation Project Course	**Required**	**3.0**	**Fall 2021** **Winter 2022**
What is new value creation in healthcare? This course will provide you with an opportunity to apply the entrepreneurship skills you have developed so far to real-world health problems. As part of this course, you will be working on teams with learners from various programs at the undergraduate, graduate, resident, and clinical levels. The purpose of this course is to train you on how we identify and manage scalable opportunities for big impact in healthcare. We will work through four three-week 'sprints', where we analyze clinical problems, develop solutions and pitch our proposed solutions to a clinical and industry panel. This course highlights disruptive technologies (e.g. artificial intelligence, machine learning, virtual reality) as the solution space of interest as well as business models that require complex change and regulatory processes to become adopted. As such one of the key themes of this course will be managing complexity. This course also helps you understand how innovation works in healthcare contexts. What challenges exist? Which opportunities are prioritized? How do you identify opportunities that are worth pursuing? How do you navigate the health system and innovation processes to create a new value alongside a compelling business case? By the end of this course, you will have a deep understanding of the challenges faced by health innovators, a refined skill set in health entrepreneurship, and a network of industry and clinical professionals. **This is equivalent to the HTH SCI 4IS3 course.**			
Health Ventures Level 2	**Elective**	**3.0**	**Winter 2021**
Health Ventures Level 2 is available to individuals seeking to explore a proof of concept, assess feasibility, and validate various aspects of their project, product, or company in the health innovation space. This milestone-based program will help you overcome common pitfalls and accelerate your innovation towards the market. This course includes project- and case-based learning. It uses both inquiry and problem-based learning approaches to introduce you to a broad range of topics relevant to aspiring health innovators. Key course components: video modules, challenges, PBL Case Labs, reflections, and quizzes. There is no final exam or project. There is a final presentation.			
Navigating Complexity in Healthcare	**Elective**	**3.0**	**Winter 2021**
This course introduces learners to complexity theory through a healthcare lens. The health industry is inherently complex and challenging to navigate. Much like a biological system, it cannot be reduced to individual components or 'agents': it must be studied as a decentralized system. A complex system is inherently adaptable within a range of conditions, and although inter-dependencies may be characterized through simple rules, these rules may also change in response to constraints that naturally arise through a change in context. Our collective response to the COVID-19 pandemic has demonstrated the intricacies of complex adaptive systems. It has demonstrated the importance of strategic foresight, scenario planning, problem definition, big data, effective lines of communication, multi-disciplinary teams, and rapid decision-making processes. To explain healthcare as a complex adaptive system, this course will use multi-part problem-based learning case studies centred on the COVID-19 pandemic. We will also reverse-engineer several adaptations that emerged in non-health sectors to illustrate additional elements of complexity theory. These exercises will illustrate leadership, innovation, and management challenges faced by various agents before, during, and after the pandemic. Learners will develop a comprehensive set of tools to frame problems and navigate a variety of change efforts.			

McMaster University

HEALTH SCIENCES

DATE: March 17, 2021

TO: Certificate & Diploma Committee
FROM: Dr. Robert Whyte, Vice-Dean of Education, Faculty of Health Sciences
RE: Proposal for Certificate of Professional Learning for Health Ventures

---

I have reviewed the program submission documents presented by Continuing Education (CE) for the establishment of one Certificate in Professional Learning for Health Ventures. The specific program title is as follows:

- **Certificate of Professional Learning in Health Ventures**

I have determined that the proposed program meet all the criteria set out by the Undergraduate Council in its guidelines for certificates and diplomas and, therefore, endorse this submission with the support of the Faculty of Health Sciences.

The submission document provide specific course requirements, descriptions, and program learning outcomes for each program. The program is composed of academic credit courses and certificates from the Faculty of Health Sciences. This diploma program is aligned with and supported by the Faculty of Health Sciences. The involved courses for the Certificate of Professional Learning have been previously reviewed by the Faculty. Finally, the programs meet the Undergraduate Council's criteria for the designation of a Certificate of Professional Learning.

The Faculty of Health Sciences is pleased to have these high-quality programs available for individuals to meet their academic and professional goals. We support this Continuing Education program as their academic affiliate by carrying out the initial submission review and by providing guidance relative to curriculum issues. Additionally, we have provided Continuing Education with the guidelines needed by their students for the possible use of advanced standing rules when students enter our degree programs with credits from completion of the above program.

Sincerely,

INSERT SIGNATURE HERE

Dr. Robert Whyte Vice-Dean, Education
Faculty of Health Sciences

Cc. Lorraine Carter, Director, MCE
Dan Piedra, Assistant Director, MCE

McMaster University | HEALTH SCIENCES

DATE: March 26, 2021

TO: Certificates & Diplomas Committee

FROM: Dr. Robert Whyte, Vice-Dean of Education, Faculty of Health Sciences

RE: Proposal for Health Ventures Program, Certificate of Professional Learning

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I have reviewed the submission document presented by McMaster Continuing Education (MCE) for the establishment of the Health Ventures program, Certificate of Professional Learning.

I have concluded that the proposed program meets all relevant criteria set out by the Undergraduate Council in its guidelines for Certificates and Diplomas. Therefore, I endorse this submission on behalf of the Faculty of Health Sciences.

The submission document outlines specific course requirements, descriptions, and program learning objectives. The program is composed of courses from the Michael G. DeGroote Health Innovation, Commercialization & Entrepreneurship initiative within the Michael G. DeGroote School of Medicine and the Faculty of Health Sciences. The involved courses for the Certificate of Professional Learning have been previously reviewed by the Faculty and meet the standards for academic undergraduate credit. Finally, as noted above, the program meets the criteria for the designation of a Certificate of Professional Learning as outlined in McMaster University's Policy for Certificates and Diplomas.

The Faculty of Health Sciences is pleased to support this program. As the academic affiliate, we support this Continuing Education program as well as their collaboration with the Michael G. DeGroote Health Innovation, Commercialization & Entrepreneurship initiative.

Sincerely,

Dr. Robert Whyte
Vice-Dean, Education
Faculty of Health Sciences

Cc. Lorraine Carter, Director, MCE
Dan Piedra, Assistant Director, MCE

McMaster University | CONTINUING EDUCATION

DATE: March-10-21

TO: Certificate & Diploma Committee

FROM: Lorraine Carter, Director, Continuing Education

RE: Closure of Health Information Management Programs (For Information Purposes)

Effective Fall 2020, McMaster Continuing Education (MCE) closed admissions into the Health Information Management (HIM) programs. These include our HIM Certificate, HIM Diploma and HIM+ Diploma. The programs were developed to shape and train health information management professionals in Canada. The HIM+ Diploma is the only pathway that led to a professional designation with the Canadian Health Information Management Association (CHIMA).

The decision to close the program was based on the development of a new pathway into the Health Information Management profession for post-graduate students. This pathway will best suit the needs of post-graduate adult learners. The HIM+ Diploma has seen constant enrolment. However, completion rates at McMaster University were low due to the long-term commitment part-time students had to devote to a 45 units diploma. Furthermore, industry research performed by CHIMA indicated that a new fundamentals approach could be designed as another point of entry into the profession for those aspiring for management or analytics positions within the field.

Students currently enrolled in the HIM programs will be able to complete their existing program up to December 31, 2022. A program schedule was developed and distributed to students so that they can plan their required course work for the next two years.

<u>Plan to Wind Down the Program</u>

Every effort will be made to ensure that students who are currently enrolled have the opportunity to complete their certificate, diploma or diploma+. The following steps were taken to communicate the closure of the program and manage the wind-down phase:

- Instructors were informed about the closure and the effect on their course load.
- An email was sent to all students who were enrolled in the program in the last 8 years.

- These students were asked if they wish to complete the program. A plan was developed to ensure that each student has an opportunity to complete the program within a reasonable period.
- The last program application intake was offered Winter 2020; no further intakes were permitted as of Fall 2020. Only active students in the program will be permitted to enrol in HIM courses.
- Scheduling for subsequent terms was aligned with the requirements for current students to complete their program choice and the schedule was distributed to all students for future planning.
- A closure message was posted on the MCE website.

MCE is committed to helping all current students complete their HIM Program if that is their wish. We are also committed to working with our instructors to maintain good relationships and seek their support in creating a smooth and professional closure of the program.

Sincerely,

Lorraine Carter
Director, Continuing Education

McMaster University | CONTINUING EDUCATION

Mailing Address:
1280 Main Street West, OJN 386
Hamilton, ON L8S 4L8

Physical Location:
One James Street North, 2nd Flr
Hamilton, ON L8R 2K3

(905) 525-9140 x 24321
(905) 546-1690
conted@mcmaster.ca
mcmastercce.ca

To: Ceremonials and Insignia Committee

From: Lorraine Carter, Director, McMaster Continuing Education

Re: Approval of design for new credential, Certificate of Professional Learning; Certificate of Completion duplicate options

McMaster Continuing Education is seeking the Committee's approval of the proposed design for a new academic credential called Certificate of Professional Learning. This credential consists of nine academic units of study and was approved by Senate in Summer 2020. Please see the attachment.

Also, we would ask for the Committee's assistance on a second matter. In the present Certificate and Diploma policy, there are two designs for a Certificate of Completion: one with a largish maroon border and a second newer one that McMaster Continuing Education recommended and was approved by the Certificates and Diplomas Committee. This latter design is very helpful in that it can be used for single partner programs as well as programs with two or three partners. It is also appropriate for use as a Certificate of Attendance.

Unfortunately, when the newer design was approved, the former design was not eliminated. The outcome is that eligible learners are receiving different documents for the same credential.

With thanks.

McMaster University

Continuing Education awards

William A. McMaster

the Certificate of Professional Learning in

Risk Management

Dated this 31st day of May, 2021 at Hamilton, Ontario.

University Registrar

Director, McMaster Continuing Education

Reason for reprint:

Across the Stage:

McMaster University

Continuing Education awards

William B. McMaster

the Certificate in

Data Analytics

Dated this 1st day of June, 2021 at Hamilton, Ontario.

University Registrar

Director, McMaster Continuing Education

Reason for reprint:

Across the Stage:

McMaster University

Continuing Education awards

William C. McMaster

the Diploma in

Professional Addiction Studies

Dated this 30th day of November, 2021 at Hamilton, Ontario.

University Registrar

Director, McMaster Continuing Education

Reason for reprint:

Across the Stage:

Policies, Procedures and Guidelines

Complete Policy Title	Policy Number (if applicable):
Certificates & Diplomas Policy	
Approved by	**Date of Most Recent Approval**
Senate	July 8, 2020
Date of Original Approval(s)	**Supersedes/Amends Policy dated**
May 12, 1997	Senate Policy on Diplomas and Certificates, June 6, 2018 Policy on Certificates and Diplomas, March 10, 2010
Responsible Executive	**Policy Specific Enquiries**
Vice-Provost, Faculty	Vice-Provost, Faculty
	General Policy Enquiries
	Policy (University Secretariat)

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

TABLE OF CONTENTS

SECTION I: INTRODUCTION

PREAMBLE

1. The purpose of this Policy is to provide minimum academic criteria which must be met if programs are to be approved as McMaster University certificates and diplomas. The academic criteria proposed are intended to maintain the University's high academic standards and enable certificates and diplomas to continue their traditional functions of providing studies complementary to degree programs, professional preparation or upgrading, and/or bridging into degree programs.

2. The evaluation, approval and monitoring of certificate and diploma programs is the responsibility of the University's governing councils, Graduate Council and Undergraduate Council (as applicable). The relevant Council shall report to the Senate the establishment, closure, and/or substantial revisions of academic certificate and diploma programs.

3. Academic certificate and diploma programs are operated in accordance with normal academic regulations as outlined in the *Undergraduate Calendar* or *Graduate Calendar* (as applicable).

DEFINITIONS

4. Credential is a body of academic work or collection of course work that stands on its own and for which a parchment is issued. McMaster credentials include certificates, diplomas, and degrees.

5. Academic Credit Course is a course of an academic calibre consistent with those offered in undergraduate or graduate degree programs. The most common kind of academic credit course is that included in the curricula of undergraduate or graduate degree programs. These provide a benchmark against which other academic credit courses can be evaluated.

SECTION II: PROCEDURAL REQUIREMENTS

MANAGEMENT OF ACADEMIC CERTIFICATE AND DIPLOMA PROGRAMS

6. Academic certificate and diploma programs are operated in accordance with normal academic regulations as outlined in the *Undergraduate Calendar* or *Graduate Calendar* (as applicable).

7. Students registered in academic certificate and diploma programs are issued a student number, classes are scheduled within sessional dates, and part-time student fees are charged. Student records, including grades, are maintained by the Office of the Registrar.

8. Academic certificates and diplomas will be issued by the academic unit offering the program to the student upon completion of all academic requirements of a program.

ACADEMIC CREDIT FOR DIPLOMA AND CERTIFICATE COURSES

9. Certificate and diploma programs include courses which are determined to be of an academic calibre consistent with courses offered in undergraduate or graduate degree programs (as appropriate).

10. While credit for courses in degree programs is normally given in blocks of three or six units, credit can be at the one, two, three or any other unit level.

11. To receive approval as an academic credit course, a course which is not part of a degree program must:

    a) be at a level of intellectual rigour comparable to that found in undergraduate or graduate degree program courses in the same or similar field(s). Academic credit courses are vetted by the Faculty offering the course or that is most relevant to the content of the course;

    b) evaluate student performance by the methods normally used in degree courses such as tests, essays, reports and other assignments; and

    c) include a systematic student evaluation of the course using such methods as multiple-choice questionnaires, narrative responses and/or interviews.

Transfer between Credentials

12. Academic credits can be applied to another credential. Examples include, but are not limited to, transfer of credit from a certificate to a degree or from a degree to a diploma. Normally, credits can be applied to a maximum of two credentials.

13. Up to 100% of the academic credit courses completed toward undergraduate diploma and certificate programs may be used for credit toward another credential at the discretion of and in accordance with the normal academic rules specified by the academic unit offering the subsequent credential.

14. In some specific cases, courses taken for credit as part of a graduate diploma program may be considered for credit toward a subsequent Master's degree program.

Academic Approval Criteria

15. When approving a certificate or diploma program, Undergraduate Council or Graduate Council (as appropriate) must ensure that the program proposal appropriately fulfills all of the following criteria:

    a) well-defined program objective(s);

    b) well-defined program learning outcomes;

    c) curriculum to meet the program learning outcomes; and

    d) admission requirements (as applicable).

SECTION III: UNDERGRADUATE DIPLOMAS

16. An Undergraduate Diploma is a program of study involving a significant body of academic work coherently organized around clear learning objectives. Undergraduate Diplomas (including post-baccalaureate diplomas) may be focused primarily upon academic or professional development objectives, but all must include academic content equivalent to a minimum of 24 units of undergraduate-level course work.

17. Undergraduate Diplomas serve such functions as: study complementary to degree programs, professional preparation or upgrading, and bridging into undergraduate degree programs. The word Diploma must be included in the program name.

Academic Program Requirements

18. All Undergraduate Diplomas must include academic credit courses equivalent to at least 24 units of undergraduate study at McMaster. In addition to their academic content, Undergraduate Diploma programs may include courses and other forms of learning which are not suitable for academic credit.

19. The maximum overlap with degree courses is 70% of the requirement for the diploma. Up to 100% of the academic credit courses completed toward undergraduate diploma and certificate programs may be used for credit toward another credential at the discretion of and in accordance with the normal academic rules specified by the academic unit offering the subsequent credential.

Admission Requirements

20. There are two sets of admission requirements:

General Requirements

a) students who wish to enter an Undergraduate Diploma program must have at least one of:

   (i) an Ontario Secondary School Diploma or equivalent;

   (ii) be a mature student as defined in the *Undergraduate Calendar*; or

   (iii) be deemed an exceptional case by the admissions committee for the Undergraduate Diploma.

b) these requirements ensure that students have the basic capabilities necessary to deal with the academic credit courses in Undergraduate Diploma programs and take into account the bridging function that some diplomas perform; and

Additional Requirements

c) any particular diploma program may have other admission requirements which are appropriate to its learning objectives. These requirements may include prerequisite courses or degrees specific to the particular diploma.

SECTION IV: GRADUATE DIPLOMAS

21. A Graduate Diploma is based on Graduate Degree Level Expectations and will prepare students for employment requiring sound judgment, personal responsibility and individual initiative, in complex and unpredictable professional environments.

22. Graduate Diplomas must include academic content equivalent to a minimum of four graduate courses at McMaster. Graduate Diplomas are defined in this Policy. However, the review and approval process falls under the *Policy on Academic Program Development and Review*.

23. There are three types of Graduate Diplomas:

    a) *Master's Level Diploma (Type 1)* programs require students to develop a conceptual understanding of fundamental aspects of the discipline. Some programs require students to demonstrate Master's-level analytical, interpretative, methodological and expository skills through course-specific applications, while some may also require students to demonstrate these skills in applied activities;

    b) *Master's and Doctoral Level Diploma (Type 2)* programs are offered in conjunction with a Master's or doctoral degree and represent an additional, usually interdisciplinary, qualification. Programs require students to develop a conceptual understanding of fundamental aspects of the discipline(s) and appropriate levels of analytical, interpretative, methodological and expository skills through course-specific applications, while some may require students to demonstrate these skills in applied activities; and

    c) *Master's and Doctoral Level Diploma (Type 3)* programs are stand-alone, direct-entry Graduate Diploma programs require students to develop a conceptual understanding of fundamental aspects of the discipline. Programs require students to demonstrate the appropriate level of analytical, interpretative, methodological and expository skills through course-specific applications, while some may require students to demonstrate these skills in applied activities.

Academic Course Requirements

24. All McMaster Graduate Diplomas must include academic credit courses equivalent to at least four courses at the graduate level at McMaster.

Admission Requirements

25. There are two sets of admission requirements:

General Requirements

    a) students who wish to enter a Graduate Diploma program must meet the admission requirements of a Master's level program. These requirements ensure that students have the basic capabilities necessary to deal with the academic credit courses in Graduate Diploma programs; and

Additional Requirements

    b) any particular Graduate Diploma program may have other admission requirements which are appropriate to its learning objectives. These requirements may include prerequisite courses or degrees specific to the particular diploma.

SECTION V: UNDERGRADUATE CERTIFICATES

26. An Undergraduate Certificate is a program of study coherently organized around clear learning objectives and having academic content equivalent to 15 or 9 units of undergraduate study at McMaster.

27. There are three types of Undergraduate Academic Certificates:

    a) Stand-Alone Undergraduate Certificate (15 units);

    b) Stand-Alone Certificate of Professional Learning (9 units); and

    c) Concurrent Undergraduate Certificate (15 units).

STAND-ALONE UNDERGRADUATE CERTIFICATE

28. Stand-Alone Undergraduate Certificate (including Post-Baccalaureate Certificates) may be focused primarily upon academic or professional development objectives, but all must meet the minimum criterion of academic content (15 units). Stand-Alone Undergraduate Certificates serve such functions as bridging into undergraduate degree programs, professional preparation or upgrading, and study complementary to degree studies.

Academic Course Requirements

29. All Stand-Alone Undergraduate Certificates must include academic credit courses equivalent to at least 15 units (half a year) of undergraduate study at McMaster. In addition to their academic content, Stand-Alone Undergraduate Certificate programs may include courses and other forms of learning which are not suitable for academic credit.

30. Up to 100% of the academic credit courses completed toward undergraduate diploma and certificate programs may be used for credit toward another credential at the discretion of and in accordance with the normal academic rules specified by the academic unit offering the subsequent credential.

Admission Requirements

31. There are two sets of admission requirements:

    General Requirements

    a) students who wish to enter a Stand-Alone Undergraduate Certificate program must have at least one of:

        (i) an Ontario Secondary School Diploma or equivalent;

        (ii) be a mature student as defined in the *Undergraduate Calendar* of McMaster University; or

        (iii) be deemed an exceptional case by the admissions committee for the certificate.

    b) these requirements ensure that students have the basic capabilities necessary to deal with the academic credit courses in Undergraduate Certificate programs and take into account the bridging function that some certificates perform; and

Additional Requirements

c) any particular Stand-Alone Undergraduate Certificate program may have other admission requirements which are appropriate to its learning objectives. These requirements may include prerequisite courses or degrees specific to the particular certificate.

STAND-ALONE CERTIFICATE OF PROFESSIONAL LEARNING

32. Stand-Alone Certificate of Professional Learning enables learners to complete an academic program of study (9 units) with a professional focus. It will include academic development objectives targeting the learner's growth in a professional area and will meet the minimum criterion of academic content. Stand-Alone Certificates of Professional Learning serve the function of bridging into undergraduate degree programs and professional enhancement.

Academic Course Requirements

33. All Stand-Alone Certificates of Professional Learning must include academic credit courses equivalent to 9 units of undergraduate study at McMaster. Up to 100% of the academic credit courses completed toward undergraduate diploma and certificate programs may be used for credit toward another credential at the discretion of and in accordance with the normal academic rules specified by academic unit offering the subsequent credential.

Admission Requirements

34. There are two sets of admission requirements:

General Requirements

a) students who wish to enter a Stand-Alone Certificate of Professional Learning program must have at least one of:

   (i) an Ontario Secondary School Diploma or equivalent;

   (ii) be a mature student as defined in the *Undergraduate Calendar* of McMaster University; or

   (iii) be deemed an exceptional case by the admissions committee for the certificate.

b) these requirements ensure that students have the basic capabilities necessary to deal with the academic credit courses in Undergraduate Certificate programs and take into account the bridging function that some certificates perform; and

Additional Requirements

c) any particular Undergraduate Stand-Alone Certificate of Professional Learning program may have other admission requirements which are appropriate to its learning objectives. These requirements may include prerequisite courses or degrees specific to the particular certificate.

CONCURRENT UNDERGRADUATE CERTIFICATE

35. A Concurrent Undergraduate Certificate shall be focused primarily upon academic development objectives and must meet the minimum criterion of academic content (15 units). This type of Certificate sets out a plan of study complementary to degree studies and will provide added value to degree studies.

Academic Course Requirements

36. All Concurrent Undergraduate Certificates must include academic credit courses equivalent to at least 15 units (half a year) of undergraduate study at McMaster.

37. In addition to their academic content, concurrent certificate programs may include courses and other forms of learning which are not suitable for academic credit. Up to 100% of the requirement for the concurrent certificate may overlap with degree courses.

Admission Requirements

38. Students who wish to enter a Concurrent Undergraduate Certificate program must be enrolled in an undergraduate degree program at McMaster.

39. Any particular Concurrent Undergraduate Certificate program may have other admission requirements, such as prerequisite courses, which are appropriate to its learning objectives.

SECTION VI: GRADUATE CERTIFICATES

40. A Graduate Certificate is a program of study coherently organized around clear learning objectives and having academic content equivalent to a minimum of three graduate courses at McMaster.

Academic Course Requirements

41. All Graduate Certificates must include academic credit courses equivalent to at least three courses at the graduate level at McMaster. Up to 100% of the certificate course requirements may overlap with graduate degree courses. (Courses may or may not be unique to the certificate.)

Admission Requirements

42. There are two sets of admission requirements:

General Requirements

a) students who wish to enter a Graduate Certificate program must meet the admission requirements of a Master's level program. These requirements ensure that students have the basic capabilities necessary to deal with the academic credit courses in Graduate Certificate programs; and

Additional Requirements

b) any particular Graduate Certificate program may have other admission requirements which are appropriate to its learning objectives. These requirements may include prerequisite courses or degrees specific to the particular certificate.

SECTION VII: OTHER CERTIFICATES

43. There are two types of non-academic programs:

    a) Certificates of Completion: and

    b) Certificates of Attendance.

44. These non-academic programs are distinct and differentiated from Certificates and Diplomas. The term "Certificate" shall only be used by McMaster courses and programs within the guidelines of this Policy.

CERTIFICATE OF COMPLETION

45. A Certificate of Completion acknowledges that an individual has completed a course or program at McMaster that does not have the status of an academic program.

46. A Certificate of Completion can be issued when a non-academic course or program includes a minimum of 30 contact hours and evaluation of the learner's learning. Certificates of Completion may include academic content if the course or courses have been approved for credit toward another credential.

47. The learner must demonstrate competency in the material as determined by evaluation methods which may include an exam, paper, project, presentation, etc. This will normally be recorded as a pass or fail, and records will be kept by the unit offering the program.

48. This category will be suitable for various types of life-long learning courses and programs. The Certificate of Completion is not an academic certificate and as such shall not be categorized as undergraduate or graduate level.

Admission Requirements

49. Normally, there are no specific admission requirements.

Credit Toward Another Credential

50. Normally, there is no credit granted towards degree program studies, unless the course or courses making up the Certificate of Completion have been approved for credit as part of a degree, diploma or certificate.

51. A series of Certificates of Attendance (see below) cannot make up the components of a Certificate of Completion.

Approval Criteria

52. Although administrative and academic units at McMaster do not need permission from Undergraduate Council to issue Certificates of Completion, they are required, at minimum, to report new Certificates of Completion and revisions to existing Certificate of Completion programs to Undergraduate Council on an annual basis.

53. However, if new fees are being charged to learners, the Faculty proposing the Certificate of Completion program must follow the process for approval of academic certificates and diplomas.

54. It is expected that Certificates of Completion will be granted only when the activities are of benefit and/or interest to the community and are consistent with the objectives of McMaster University.

Guidelines and Limitations

55. Clarity and the protection of the McMaster certificate brand are paramount. Thus, any courses or programs that issue a Certificate of Completion shall not use the term Certificate in their title, unless it is part of the term "Certificate of Completion." Exceptions may occur when a program is provided as contract training to a company (i.e. not a public program) and the program name is determined jointly with the client.

56. The course description should include the credit or non-credit status of the course, that there will be learner evaluation, how the learner shall be graded (i.e., pass/fail or a letter grade), and that a "Certificate of Completion" will be awarded for successful completion.

CERTIFICATE OF ATTENDANCE

57. A Certificate of Attendance acknowledges that an individual has participated in a set of activities at McMaster that does not have the status of an academic program as there is no academic content and no evaluation of learning.

58. Such activities are designed to meet the interests and objectives of participants who may want to acquire general knowledge or training for general interest purposes, but who neither require nor seek any form of professional or academic recognition. As such a Certificate of Attendance shall not be categorized as undergraduate or graduate level. This category will be suitable for various types of life-long learning courses and programs.

Admission Requirements

59. Normally, there are no specific admission requirements.

Credit Toward Degree or Other Program Studies

60. There is no credit granted toward additional credentials.

Approval Criteria

61. Although administrative and academic units at McMaster do not require approval from Undergraduate Council to issue Certificates of Attendance, they are required, at minimum, to report to Undergraduate Council on an annual basis new Certificates of Attendance programs and revisions to existing Certificate of Attendance programs.

62. However, if new fees are being charged to learners, administrative and/or academic units proposing the Certificate of Attendance program must follow the process for approval of academic certificates and diplomas.

63. It is expected that Certificates of Attendance will be granted only when the activities are of benefit and/or interest to the community and are consistent with the objectives of McMaster University.

Guidelines and Limitations

64. Clarity and the protection of the McMaster certificate brand are paramount. Thus, any courses or programs that issue a Certificate of Attendance shall not use the term Certificate in their title, unless it is part of the term “Certificate of Attendance.”

NON-MCMASTER CERTIFICATES

65. McMaster collaborates with other organisations and institutions to offer programming toward a credential that is issued by that other entity. Such externally issued credentials are outside the scope of this Policy.

SECTION VIII: PROCEDURES FOR APPROVAL

66. The Faculty or Centre for Continuing Education will present the proposal for undergraduate diplomas, undergraduate academic certificates and undergraduate-level academic credit courses to the Undergraduate Council Certificates and Diplomas Committee. Once approved, the Certificates and Diplomas Committee will then make a recommendation to Undergraduate Council.

67. In the case of graduate certificates and graduate-level academic courses, the Faculty will present proposals to Graduate Council.

68. The relevant Council shall report to the Senate the establishment, closure, and/or substantial revisions of academic certificate and diploma programs.

69. The academic unit is responsible for providing a complete proposal. In addition to the program proposal, the complete submission must include a statement of academic merit from the office of the Dean, as described below.

70. Graduate Diplomas are approved through the process outlined in the *Policy on Academic Program Development and Review.*

71. The approval and reporting processes for Certificates of Completion and Certificates of Attendance are outlined in Section VII above.

Statement of Academic Merit

72. The statement of academic merit is normally an attestation from a Faculty, at McMaster University, confirming that the Faculty has vetted the proposed program and found that it meets the criteria for the designation proposed. That statement will also include a general description of how the academic merit of the proposal was evaluated, including such things as which academic departments were involved and the procedures used.

73. Proposals for new academic credit courses, which are intended to be part of a certificate or diploma program, and which are not to be part of any degree program, will include the following:

    a) a paragraph-long course description along with a statement of the number of units of academic credit provided by the course; and

    b) a statement of how the course contributes to the learning objectives of the program(s) of which it will be a part.

Financial Viability and Resource Implications

74. The financial viability of a certificate and diploma program is evaluated through other mechanisms within the University. All programs should follow these approval processes and ensure they are complying with financial policies, which may include returning a portion of revenue to the University.

75. Diploma and academic certificate programs, as well as non-academic certificates for which fees are charged, must submit fee proposals to the University Student Fees Committee for approval. Normally, this approval

should be sought prior to submission of the academic proposal to Undergraduate Council or Graduate Council. Please note that fees are approved by the Board of Governors for the subsequent academic year, so approvals should be sought in sufficient time to launch programs as planned.

76. Following approval by Undergraduate Council or Graduate Council (as applicable), the completed *Financial Viability and Resource Implications template* for new certificate and diploma programs must be reviewed, prior to submission of the business case to the University Planning Committee, as per the *Academic Revenue Activity Policy for Revenue Generating Certificate and Diploma Programs Administered through a Faculty* by the:

    a) Executive Director Finance and Administration (Academic); and

    b) Vice-Provost (Faculty) or Vice-Provost and Dean of Graduate Studies.

77. It is expected that additional fees will not be charged for Undergraduate Concurrent Certificates and Graduate Certificates, and that such programs will not generate additional revenue for the University, and therefore do not normally require approval from the University Planning Committee.

APPENDIX A: SAMPLE PARCHMENTS

The Chancellor and Senate of

McMaster University

award

Firstname Lastname

the graduate diploma in

Advanced Neonatal Nursing

Dated this 20th day of November, 2015 at Hamilton, Ontario.

President and Vice-Chancellor *University Registrar* *Dean of Graduate Studies*

McMaster University

Certificate of Completion

is hereby presented to

Firstname Lastname

to recognize the successful completion of the

Project Management Program

delivered by <Faculty/Dept>

<enter optional information re: hours>

<Signature> <Date>

<Name>
<Title>
<Faculty/Dept>


Name of Credential
is hereby presented to
Firstname Lastname
to recognize the successful completion of the
Program Title
delivered by the <CCE or Partner> in partnership with <CCE or Partner> and <CCE or Partner>
SAMPLE
Signature
Date
McMaster University


Name of Credential
is hereby presented to
Firstname Lastname
to recognize the successful completion of the
Program Title
delivered by the Centre for Continuing Education
SAMPLE
Signature
Date
McMaster University


Name of Credential
is hereby presented to
Firstname Lastname
to recognize the successful completion of the
Program Title
delivered by the <CCE or Partner> in partnership with <CCE or Partner>
SAMPLE
Signature
Date
McMaster University


Name of Credential
is hereby presented to
Firstname Lastname
to recognize the successful completion of the
Program Title
delivered by the <Name of Faculty or Department>
SAMPLE
Signature
Date
McMaster University

Admission Requirements

1. Admission from Secondary Schools

All Level I programs have enrollment limits and admission is by selection.

A. Ontario

General Requirements (For all Level I Programs)

To be considered for admission, you must satisfy the general requirements of the university and the specific subject requirements for the program to which you applied plus any specified supplementary application/on-line assessment/audition/portfolio required by some programs at the university.

If you are an applicant from an Ontario secondary school you must meet the following minimum requirements:

1. An Ontario Secondary School Diploma (OSSD) with acceptable standing; AND
2. An overall average in completed Grade 12 U and/or M courses which meets or exceeds the minimum set by the specific program to which you applied; AND
3. Satisfactory completion of six Grade 12 U and/or M courses including the subject requirements for your chosen program.

Note: Co-op courses are not included in any admission or final admission average calculations. Music External (Conservatory) 4M is acceptable as a credit and the mark obtained can be included in the calculation of your admission average. Alternatively, you may submit certificates from a recognized conservatory of music in Grade 8 practical and Grade 2 theory to your secondary school for one Grade 12M credit.

Admission Average Range

The Admission Average Range used to determine eligibility for consideration is calculated using the best six Grade 12 U and/or M grades, including those for all of the required subjects. **McMaster calculates averages to two decimal points and we do not round up averages. Please Note:** Grade 12 Co-op courses are not eligible to be used as one or more of the required prerequisite courses used to calculate admissibility and/or the admission average. See *Early Conditional Admission* and *Final Admission* below for specific details. Estimated admission average ranges for our Level I Programs can be found at: http://future.mcmaster.ca and click on *Admission Requirements*.

Early Conditional Admission

Early **conditional** admission may be granted annually to qualified applicants with strong academic standing. Early **conditional** admission is based on:

1. six appropriate midterm/interim Grade 12 U and/or M grades, OR
2. at least three final Grade 12 U and/or M grades PLUS enrollment in the appropriate additional three Grade 12 U and/or M courses.
3. In some cases, Grade 11 marks may be considered in extending early conditional offers of admission.

If you do not receive an offer of admission in March, you will automatically be reassessed for admission until May 15 after additional Grade 12 U and/or M grades are received from your secondary school. Due to enrollment limits, McMaster may not be able to consider additional grade data for admission purposes received after May 15.

The University reserves the right to withdraw a conditional offer of admission due to any of the following:

1. You do not meet the minimum final average prescribed for your chosen program; OR
2. You do not receive an OSSD; OR
3. You do not complete six Grade 12 U and/or M courses including all required subjects; OR
4. You do not successfully accept your offer of admission at the Ontario Universities' Application Centre (OUAC) by the response deadline indicated on your offer letter; OR
5. You do not meet any other condition stipulated on your conditional offer of admission; OR
6. You attend a post-secondary institution prior to beginning your studies at McMaster; OR
7. Your offer of admission to the university was secured through fraudulent means. **Please note the University's statements regarding application fraud at the end of the Admission section of this calendar.**

Minimum Final Average

If you are a secondary school applicant who receives a conditional offer of admission, you will be required to achieve an overall average calculated to two decimal points (on six (6) final grades including all required courses for your desired program) as indicated on your offer of conditional admission.

If your final average falls below this level (or its equivalent), your offer of admission will be rescinded/revoked and your registration will be cancelled.

The required minimum final average will vary from year to year and by program. This average will be stated clearly on the offer of conditional admission.

Supplementary Application Forms and Extenuating Circumstances Situations

Certain Level I programs including Arts & Science, Bachelor of Health Sciences (Honours), Integrated Business and Humanities (IBH), Integrated Biomedical Engineering & Health Sciences (iBioMed) (regular and co-op), Engineering 1 (regular and coo-p), Honours Integrated Science, and Nursing have **mandatory online supplementary application forms or online assessments** which must be completed by specific deadline dates. Applicants to Nursing must complete a **mandatory on-line assessment (CASPer™)** on the dates specified each year. See *Application and Documentation Deadlines*, for specific deadline dates. Applicants to Engineering 1 (regular and co-op) and Integrated Biomedical Engineering and Health Sciences (regular and co-op) must complete a **mandatory on-line assessment (2016 © Kira Talent)** by February 1 each year. See *Application and Documentation Deadlines*, for specific deadline dates. Applicants to Integrated Business and Humanities must complete a **mandatory on-line assessment (2016 © Kira Talent) and**

submit a personal resume by February 1 each year. Applicants to Business 1 may elect to complete an optional supplemental form prior to February 1 to let the program know more about themselves.
McMaster does not normally use **optional** supplementary application forms. Applicants will be notified if the program they applied to decides to use an optional supplementary application form.
Applicants with special circumstances whose average falls slightly below the required admission average range may forward a letter to the Office of the Registrar, **Admissions** explaining the nature of their extenuating circumstances.
In some cases, the university may request letters of recommendation, personal history or other additional information to aid in the admission process.

Offers of Admission for Secondary School Graduates

Applicants may be eligible for final admission if they have fulfilled the requirements for their OSSD and have final grades in six Grade 12 U and/or M courses. If you fulfill the requirements for your chosen program by the end of February, you may be granted an offer of **final admission**.
The University reserves the right to withdraw an offer of final admission due to any of the following:

1. You do not successfully accept your offer of admission at the Ontario Universities' Application Centre (OUAC) by the response deadline indicated on your offer letter; OR
2. You attend a post-secondary institution prior to beginning your studies at McMaster.
3. Your offer of admission to the university was secured through fraudulent means. **Please note the University's statements regarding application fraud at the end of the Admission section of this calendar.**

Deferral of Admission

McMaster does not normally grant a deferral of an offer of admission unless special extenuating circumstances exist. Each case is evaluated on its own merits.
All requests for deferral of both admission and scholarship should be made in writing to:

Office of the Registrar, Admissions
McMaster University
Gilmour Hall 109, 1280 Main St. W.
Hamilton, Ontario L8S 4L8

by September 1 of the application year, outlining the reasons for the request. If a deferral is granted, it is conditional upon the student not attending a secondary or post-secondary institution during the deferral period.

Subject Requirements for Specific Level I Programs

McMaster University offers the following Level I programs:
Arts & Science I, Automation Engineering Technology 1 (B.Tech.), Automotive and Vehicle Engineering Technology I (B.Tech.), Biotechnology I (B.Tech.), Business I, Chemical & Physical Sciences Gateway, Computer Science I (regular and co-op), Economics I, Engineering I (regular and co-op), Environmental and Earth Sciences Gateway, Honours Health and Society I, Health Sciences I, Humanities I, Honours Integrated Science (Level I), Honours Kinesiology (Level I), Integrated Biomedical Engineering & Health Sciences I (regular and co-op), Integrated Business & Humanities I, Life Sciences Gateway, Mathematics and Statistics Gateway, Medical Radiation Sciences (Level I), Midwifery I, Music I, Nursing I, Social Sciences I, and Studio Art I.

ARTS & SCIENCE I

You are required to complete a **mandatory Supplementary Application Form** which must be submitted electronically via the web at https://artsci.mcmaster.ca/prospective-students/supplementary-application/. The information provided enters into the selection process. A minimum overall average of 88% or higher is required for application consideration.
The following are the minimum Grade 12 U and M requirements:

1. English U
2. One of Advanced Functions U or Calculus and Vectors U (Calculus and Vectors U is strongly recommended)
3. Completion of four additional U or M courses, to total six courses, of which two must be at the U level

AUTOMATION ENGINEERING TECHNOLOGY I CO-OP (B.TECH.), AUTOMOTIVE AND VEHICLE ENGINEERING TECHNOLOGY I CO-OP (B.TECH.), BIOTECHNOLOGY I CO-OP (B.TECH.)

Admission to Automation Engineering Technology I, Automotive and Vehicle Engineering Technology I, and Biotechnology is by selection. A minimum average range in the low 80s is required for application consideration. Applicants must complete a **mandatory on-line assessment ~~(2016 © Kira Talent)~~** by the deadline as specified each year. See *Application and Documentation Deadlines*, for specific deadline dates.

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Calculus and Vectors U
3. Chemistry U
4. Physics U
5. Completion of two additional U or M courses to total six courses

Note: *Applicants are also expected to have completed Advanced Functions U.*

BUSINESS I

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Advanced Functions U
3. Calculus and Vectors U
4. Completion of three additional U or M courses to total six courses

Note: *Applicants to Business I may elect to complete an optional supplemental form prior to February 1 to let the program know more about themselves.*

COMPUTER SCIENCE I, COMPUTER SCIENCE I CO-OP

Admission to Computer Science I (regular and co-op) is by selection. A minimum average range in the low 90s is required for application consideration. Applicants must complete a **mandatory on-line assessment ~~(2016 © Kira Talent)~~** by the deadline as specified each year. See *Application and Documentation Deadlines*, for specific deadline dates.

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Calculus and Vectors U
3. Two of: Biology U, Chemistry U, Physics U, Earth and Space U, Computer and Information Science M (or Computer Science U), or Computer Engineering M (or Computer Engineering Technology M)
4. Completion of two additional U or M courses to total six courses

Note: *Applicants are also expected to have completed Advanced Functions U.*

ECONOMICS I (Effective September 2019)

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Two of Advanced Functions U, Calculus and Vectors U, and Mathematics of Data Management U
3. Completion of three additional U or M courses to total six courses

Note: Applicants without Calculus and Vectors 4U will be required to take an equivalent Calculus course in Level I. Applicants without Data Management U will be required to take an equivalent Stats course in Level I.

ENGINEERING I, ENGINEERING I CO-OP

Admission to Engineering 1 (regular and co-op) is by selection. A minimum average range in the high 80s is required for application consideration. Applicants must complete a **mandatory on-line assessment ~~(2016 © Kira Talent)~~** by the ~~February 1~~ deadline as specified each year. See *Application and Documentation Deadlines*, for specific deadline dates.

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Calculus and Vectors U
3. Chemistry U
4. Physics U
5. Completion of two additional U or M courses to total six courses

Note: *Applicants are also expected to have completed Advanced Functions U.*

ENVIRONMENTAL AND EARTH SCIENCES GATEWAY

The following are the minimum Grade 12 U and M requirements:

1. English U
2. One of Advanced Functions U or Calculus and Vectors U
3. One of Biology U, Chemistry U
4. One of Advanced Functions U, Biology U, Calculus and Vectors U, Chemistry U, Physics U
5. Completion of two additional U or M courses to total six courses

HONOURS HEALTH AND SOCIETY I (Effective September 2019)

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Completion of five additional U or M courses to total six courses

HONOURS HEALTH SCIENCES I

The selection method is by consideration of academic and a **mandatory on-line Supplementary Application Form (due mid-February) submitted electronically via the web; details at https://bhsc.mcmaster.ca/.** A minimum overall average of 90% or higher is required for application consideration. The Supplementary Application must be completed and submitted on-line by the specified deadline date. A review of the mandatory Supplementary Application is a very important component of the admission process. Applicants who do not complete the Supplementary Application will not be considered for admission.

The following are the minimum Grade 12 U and M requirements:

1. English U
2. One of Advanced Functions U, Calculus and Vectors U, or Mathematics of Data Management U
3. Biology U
4. Chemistry U
5. One U or M non-math/non-science course (**Note:** courses in technological education, science or mathematics are not acceptable)
6. Completion of one additional U or M course in any subject area to total six courses

HUMANITIES I

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Completion of additional U or M courses to total six courses

The Faculty of Humanities strongly recommends that you select at least one Grade 12 U or M course from Humanities subjects (Art, Drama, English, French, Français, other languages, History and Music). **Note:** In addition to Requirement 1 above, Biology U is strongly recommended for students planning to enter a Cognitive Science of Language program.

HONOURS INTEGRATED SCIENCE (Level I)

Candidates are required to complete a mandatory **Supplementary Application Form** which must be submitted electronically via the web at **http://www.science.mcmaster.ca/isci/prospective-students**. The information provided in the supplementary application

enters into the selection process. Only applicants with high academic standing will be selected. Successful candidates must present a minimum average in the high 80's.
The following are the minimum Grade 12 U and M requirements:

1. English U
2. Advanced Functions U
3. Calculus and Vectors U
4. Two of Biology U, Chemistry U, Physics U
5. Completion of one additional U or M course to total six courses

HONOURS KINESIOLOGY (Level I)
The following are the minimum Grade 12 U and M requirements:

1. English U
2. Calculus and Vectors U
3. Biology U
4. Completion of three additional Grade 12 U or M courses to total six courses. Introductory Kinesiology U is strongly recommended.

INTEGRATED BIOMEDICAL ENGINEERING AND HEALTH SCIENCES (IBEHS) I /
INTEGRATED BIOMEDICAL ENGINEERING AND HEALTH SCIENCES (IBEHS) I CO-OP
Admission to Integrated Biomedical Engineering and Health Sciences 1 (regular and co-op) is by selection. A minimum overall average of 90% or higher is required for application consideration. Applicants must complete a **mandatory on-line assessment ~~(2016 © Kira Talent)~~** ~~by February 1~~ as specified each year. See *Application and Documentation Deadlines*, for specific deadline dates. The following are the minimum Grade 12 U and M requirements:

1. English U
2. Calculus and Vectors U
3. Biology U
4. Chemistry U
5. Physics U
6. Completion of one additional U or M course to total six courses

INTEGRATED BUSINESS AND HUMANITIES I
Admission to Integrated Business and Humanities 1 is by selection. A minimum overall average of 88% or higher is required for application consideration. Applicants must complete a **mandatory on-line assessment (2016 © Kira Talent)** by February 1 each year.
The following are the Minimum Grade 12 U and M requirements:

1. English U
2. Calculus and Vectors U
3. Data Management U
4. Completion of three additional U and M courses to total six courses.

Note: Applicants are also expected to have completed Advanced Functions U.
LIFE SCIENCES GATEWAY
The following are the minimum Grade 12 U and M requirements:

1. English U
2. Advanced Functions U or Calculus and Vectors U
3. Biology U
4. One of Advanced Functions U, Calculus and Vectors U, Chemistry U or Physics U
5. Completion of two additional U or M courses to total six courses

MATHEMATICS AND STATISTICS GATEWAY
The following are the minimum Grade 12 U and M requirements:

1. English U
2. Advanced Functions U
3. Calculus and Vectors U
4. Completion of three additional U or M courses to total six courses

MEDICAL RADIATION SCIENCES (Level I)
Students considering the Medical Radiation Sciences I program should refer to the *Regulations for License to Practice and Functional Demands* in the Medical Radiation Sciences program in the *Faculty of Science* section of this calendar.
The following are the minimum Grade 12 U and M requirements:

1. English U
2. Advanced Functions U
3. Calculus and Vectors U
4. Biology U
5. Chemistry U
6. Completion of one additional U or M course to total six courses

MIDWIFERY I
Places in the Midwifery program are very limited and the admission process is highly competitive. Admission to the Midwifery Education Program is by selection. **Application to the Midwifery program must be completed by February 1**. In recent years an average range in the mid to high 80's has been required to move forward to the admissions interview stage. Interviews are by-invitation only.
The following are the minimum Grade 12 U and M requirements:

1. English U
2. Biology U
3. Chemistry U

4. Completion of additional U or M courses to total six courses
5. To be eligible to apply students must obtain a minimum grade of 75% in each of the three required courses listed in points 1, 2, and 3 above AND an overall average, including the required courses, that is acceptable to the Program.
6. Current (Ontario) secondary students may apply if one or more of the three (3) mandatory prerequisite courses are in progress at the time of application; however, the grade 11 prerequisite(s) in the same subjects must be completed at the time of application so that a preliminary assessment of the subject area(s) can be made. Admission is based on in-progress secondary school subjects for current secondary students only if the grade 11 prerequisite in that subject area has been completed with a minimum grade of at least 75%.

MUSIC I

The academic requirements are the same as for Humanities I. In addition, applicants to Music I or to the B.A. in Music must successfully complete a **music audition/examination** consisting of:

1. Demonstration of technique (a level equivalent to at least honours standing in Grade 8 of the Royal Conservatory of Music)
2. Performance (approximately 20 minutes' duration) of two or three varied pieces of your choice (approximately Grade 8 honours level), including at least one from the 20th century
3. Ear test appropriate to the Grade 8 performance level
4. Written examination on rudiments of theory (Grade 2 level)
5. Interview

For comprehensive details, visit **https://sota.humanities.mcmaster.ca/undergraduate-programs/music/**
Auditions take place between February and April. You must make arrangements with the School of the Arts for your audition at **sota@mcmaster.ca.**

NURSING I

NURSING CONSORTIUM (CONESTOGA)

NURSING CONSORTIUM (MOHAWK)

Students interested in a McMaster (B.Sc.N.) Nursing degree have **three location options: McMaster University, Mohawk College or Conestoga College**. Each of the three sites offers the four-year program which uses the problem-based learning and small group tutorial educational model. For more information about the Mohawk and Conestoga College sites refer to the B.Sc.N. (A) Stream the School of Nursing, *Faculty of Health Sciences* portion of the Calendar. For full application instructions see http://fhs.mcmaster.ca/nursing/education_undergrad_bscn.html as well as the *Application Procedures* section of this Calendar.
Admission to Nursing 1 at all sites is by selection. A minimum overall average of 85% or higher is normally required for application consideration. Additionally, applicants to Nursing must complete a **mandatory on-line assessment (CASPer™)** on the dates in February as specified each year.
The following are the minimum Grade 12 U and M requirements:

1. English U
2. One of Advanced Functions U, Calculus and Vectors U, Mathematics of Data Management U
3. Biology U
4. Chemistry U
5. Completion of two additional U or M courses to total six courses

The selection method is by academic qualifications (minimum overall average range of 85% or higher is required for consideration) and a **mandatory, online, 90-minute computer-based assessment of personal characteristics called CASPer™**. Applicants who do not complete the CASPer™ test will not be considered for admission.
Health requirements for admission to Nursing 1: During the registration process, you must file with the University information pertaining to your state of health and immunization. Detailed instructions will be provided after acceptance into the program.
Students considering the Nursing 1 program should refer to the document Requisite Skills and Abilities for nursing practice in Ontario at the College of Nurses of Ontario www.cno.org.

CHEMICAL & PHYSICAL SCIENCES GATEWAY

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Advanced Functions U
3. Calculus and Vectors U
4. Chemistry U
5. Physics U
6. Completion of one additional U or M courses to total six courses

SOCIAL SCIENCES I

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Completion of additional U or M courses to total six courses

Advanced Functions U or Calculus and Vectors U is strongly recommended for students planning to enter programs in Economics or Psychology, Neuroscience and Behaviour. Biology U is recommended for students planning to enter a program in Psychology, Neuroscience and Behaviour.

STUDIO ART I

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Completion of additional U or M courses to total six courses

McMaster offers Studio Art as a direct-entry Level I program leading to a Bachelor of Fine Arts (BFA) degree. Admission to this program is by selection and requires a **mandatory portfolio interview** with the School of the Arts http://sota.mcmaster.ca/undergraduate/studio_art.html.
You must make arrangements for your portfolio interview with the School of the Arts at **sota@mcmaster.ca.**

B. Other Canadian Provinces and Territories

Subject Requirements for Level I Programs

In addition to the minimum requirements below, satisfactory completion of the specified subject requirements for the program to which you applied is also required. Please refer to our website **http://future.mcmaster.ca** for more details.
Averages used to determine eligibility for admission and residence are calculated to two decimal points based on the minimum provincial requirements, including the prerequisite courses for the program to which you have applied.

Early Conditional Admission

Applications are reviewed for conditional admission as soon as all required documents, with sufficient course and grade data, are received by the Office of the Registrar, Admissions. All Canadian applicants should ensure that their **schools** (vs. the Provincial Ministry for those provinces where transcripts are issued by the Ministry), **forward interim/midyear school grade reports** showing **marks for all courses taken during the Grade 11 and 12 years as well as all course registrations for the current academic year**, as soon as they are available. The terms and conditions of the offer of admission are stated clearly on the offer letter. The Provincial Ministry final transcript confirming final grades and graduation status will be required at the end of the school year. **Students from all other provinces where transcripts are issued by their high schools should have their schools forward the appropriate interim mid-year transcripts and final transcripts confirming graduation.**
Applicants are required to meet the following minimum requirements including the specified subject requirements (not listed below) for their chosen program. For a complete listing of our specific course requirements by province and Level I program you may refer to our web site: http://future.mcmaster.ca/admissions/admission-requirements/.

Alberta, Northwest Territories and Nunavut

Grade 12 high school diploma with five acceptable academic courses numbered 30 or 31, including English Language Arts 30-1.

British Columbia and Yukon

Grade 12 high school diploma with four acceptable Grade 12 academic courses (or equivalent), including English 12 or English 12 First Peoples.

Manitoba

Grade 12 high school diploma with five acceptable Grade 12 academic courses numbered 40A or 40S, including one of English 40S or Anglais 40S.

New Brunswick

Grade 12 high school diploma with five acceptable Grade 12 academic courses numbered 120, 121, or 122, including English 121 or 122.

Newfoundland and Labrador

Grade 12 high school diploma with eleven acceptable Grade 12 academic credits at the 3000 level, including English 3201.

Nova Scotia

Grade 12 high school diploma with five acceptable Grade 12 academic courses (university preparatory Academic or Advanced), including English 12.

Prince Edward Island

Grade 12 high school diploma with five acceptable Grade 12 academic courses numbered 611 or 621, including English 621.

Québec

Grade 12 Diploma with six acceptable Grade 12 academic courses in the 600 series including English
OR
Year I CEGEP with twelve appropriate academic courses, including two English/Anglais 603 or two English 604 courses. Students completing Year II or III CEGEP who will or have achieved the DEC may be considered for advanced credit in their chosen program. The *côte de rendement* (R Score) is used for admission consideration.

Saskatchewan

Grade 12 high school diploma with five acceptable Grade 12 academic courses numbered 30, including both English A30 and B30.

C. International Baccalaureate Diploma

Applicants who have completed or will be completing the International Baccalaureate Diploma will be considered for admission to Level I, provided the completed diploma program includes the subject requirements of the program desired. Advanced credit of up to 18 units of study will be considered for Higher Level (HL) courses based on the achievement of final IB Diploma grades of 5 or greater.
For more information please refer to http://future.mcmaster.ca/admission/admission-requirements/.

D. Advanced Placement (A.P.) Courses/Examinations

Applicants who have completed AP courses will be considered for admission to a Level I program. Applicants who have completed A.P. exams through the College Board in acceptable courses and achieve a minimum grade of 4 will be considered for up to 18 units of advanced credit. For all students who have completed AP examinations through the College Board, an official copy of the final *Advanced Placement Examination Results Report* from the College Board is required as part of the admission and advanced credit evaluation process. For more information please refer to https://future.mcmaster.ca/admission/requirements/.

E. Other International Secondary School Qualifications

See the admission requirements for applicants from the more common international educational systems below. For all other education systems from around the world, please visit our website for the specific minimum requirements for your country's educational system.

Required subjects would be the same as required for Ontario and other Canadian students: https://future.mcmaster.ca/admission/requirements/.

Applicants must arrange for official high school transcripts to be sent to McMaster University directly from their high school well in advance of the session to which they are applying. The equivalent of first-class standing will be required for admission consideration. Documents in a language other than English should be accompanied by notarized English translations. You will be considered for admission on an individual basis and you will not be allowed to attend the University until we have received official evidence that all conditions attached to your Offer of Admission have been fulfilled.

McMaster University may require students presenting documents that will form the basis of their admission to the university, from schools outside of North America, to have those documents authenticated via WES Canada http://www.wes.org/ca/index.asp. Students will be supplied with specific information in their official Offer of Admission letter.

American High School Curriculum

American Curriculum High School applications are reviewed for admission based on McMaster's own calculation of the admission average. McMaster's calculations of the admission averages may vary from those used at other institutions.

Applicants from an American high school curriculum must satisfactorily complete a secondary school diploma with a minimum overall average of at least 80% in a Grade 12 academic program from an accredited American high school/International American Curriculum high school AND must present all prerequisite courses for their chosen program(s).

Admission is competitive and many programs will require grades/averages well above the minimum 80% for admission consideration.

For complete requirements for American Curriculum applicants, please visit our website: https://future.mcmaster.ca/admission/requirements/.

General Requirements

High school Diploma from an accredited school with prerequisite subjects including English completed at the AP or Senior Grade 12 academic level.

Students may be required to satisfy our English language proficiency requirements: https://future.mcmaster.ca/admission/language/

McMaster will consider a minimum of five Senior Grade 12 academic courses including all prerequisite subjects for the applicant's selected program(s). **Students applying to programs in Engineering, Science, Health Sciences, Economics and Business programming that have mandatory Science and/or Mathematics prerequisites should note the following requirements for each subject:**

- **Biology** - 2 years/ 2 full credits (Junior and Senior) or AP Biology (or equivalent)
- **Physics** - 2 years/2 full credits (Junior and Senior) or AP Physics (or equivalent)
- **Chemistry** - 2 years/ 2 full credits (Junior and Senior) or AP Chemistry (or equivalent)
- **Calculus** - 4 years of high school Mathematics including Pre-Calculus and AP Calculus or equivalent.

McMaster University will accept the results of an equivalent **AP challenge examination** in lieu of ONE of the science/math prerequisites for your chosen subject if your school does not offer the subject. A minimum score of 4 or 5 will be required for AP challenge exams.

Students who are presenting AP courses that are prerequisite to their selected program(s) will be required to complete and submit the AP Examination(s) via the College Board and minimum grades of at least 3 will be required from the examinations to meet admission conditions.

SAT II Subject Test with a score of at least 670 or higher may be considered on a case-by-case basis in lieu of ONE of the science/math prerequisites for your chosen program.

For claimed equivalencies, detailed syllabi including all topics covered, total hours and textbooks used are required for our evaluation and should be submitted alongside official high school transcripts/reports.

Students in continental US high schools must supply results from either the **SAT** or **ACT** testing. The SAT Essay and the ACT Writing Test are optional for McMaster. All other applicants in American Style Curriculum schools outside of the US are also encouraged to submit the results of SAT/ACT tests as admission to all of McMaster's undergraduate programs is highly competitive and preference may be given to applicants presenting excellent scores.

Students in **China** and who are completing an International hybrid curriculum (National curriculum concurrent with an AP/American style curriculum are required to supply results from either SAT or ACT testing:

- **SAT** - minimum overall score of 1200 or greater (Reading/Math sections only) with minimum scores of 600 in each section. (Institutional Code for SAT/AP 0936)
- **ACT** - minimum composite score of 27 or greater (Institutional Code 5326)

High scores in external tests such as SAT, SATII Subject Tests, ACT and AP may help your applications to be more competitive for your selected program.

General Certificate of Education (G.C.E.)

Applicants from the General Certificate of Education system require a minimum of five G.C.E. subjects **at least** two of which must be at the Advanced A2 Level with the balance of the subjects at the IGCSE/GSCE (Ordinary Level). Advanced Level subjects must be appropriate to your chosen program.

Note: Many programs may require a minimum of **three** Advanced A2 Level courses.

For program specific requirements please refer to https://future.mcmaster.ca/admission/requirements/.

Other Countries or Educational Systems

For admission requirements from other education systems, please visit https://future.mcmaster.ca/admission/requirements/ to view our country-specific Admissions Requirements.

F. Home Schooled Applicants

Home schooled applicants who in addition to their home schooling experience have completed six Grade 12 U and M courses at an Ontario Ministry of Education inspected and approved school, or equivalent courses from another recognized academic jurisdiction may be considered for their program of choice providing they present the appropriate prerequisite courses on official transcripts from accredited schools and meet the required admission average. McMaster University is the sole arbiter of what is considered as equivalent level education and equivalent courses.
All other home schooled applicants may apply for admission consideration to Humanities I or Social Sciences I by presenting the following:

1. List of home school credentials including but not limited to structured curriculum completed through ACE (Accelerated Christian Education Program) or other such programs.
2. Portfolio of written work; normally, evidence of appropriate intellectual maturity is expected.
3. Results of standardized tests such as SAT, ACT. Applicants must also present results from the Critical Reading and Mathematics components of **SAT I** with a minimum combined score of 1200 (minimum 580 Critical Reading, 520 Mathematics) OR a minimum combined score for the **Redesigned SAT** result of at least 1200 as a combined score with a minimum of 600 in each section OR from **ACT** with a minimum composite score of 27.

Interested applicants should contact the Office of the Registrar for further information regarding admission criteria.

G. Prior-Year Secondary School Graduates

Applicants who have previously completed a secondary school diploma and have not attended a post-secondary institution since graduation, may be considered for admission by presenting satisfactory standing in six required Grade 12 U and M courses (or equivalent) as identified in the *Subject Requirements For Specific Level I Programs* section in this calendar.
If you have attended a post-secondary institution after high school graduation, you would not be considered as an applicant from secondary school. See *Admission/Transfer From Post-Secondary Institutions* section in this calendar.

2. Admission/Transfer from Post-Secondary Institutions

A. From Universities

Most McMaster programs have enrollment limits and admission is by selection. Possession of the minimum admission requirements does not guarantee admission. Admission will be considered on a case by case basis and is not guaranteed.
When you transfer to McMaster University, you will normally receive credit for courses in which you have obtained at least a C- standing (as per the McMaster grading scale). Assessment of courses for transfer credit is subject to the guidelines of the individual Faculties.
As a transfer student, you must also satisfy the Residence Requirements set out in the General Academic Regulations section of this Calendar. **The University will not accord to you privileges which would not be granted by your own university.**
Grades obtained in courses taken at another university will not be included in McMaster's Grade Point Average, and, therefore, cannot be used to raise your standing.
If you have been required to withdraw from another university and have fulfilled your period of suspension, you may apply for admission. However, you must present a letter of explanation and clarification concerning your past academic performance. You may also be asked to provide academic documentation for proof of further academic achievement which is both current and relevant. For full transfer information see our website: https://future.mcmaster.ca/admission/transfer-student-information/.

B. From Colleges of Applied Arts and Technology

Most McMaster programs have enrollment limits and admission is by selection. Possession of the minimum admission requirements does not guarantee admission. Admission will be considered on a case by case basis and is not guaranteed.
See the minimum admission requirements for Level I programs as listed below. You are considered for admission on an individual basis.
For information regarding the amount of available transfer credits when transferring from a College of Applied Arts and Technology please visit https://future.mcmaster.ca/admission/college-transfer-student-information/.

C. University Graduates Applying for a Second Bachelor's Degree

All programs have enrollment limits and admission is by selection. If you have a first non-Honours degree, you may apply to take an Honours second degree in the same subject area or a second degree in another discipline. Please note the following exceptions: B.Arts Sc.(Arts & Science), B.Com. (Bachelor of Commerce), B.Com. (Honours), B.H.Sc. (Bachelor of Health Sciences (Honours)), B.Sc. (Honours) in Integrated Science (ISCI), Honours B.Sc. Kinesiology, Integrated Biomedical Engineering and Health Sciences, Integrated Business and Humanities cannot be done as second degree programs. Honours Music is only available as a second degree to students whose first degree is not a BA in Music. The requirements are set out in the *General Academic Regulations* section of this Calendar.
If you wish to enter a Second Bachelor's Degree in a subject area from the Faculty of Science, please note that admission to all limited enrollment programs, with the exception of Medical Radiation Sciences I, may not be possible. Second Degree applicants to all Science programs, except Medical Radiation Sciences I, are not eligible to apply to or be admitted to any of the other first year Science programs. Second Degree applicants must have already completed all first year requirements for the second year program they wish to apply to, with the exception of Medical Radiation Sciences I. See *Limited enrollment Programs* in the *Faculty of Science* section of this Calendar for a list of programs. Please contact the Office of the Associate Dean of Science (Academic) for further information (see the *Application Procedures* section).
If you are a McMaster graduate or potential graduate, you may be able to use the *McMaster University Returning Student Application* (see the *Application Procedures* section).

D. Continuing Students

At McMaster, a *Continuing Student* is defined as a graduate from an undergraduate program, who wishes to take more undergraduate courses, either out of general interest or to upgrade or obtain courses required for future applications to graduate studies or other

professional programs. To be eligible to take courses as a Continuing Student you will be expected to have an undergraduate university degree and at least a C average, with no failures, in your final year's work (or the equivalent, in the case of a degree taken through part-time studies), and academic records which are satisfactory to the Department and the Office of the Associate Dean of the appropriate Faculty. *Please Note: not all courses are available to Continuing students and course prerequisites for selected courses must be met. Also note that admission as a Continuing student does not guarantee registration in courses of interest to the student.

McMaster Graduates

If you are a graduate of a McMaster undergraduate degree program and wish to become a Continuing Student, you do not need to apply for admission. Graduates who have not attended courses for more than two years will need to contact the Office of the Registrar prior to attempting to enrol for courses.

Graduates from Other Universities

As a Continuing Student with a non-McMaster degree, you must apply formally for admission in the first instance. In subsequent sessions, you will only be required to enrol.

Acceptance as a Continuing Student carries no implications with respect to acceptance in the School of Graduate Studies. If you plan to proceed to a graduate degree you should apply directly to the specific department of your program of interest.

E. From Six Nations Polytechnic

McMaster University, along with four other universities, partnered with Six Nations Polytechnic to offer university courses in the community of Six Nations. The courses offered are eligible for transfer credit at any of the universities within the consortium. For more information please contact the Indigenous Student Services at 905-525-9140, ext. 27459 or indigservices@mcmaster.ca.

F. From Post-Secondary Institutions with Religious Affiliation

Undergraduate general academic studies taken at colleges with religious affiliation that are member institutions of specific accredited associations will be considered for admission and transfer credit on a case by case basis. Applicants from a non-accredited postsecondary institution with religious affiliation will be considered for admission based on completion of a Grade 12 high school diploma.

3. Other Categories of Admission

A. Part-time Admission

Students interested in beginning studies on a part-time basis should review the requirements and information found in the following sections of this Calendar:

- Admission Requirements
- Application Procedures
- General Academic Regulations
- Sessional Dates
- Program descriptions found in the specific Faculty sections

Applicants who wish to pursue undergraduate studies on a part time basis at McMaster must meet one of the admissions criteria outlined in the sections above. If applicants do not meet any of these criteria, they may qualify for *Mature Student Admission* as outlined under the heading *Mature Student Admission* below.

Detailed information can be found on our website: **http://future.mcmaster.ca/admission/process/105pt**.

B. Mature Students (Admission)

If you do not qualify for admission consideration under one of the above categories, McMaster will assess your eligibility as a mature student. You may be considered for limited admission, provided both of the following conditions are satisfied:

1. You have not attended secondary school or college on a full-time basis for at least two years.
2. You have never attended university.

Applicants admitted as mature students will not be granted transfer credit. Programs in the Faculties of Humanities and Social Sciences have no specific course requirements for mature student admission. The following Level I programs have specific course requirements that mature applicants must present from secondary school, as outlined:

- **Business I:** requires one Grade 12 U Mathematics course (or equivalent).
- **Chemical and Physical Sciences Gateway:** requires satisfactory standing in four Grade 12 U mathematics and science courses (or equivalent) as specified under the heading *Subject Requirements For Specific Level I Programs*.
- **Environmental and Earth Sciences Gateway:** requires satisfactory standing in three Grade 12 U mathematics and science courses (or equivalent) as specified under the heading *Subject Requirements For Specific Level I Programs*.
- **Life Sciences Gateway:** requires satisfactory standing in three Grade 12 U mathematics and science courses (or equivalent) as specified under the heading *Subject Requirements For Specific Level I Programs*.
- **Mathematics and Statistics Gateway:** requires satisfactory standing in two Grade 12 U mathematics courses -- Advanced Functions U and Calculus and Vectors U as specified under the heading *Subject Requirements For Specific Level I Programs*.
- **Midwifery I: does not offer mature admission directly to the program.** However, students interested in Midwifery may be admitted as a mature student to another program in order to complete a minimum of six university courses (18 units) in their program of admission before applying to the Midwifery Education Program.
- **Nursing I does not offer mature admission directly to the program.** However, students interested in Nursing may be admitted as a mature student to another program in order to complete university prerequisite courses for later consideration for admission to Nursing I. Possession of the minimum admission requirements does not guarantee an offer of admission. Contact the School of Nursing for more details.

The following programs do not admit under the category of Mature Students: Arts & Science I, Automotive and Vehicle Technology I (B.Tech.), Biotechnology I (B.Tech.), Computer Science I, Engineering I, Health Sciences I, Honours Integrated Science (Level I), Honours Kinesiology (Level I), Integrated Biomedical Engineering and Health Sciences I, Integrated Business and Humanities I, Medical Radiation Sciences (Level I), Midwifery I, Nursing I, and Process Automation Technology I (B.Tech.).

If admitted to a program as a mature student, you may register to take up to 18 units of course work (normally Level I courses) during the Fall/Winter session with no more than nine units in each term (three courses). Within the first 18 units, mature students will be limited to taking three units in each term of the Spring/Summer session.

Upon completion of 18 units, your performance will be reviewed according to the general academic regulations of the university. (See Level I *Registration and Academic Standing Requirements under General Academic Regulations*).

C. Visiting Students (Letter of Permission - For Credit at Another University)

If you are a student currently attending another university, you may apply to take McMaster courses for credit at your own/home institution. Please note, not all courses are available for credit outside McMaster and all are subject to enrollment limits, so it is important that all applicants adhere to McMaster application deadlines.

You must initially apply through the Ontario Universities' Application Centre (OUAC) and **send your Letter of Permission and an official transcript from your home institution directly to the Office of the Registrar, Admissions**. Upon receipt, your transcript will be reviewed to ensure you have met the prerequisites for courses you plan to take at McMaster. **Approval of your application as a Visiting Student does not guarantee your enrollment in a course**.

Subsequent requests to take courses on a Letter of Permission do not require another application; however you must send an updated Letter of Permission and a current official transcript from your home institution to the Office of the Associate Dean of the Faculty offering the course at McMaster. If you are attempting to register in courses offered by more than one Faculty, you must obtain approval from each Office of the Associate Dean.

D. Graduates of McMaster Certificate/Diploma Programs

If you have completed certificate or diploma programs from McMaster, you may be granted advanced credit up to maximum specified by Undergraduate Council upon successful completion of the certificate/diploma program. Faculties will take into account the subject matter of both the certificate and degree programs. The credit will normally be applied against your elective courses. For more information concerning the amount of advanced credit granted, please refer to the *Certificate and Diploma Programs* section of this Calendar.

E. Post-Degree Students

If you are a university graduate or a person with professional qualifications who wishes to take one or more graduate courses but not proceed to an advanced degree, you may apply to McMaster as a post-degree student. To enroll as a post-degree student, you must apply to the appropriate departments and have your admission and registration approved by the School of Graduate Studies for each session in which you wish to take courses. You will register and pay fees as a graduate student.

Acceptance as a post-degree student carries no implications with respect to admission to advanced degrees, and even if such admission is granted subsequently, credit toward the advanced degree will not normally be granted for the work previously taken.

F. Listeners

If you are uncertain about degree courses, you may register as a listener in a degree course, but not for credit. You attend all classes, but do not complete any of the essays, tests and other formal requirements. You do not receive a grade for courses that you attend. Some students have eased their way into degree study with this option, subsequently applying for admission and enrolling in further courses for credit. Please note not all courses are available to Listeners. Please see **http://www.mcmaster.ca/bms/student/index.htm** for any applicable fees. For more information please contact the Office of the Registrar.

Written permission to attend must be obtained from the instructor delivering the course. An I.D. card cannot be issued until permission has been obtained.

G. Enrichment Program for Secondary School Students

If you are an outstanding Grade 12 student and wish to enroll in a university-level course while completing Grade 12 U and M courses in your final year of study, you may apply for the Enrichment Program. For more information contact the Office of the Registrar at (905) 525-4600.

H. Former McMaster Degree Students (Returning Students)

Readmission

If you are a former McMaster student who voluntarily withdrew from an undergraduate program **more than five years ago** (and have not attended another university or completed a college diploma elsewhere) and you wish to return to your studies, then you must apply for Readmission. Students from the School of Nursing must apply for Readmission regardless of time elapsed following voluntary withdrawal.

If you were enrolled (have a record of course enrolment) within the last five years and you left the university in good academic standing (and have not attended another university or completed a college diploma elsewhere), then it is not necessary for you to apply for Readmission. Normally, you will be permitted to enrol in your previous program or another program for which you qualify. You must contact the Office of the Registrar directly in order to have your status reactivated prior to enrollment: (905) 525-4600.

Reinstatement

See the *General Academic Regulations* section in this Calendar.

Second McMaster Degree

See *University Graduates Applying for a Second Bachelor's Degree* in this section of the Calendar.

Continuing Studies

See *Continuing Students* in this section of the Calendar.

4. Transfer Credits

A. General Policy on the Transfer of University Course Credits

To facilitate program completion by undergraduate students seeking to transfer course credit from an accredited university to McMaster, the University has implemented the following principles:

1. Acceptance of transfer credits from accredited universities shall be based on the recognition that, while learning experiences may differ in a variety of ways, their substance may be essentially equivalent in terms of their content and rigour. Insofar as possible, acceptance of transfer credit shall allow for the maximum recognition of previous learning experience in university-level courses;
2. Subject to degree, grade and program requirements, any course offered for credit by an accredited university shall be accepted for credit by McMaster when there is an essential equivalency in course content. However, no course for which a grade of less than C- (60%) has been achieved will be considered.
3. Evaluation of all possible transfer credits available at the time of admission must be completed within one year of the date of admission to the University.

B. From Colleges of Applied Arts and Technology

Normally, if you are a well-qualified graduate of a three-year program and the college work is appropriate to your chosen university program, you could receive up to 30 units of transfer credit. If you have completed a two-year program and performed well, transfer credit will be reviewed on a case-by-case basis.

Credit beyond this may be given on an individual basis where the college and university programs are in similar areas, and where your academic record warrants special consideration.

In the granting of credit, attention will be given to:

1. your performance in the college program;
2. the duration of the college program;
3. the program taken at the college and the program to which entry is sought;
4. your secondary school record.

Each case will be considered individually on its own merits for the program desired.

C. Advanced Credit

Subject to the discretion of the Faculty, advanced credit may be granted if you have completed the International Baccalaureate (I.B.) Diploma, the Advanced Placement (A.P.) Program and the College Board examinations or the General Certificate of Education (G.C.E.) and you have met the minimum requirements prescribed. Advanced credit may shorten your degree program at McMaster.

D. Credit in Courses by Special Assessment (Challenge Examinations)

Students who have acquired knowledge at a different type of institution or in a manner that makes assessment of their qualifications difficult are permitted to seek degree credit through special assessment (Challenge for Credit).

Challenge for credit is not intended to give credit for skills or knowledge gained through high school, college or previous university instruction. The special assessment may include one or more of the following: written examinations, papers, essays, submissions of a substantial body of work, or portfolios, or laboratory tests. Credit can be granted only for those courses listed in the current McMaster calendar. Not all courses in all disciplines are available for challenge. Faculties and departments are free to determine which, if any, of their courses are open for special assessment. Challenges are assessed on a pass/fail basis. The passing grade for a challenge appears on the transcript as COM (Complete) and is not used in computing averages or evaluating honours or scholarship standing, but is counted as a course attempt. Unsuccessful attempts will be noted on the transcript as a grade of F. Special Assessment is not available for a course taken previously and a course may be attempted only once by special assessment. Once you have registered for a course by such means (known as challenge exams) the registration may not be cancelled and you may not withdraw from the course. Waivers of prerequisites only (ie. no degree credit) will be at the discretion of the department.

5. English Language Proficiency

If you have been asked to meet our English Language Proficiency requirement, you must demonstrate English language proficiency by achieving the minimum requirements as specified by McMaster. The university reserves the right to require applicants with an English Language Proficiency score disparate from their English prerequisite subject grade to present further evidence of achievement. You may review acceptable tests of English Language Proficiency and minimum score requirements on our web site **http://future.mcmaster.ca/admission/admission-requirements/language/**. It is your responsibility to make all arrangements regarding the writing of the English Language Proficiency tests and to have the official score report forwarded to the Office of the Registrar, Admissions directly from the testing center in a timely manner.

At the discretion of the university, you may be exempted from this requirement if you meet one of the following requirements:

i. Attended immediately prior to application to McMaster, in full-time academic studies (non-ESL), an accredited Secondary School (High School) or Post-Secondary College in an English-speaking country for at least four years, **OR**
ii. Attended immediately prior to application to McMaster, in full-time academic studies (non-ESL), an accredited English medium Secondary School (High School) or Post-Secondary College for at least four years,* **OR**
iii. Attended immediately prior to application to McMaster, in full-time academic studies (non-ESL), an accredited English medium University for at least one year, **OR**

iv. Resided in an English speaking country for at least four years immediately prior to application to McMaster.

*Please note that the Undergraduate MD program requires a minimum of three years of study at an English-medium university. More information about the admission requirements for Medicine at McMaster can be found at: **http://www.fhs.mcmaster.ca/mdprog**.

Statements for Application Fraud

If McMaster concludes based on reasonable grounds that the applicant has falsified any information presented to the University as part of his or her application, without limiting any other rights of McMaster available at law, McMaster reserves the right to revoke the offer and, subject to applicable law and University Policy, to terminate a student's registration.

Without limiting McMaster's General Statement on Collection of Personal Information and Protection of Privacy, please take note that McMaster University collects and retains personal information of applicants for admissions to McMaster University under the authority of The McMaster University Act, 1976. This information may be used for the administration of admissions and registration and, subject to McMaster University policies (as may be amended or revoked from time to time), McMaster may disclose any evidence of misrepresentation, fraud or falsification of admissions documentation to other educational institutions, to government agencies, to law-enforcement agencies and to other relevant third parties. The information you provide on any application for admissions will be protected and used in compliance with *Ontario's Freedom of Information and Protection of Privacy Act (RSO 1990)* and will be disclosed only in accordance with this Act. If you have any questions about the collection and use of this information please contact the University Registrar, University Hall, Room 209, Student Records, Gilmour Hall, Room 108, or the University Secretary, Gilmour Hall, Room 210, McMaster University.

McMaster English Language Development Diploma (MELD)

Department of Linguistics and Languages (Faculty of Humanities)
Phone: (+1) 905.525.9140 Ext. 23718

Email: meld@mcmaster.ca
Web: http://meld.mcmaster.ca

Students who meet the academic admission requirements for their choice of Level 1 program, but do not meet McMaster's English Language Proficiency requirement may be admitted to the MELD bridging program which has been developed for international students, providing them with a supportive environment in which they can succeed. The diploma is a two-term, full-time intensive bridging program in English language development, acculturation and engagement.

Students accepted into MELD are given a conditional offer of admission to their program of choice, pending successful completion of the MELD diploma. Once the diploma in MELD has been successfully completed, the student may register in the program to which he/she was given conditional admission and will have completed 6 units of degree credit courses in Linguistics that may be applied as electives to that program. In exceptional circumstances, MELD will consider transfers from other McMaster programs.

Please visit meld.mcmaster.ca for more information or email meld@mcmaster.ca.

Fall Term

(September - December)

- MELD 1A03 - Academic Writing and Integrity
- MELD 1B03 - English Phonetics and Pronunciation
- MELD 1C03 - Academic Reading Skills
- MELD 1D03 - Social Perspectives on Language
- MELD 1L00 - Linguistics Lab 1
- MELD 1M00 - Mentorship Lab 1
- LINGUIST 1Z03 - Structure of Modern English I (degree credit course)

Winter Term

(January - April)

- MELD 1AA3 - Advanced Academic Writing
- MELD 1BB3 - Advanced Speaking and Presentation Skills
- MELD 1CC3 - Advanced Academic Reading Skills
- MELD 1DD3 - Advanced Academic Listening Skills
- MELD 1LL0 - Linguistics Lab 2
- MELD 1MM0 - Mentorship Lab 2
- LINGUIST 1ZZ3 - Structure of Modern English II (degree credit course)

McMaster English Readiness for Graduate Excellence Certificate

https://meld.humanities.mcmaster.ca/merge/

MERGE (the McMaster English Readiness for Graduate Excellence Certificate) is an intensive 10-week summer Academic English preparatory program, intended for graduate and professional students. Admission requirements include successful completion of an undergraduate degree and English language proficiency minimum requirements of **TOEFL iBT 90** or **IELTS 6.5** (with minimum category requirements). Target English proficiency upon program completion will be an **IELTS score of 7-7.5** or **Common European Framework Reference for Languages (CEFR) level C2.1**, in keeping with graduate English proficiency admission requirements. Students in MERGE will complete a program that includes intensive practice of academic English (listening, reading, writing, speaking), with an emphasis on professional development. The MERGE certificate does not require current or conditional admission to a McMaster University graduate program and program completion does not guarantee admission to a graduate program of study in and of itself. As a stand-alone program, the MERGE certificate coursework cannot be utilized for advanced standing or credit towards degree studies.

Certificate Requirements

- MERGE 100 - Advanced Reading and Writing for Graduate Studies (6 units)
- MERGE 200 - Advanced Listening and Speaking for Graduate Studies (3 units)
- MERGE 300 - Presentation Skills & Lecture Series (3 units)
- MERGE 400 - Professional Development (3 units)

Application Procedures

HOW TO APPLY

1. Determine the appropriate application form and/or procedures. (See *Categories of Admission* below.)
2. Determine application deadline. (See *Application and Documentation Deadlines* in this section.)
3. Refer to the Admission Requirements and specific Faculty sections of this Calendar for further information.
4. Complete and submit your application as directed.
5. Submit all required documentation to McMaster. (See *Documents* in this section.)
6. Once your application has been received, McMaster's Office of the Registrar, Admissions will provide you with an acknowledgment of receipt of your application plus further instructions/details about tracking your application.

1. Categories of Admission

A. Current Ontario High School Students

You should complete the 101 application if you meet ALL of the following requirements:

- You are taking courses during the day at an Ontario secondary school (this includes students returning for second semester and graduated students returning to upgrade one or more courses)
- You have not, at some point, been out of secondary school for more than seven consecutive months
- You will have received or expect to receive your Ontario Secondary School diploma (OSSD) with six 4U/M courses at the end of the current year
- **You have not attended a postsecondary (college/university/career college) institution**
- You are applying to the first year of an undergraduate degree program or diploma program at an Ontario university
- You are under 21 years of age.

Use the Undergraduate 101 on-line application at **www.ouac.on.ca/101/**. Please consult with your secondary school guidance office regarding this application process.

B. All Other Canadian High School Students

If you are currently attending secondary school outside of Ontario or have recently completed a secondary school diploma in any Canadian province or territory

- Use the OUAC 105D on-line application at **www.ouac.on.ca/105/**.

C. High School Students with International Qualifications

If you are currently attending or have recently completed a secondary school program outside of Canada, and you are not a Canadian citizen nor Permanent Resident of Canada

- Use the OUAC 105F on-line application at **www.ouac.on.ca/105/**.

D. University/College Transfer/Continuing Students

If you are currently registered in or have completed an undergraduate degree program at another university and wish to attend McMaster **OR**

If you are currently registered in or have attended or completed a college diploma program and wish to attend McMaster

- Use the OUAC 105 on-line application at **www.ouac.on.ca/105/**. Applicants residing in Canada (Canadian citizens, permanent residents or applicants studying in Canada on a student permit or other visa) should use the **105D** form. Applicants currently residing outside of Canada who are not Canadian citizens nor Permanent Residents should use the **105F** form.

E. Nursing Consortium Programs

If you are interested in applying to McMaster's Nursing (B.Sc.N). program at the Mohawk College or Conestoga College sites

- Apply on-line through the Ontario College Application Services (OCAS) at **www.ocas.on.ca/**.

F. Previous McMaster Degree Students (Returning Students)

1. **Readmission:** If you are a former McMaster student with a record of course enrolment, who was in good standing and who voluntarily withdrew from an undergraduate program more than five years ago (providing you have not attended another university nor received a college diploma since last registered at McMaster). If you are a former Nursing student, you must apply for readmission regardless of the amount of time that has elapsed. Apply on-line at: **future.mcmaster.ca/admission/process/returning/**
2. **McMaster Second Degree:** If you are a McMaster graduate or potential graduate at the end of your current academic term and wish to pursue a second undergraduate degree (providing you have not attended another university nor received a college diploma since last registered at McMaster).
    - Use the McMaster Returning Student Application to apply on-line at **future.mcmaster.ca/admission/process/returning/**
3. **Reinstatement:** If you are a former McMaster student who was required to withdraw from studies at McMaster.
    - Obtain the *Reinstatement Request Form* from the Office of the Registrar, Gilmour Hall, Room 108, McMaster University, Hamilton, Ontario, L8S 4L8.
4. **Continuing Student:** If you are a McMaster graduate from an undergraduate program and wish to become a Continuing Student.
    - You do not need to apply for admission.

G. Visiting Students (Letter of Permission - For Credit at Another University)

If you are currently enrolled at another university and wish to attend McMaster to take courses on a Letter of Permission for credit at that university

- Use the OUAC 105 on-line application at www.ouac.on.ca/105/

H. Part-Time Degree Studies at McMaster Only

If you wish to begin undergraduate studies on a part-time basis (enrolled in less than 18 units of study)

- Use the OUAC 105 on-line application at www.ouac.on.ca/105/.

I. Post-Degree Studies

If you wish to register as a post-degree student (taking graduate courses but not proceeding to an advanced degree)

- Contact the Graduate Studies Office, Gilmour Hall, Room 212, McMaster University, Hamilton, Ontario, L8S 4L8 for information on how to apply to the appropriate academic department(s).

J. Medical Program

See the heading *Admission Policy for the Medical Program* in the *Faculty of Health Sciences* section of this Calendar.

2. Documents

A. Required Documents

A complete application includes: an application form, relevant transcripts and all other documentation stipulated in the *Admission Requirements* and specific Faculty sections of this Calendar, in letters from the appropriate Faculty and/or in letters from Office of the Registrar, Admissions.

You must provide McMaster with transcripts of marks and/or certificates from all secondary and post-secondary institutions you have attended. When you are requested to provide an **official** transcript, then an official transcript is a signed and sealed record of all academic achievement **issued and sent by an academic institution directly to McMaster University, Office of the Registrar, Admissions**.

If you are currently attending secondary school, please see your guidance counselor to request that your current Grade Report showing all courses you will be completing in Grade 12 be sent by your school to McMaster. If you have previously attended secondary school in another province, you may need to submit a request for a transcript containing your secondary school marks from the Ministry or Department of Education in that province if it is not normally provided by your high school..

Where documentation from a school outside of Canada is in a language other than English, you must provide official transcripts in the original language as well as official, notarized English translations.

For specific document submission requirements and processes/procedures, please review: https://future.mcmaster.ca/admission/documents/.

If McMaster concludes based on reasonable grounds that the applicant has falsified any information presented to the University as part of his or her application, without limiting any other rights of McMaster available at law, McMaster reserves the right to revoke the offer and, subject to applicable law and University Policy, to terminate a student's enrolment.

Without limiting McMaster's General Statement on Collection of Personal Information and Protection of Privacy, please take note that McMaster University collects and retains personal information of applicants for admissions to McMaster University under the authority of *The McMaster University Act, 1976*. This information may be used for the administration of admissions and registration and, subject to McMaster University policies (as may be amended or revoked from time to time), McMaster may disclose any evidence of misrepresentation, fraud or falsification of admissions documentation to other educational institutions, to government agencies, to law-enforcement agencies and to other relevant third parties. The information you provide on any application for admissions will be protected and used in compliance with Ontario's *Freedom of Information and Protection of Privacy Act (RSO 1990)* and will be disclosed only in accordance with this Act. If you have any questions about the collection and use of this information please contact the University Registrar, University Hall, Room 209, Student Records, Gilmour Hall, Room 108, or the University Secretary, Gilmour Hall, Room 210, McMaster University.

B. Retention of Documents

All documentation submitted in support of your application for admission **becomes the property of the University and is not returnable**.

If you are not accepted, or you fail to enroll following acceptance, your documentation will be destroyed at the end of the admissions cycle. If you reapply, you must submit any new academic information in addition to the documentation submitted previously.

3. Application and Documentation Deadlines

McMaster University reserves the right, at its sole discretion, not to accept, process or adjudicate applications or amendments to applications to any program at any time. Meeting minimum application requirements does not guarantee admission to any program at McMaster University. **Application fees are non-refundable so we strongly advise you to review our admission requirements carefully before applying**, to determine your academic eligibility for consideration for admission. Please see the *Admission Requirements* section of this calendar for general information. University transfer applicants should review programs by Degree and Minors requirements before applying.

McMaster University has a number of highly competitive by-selection programs that require a mandatory supplementary application/assessment, and all of these programs have early application and supplementary submission deadlines, as specified in the chart below. Failure to apply on time or to submit the required supplementary application/assessment by the specified dates will

automatically disqualify consideration for these specified programs. You are advised to submit your application and/or amendments well in advance of the deadlines listed below.

Fall and Winter Terms

The dates and deadlines listed below are for applications submitted for the 2020-2021 academic year. Please refer to http://future.mcmaster.ca for the date and deadline information for new applications.

PROGRAM	APPLICATIONS	MANDATORY SUPPLEMENTARY APPLICATIONS
Arts & Science	February 1	February 1
Actuarial & Financial Mathematics (Above Level 1) Regular and Co-op Programs	April 1	April 30 For information see: https://www.math.mcmaster.ca/index.php/undergraduate-studies/undergraduate-programs/41-undergraduate-studies/1758-afm-supplementary-application.html
AUTOMATION ENGINEERING TECHNOLOGY I CO-OP (B.TECH.), AUTOMOTIVE AND VEHICLE ENGINEERING TECHNOLOGY I CO-OP (B.TECH.), BIOTECHNOLOGY I CO-OP (B.TECH.)	January 15	End of January Kira© Assessment Details at https://www.eng.mcmaster.ca/future-students/supplementary-application
Bachelor of Technology Degree Completion (Above Level 1)	April 1 (May intake) July 15 (September intake) November 1 (January intake)	Must be completed by the application deadline. View more information about the mandatory supplementary application for the Bachelor of Technology degree.
Biomedical Discovery & Commercialization (Level 3 entry)	February 1	February 1
Computer Science I (Regular and Co-op)	January 15	End of January Kira© Assessment Details at https://www.eng.mcmaster.ca/future-students/supplementary-application
Engineering 1 (Regular and Co-op)	January 15	End of January Kira© Assessment ~~Assessment dates available February 1 to February 14 after payment via: http://www.eng.mcmaster.ca/future/apply.html~~ Details at https://www.eng.mcmaster.ca/future-students/supplementary-application
Health Sciences I (Honours)	January 15	Early February Details at bhsc.mcmaster.ca
Health Sciences (Honours) (Above Level 1)	April 1	Early May Details at bhsc.mcmaster.ca
Health Sciences (Above Level 2) Biomedical Discovery & Commercialization	February 1	February 1 Details at: https://bdcprogram-mcmaster.ca/
Honours Biology and Pharmacology Co-op (Above Level 1)	February 1	February 1 Mandatory Letter of Intent specifying reasons for applying and applicant suitability for the program. Email biophrm@mcmaster.ca by February 1.
Honours Integrated Science I	February 1	February 1
Integrated Biomedical Engineering & Health Sciences 1 (Regular and Co-op)	January 15	~~February 1~~ End of January Online Kira© Assessment Details at https://www.eng.mcmaster.ca/future-students/supplementary-application
Integrated Business & Humanities	February 1	February 1 Online Kira© Assessment

PROGRAM	APPLICATIONS	MANDATORY SUPPLEMENTARY APPLICATIONS
Justice, Political Philosophy & Law	April 1	April 1 For more information see: https://www.humanities.mcmaster.ca/programs/undergraduate-programs/justice-political-philosophy-law/
Midwifery (including submission of all transcripts)	February 1	N/A
Physician Assistant (including submission of all official transcripts) **Note:** This program is not open to International Applicants. This program is open to Canadian citizens and present Permanent Residents of Canada only.	February 1	February 1
Social Work	December 1	February 1
Nursing I: Secondary School Applicants	February 1	Mandatory Supplementary application information is available on the CASPer™website.
Nursing 1 (university transfer applicants from programs other than Nursing and applicants from college pre-health programs (including submission of all official transcripts)	February 1	Mandatory Supplementary application information is available on the CASPer™website.
Transfer from another Nursing program to the McMaster site.		Students from other university Nursing programs should contact the McMaster Nursing program office at 905-525-9140, ext. 22232, for information about transfer options and application procedures. McMaster will not typically accept transfer applications from students already in a Nursing program elsewhere.
Nursing Basic-Accelerated Stream (above level 1) (including submission of all official transcripts)	February 1	Mandatory Supplementary application information is available on the CASPer™website.

Application Deadlines for All Other McMaster Programs for Fall and Winter Terms

*__February 1__ - Applications received on or before February 1 with all supporting official documentation received no later than February 15 from applicants with no postsecondary experience will be reviewed for admission pending space availability in the program. All applications received after February 1 will be considered only if there is space available in the program.
April 1 - The final date to apply for admission and submit all required documentation for admission consideration is April 1. This final deadline applies to all international and domestic applicants.

	APPLICATION DEADLINE	SUPPORTING DOCUMENTATION DEADLINE
Ontario High School Applicants (Recommended)	January 15	April 1
Early Deadline* (see above)	February 1	February 15
Final Deadline Domestic Applicants	April 1	April 1
Final Deadline International Applicants	April 1	April 1
B.Tech. Degree Completion Program Only - January Entry	November 15	November 15

Spring/Summer Term

	DOMESTIC DEADLINE	INTERNATIONAL DEADLINE
May Entry (Term 1 or 3)	April 1	April 1
Supporting Documentation for May Entry	April 1	April 1

June Entry (Term 2)	May 15	May 15
Supporting Documentation for June Entry	May 15	May 15

Former McMaster Students: Re-admission / Re-instatement Deadlines for Fall and Winter Terms

	DOMESTIC DEADLINE	INTERNATIONAL DEADLINE
Re-instatement Deadline	June 30	June 30
Re-admission Deadline	July 15	July 15
Nursing Deadline	February 1	February 1

Academic Counselling for Admitted Students

If you are offered admission to a program at McMaster, you will be asked to confirm that you have accepted the offer of admission and will attend the University. Your admission will include information regarding acceptance procedures for the offer of admission, specified deadline for your acceptance and registration procedures. Offer of admission acceptance deadlines specified in your Offer of Admission letter are strictly enforced. Please ensure that you accept your offer of admission as directed well before the specified deadline date.
If you are admitted to Level 1, your Faculty may also arrange a visit to the University so you may meet with a Faculty advisor to set up your program. Although attendance at the summer counselling and registration sessions is not compulsory, you are strongly advised to participate. If you cannot attend one of these sessions, counselling will be provided in September.
If you are offered admission above Level 1, you may arrange for academic counselling with the Office of the Associate Dean of the Faculty offering the program, or the Office of the Director of the program.

4. Review of Admission and Re-Admission Decisions

No appeal procedure shall be available for decisions on admission or re-admission to the University. Such decisions may be reviewed within the following framework:

a. An applicant to the University who believes that the admission or re-admission decision, or, in the case of a transfer student the decision to grant credits, is incorrect, or based on incorrect or incomplete information, may, **within one week of receiving the decision,** request a review of that decision by writing to the Senior Associate Registrar, Undergraduate Admissions, stating why she/he thinks the decision should be reviewed.
b. The Senior Associate Registrar, Undergraduate Admissions, shall determine whether the information on which the decision was based was incomplete or incorrect and, if so, shall refer the request for review to the appropriate Faculty Committee. That Committee shall make a final decision and report it to the Senior Associate Registrar, Undergraduate Admissions, who shall then convey the decision in writing to the student. The Senior Associate Registrar, Undergraduate Admissions may, at his/her discretion, supply reasons.

Enquiries: Application Procedures

Please direct your enquiries about Application Procedures to:

Office of the Registrar, Admissions
Gilmour Hall, Room 109
McMaster University
Hamilton, Ontario, L8S 4L8
Telephone: (905) 525-4600
http://ask.mcmaster.ca

McMaster University

SCIENCE

Report to Undergraduate Council for the 2021-2022 Undergraduate Calendar

April 2021

FACULTY OF SCIENCE

Curriculum Revisions for 2021-22

Addendum

1.0 MAJOR REVISIONS:

1.1 Notes Applicable to all Honours Biochemistry Programs

- In addition to the Honours Biochemistry program, the Department offers a Specialization in Biomedical Research. The Honours program has a specified set of basic requirements and a wide choice of electives (including those from outside the Faculty of Science), allowing for interdisciplinary studies or the opportunity to complete a Minor in another subject. Alternatively, students may wish to apply to the Biomedical Research Specialization which is strongly recommended for students intending to pursue graduate studies.
- **Admission to the Honours Biochemistry program is limited.** Selection is based on academic achievement but requires, as a minimum, completion of the Level I requirements listed below.
- **Admission to the Honours Biochemistry - Biomedical Research Specialization program is limited.** ~~Effective September 2021, a~~Admission to this program will begin at Level III and will require, as a minimum, completion of Level II Honours Biochemistry and completion of a supplementary application. ~~Last cohort of students to enter at Level II will be in September 2019 and selection is based on academic achievement but requires, as a minimum, completion of the Level I requirements listed below.~~
- Transfer between programs is possible at any time, subject to satisfying the admission requirements and availability of space.
- Students considering graduate studies in Biochemistry are recommended to complete one of BIOCHEM 4F09 A/B or 4T15 A/B.

1.2 Honours Biochemistry – Biomedical Research Specialization (B.Sc.)

~~Admission Note~~
~~Effective September 2021, admission to this program will be at Level III. Last cohort of students to enter at Level II was September 2019.~~
Admission ~~(Effective September 2021)~~
~~**Effective September 2021, admission to this program will begin at Level III.** Therefore, no admissions at Levels II or III will be assessed in September 2020.~~ **Enrolment in this program is limited** and possession of the published minimum requirements does not guarantee admission. Admission is by selection and is based on completion of a supplementary application by the stated deadline and academic achievement, but requires, as a minimum, completion of Level II Honours Biochemistry with a Grade Point Average of at least 5.0 and completion of the following courses:

12 units
· BIOCHEM 2B03 - Nucleic Acid Structure and Function
· BIOCHEM 2BB3 - Protein Structure and Enzyme Function
• BIOCHEM 2L06 A/B - Inquiry in Biochemical Techniques
3 units
· BIOLOGY 2C03 - Genetics
3 units from
· the *Biochemistry Course List* (See *Program Note 4* below.)
6 units
· CHEM 2OA3 - Organic Chemistry I
· CHEM 2OB3 - Organic Chemistry II

Program Notes
1. There are Level II and III prerequisites for many Level III and IV courses. The prerequisites should be considered when choosing Level II and III courses.

2. Completion of one of BIOCHEM 4F09 A/B, 4T15 A/B or 4Z03 is required in Level IV.
3. A 'research intensive' option, available to students registered in this Specialization, offers additional laboratory research experience through completion of BIOCHEM 3R06 A/B S and 4T15 A/B. This option is intended for students planning to pursue graduate studies or a career in research and development. Enrolment in the courses is limited and admission is by selection.
4. Both CHEMBIO 2A03 and 2P03 are highly recommended for students interested in pursuing an undergraduate thesis or graduate studies in biophysical chemistry.

Biochemistry Course List

- ANTHROP 2U03 - Plagues and People
- ANTHROP 3BD3 - The Black Death
- BIOCHEM 3BP3 - Practical Bioinformatics in the Genomics Era
- BIOCHEM 3CB3 – Emerging Discovery in Cell Biology
- BIOCHEM 3EE3 - Research Advances in Cell Biology and Biochemistry
- BIOCHEM 3H03 - Clinical Biochemistry
- BIOCHEM 3LA3 - Advanced Biochemistry Techniques
- BIOCHEM 3MI3 - Microbial Interactions
- BIOCHEM 3X03
- BIOCHEM 3Y03
- BIOCHEM 3Z03 - Structural Determination and Analysis of Macromolecules
- BIOCHEM 4EA3
- BIOCHEM 4H03 - Biotechnology and Drug Discovery
- BIOCHEM 4J03 - Immunological Principles in Practice
- BIOCHEM 4M03 - Cellular and Integrated Metabolism
- BIOCHEM 4N03 - Molecular Membrane Biology
- BIOCHEM 4Q03 - Biochemical Pharmacology
- BIOCHEM 4S03 - Introduction to Molecular Biophysics
- BIOCHEM 4Y03
- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- BIOMEDDC 2C03 - Exploring Careers in Biomedical Sciences
- BIOMEDDC 2W03 - Write Right for Your Science: Scientific Writing for the Biomedical Sciences
- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2AA3
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 2P03 - Physical Chemistry Tools for Chemical Biology
- CHEMBIO 3OA3 - Organic Mechanistic Tools for Chemical Biology
- MOLBIOL 3O03 - Microbial Genetics

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

Level I: 30 Units

30 units

- Completed prior to admission to the program

Level II: 30 Units

30 units

- Completion of Level II Honours Biochemistry

Level III: 30 Units

3 units

- BIOCHEM 3D03 - Metabolism and Regulation

3-6 units from

- BIOCHEM 3A03 - Biochemical Research Practice
- BIOCHEM 3LA3 - Advanced Biochemistry Techniques
- BIOCHEM 3R06 A/B S - Research Project

12 units from

- the *Biochemistry Course List* (See *Program Note 4* above.)

3 units
· STATS 2B03 - Statistical Methods for Science
6-9 units
· Electives
Level IV: 30 Units
3 units
· BIOCHEM 4E03 - Gene Regulation in Stem Cells and Development
9 units from
· the *Biochemistry Course List* (See *Program Note 4* above.)
12-15 units from
· Levels III, IV Biochemistry, Biology, Chemical Biology, Chemistry, Molecular Biology courses
· HTHSCI 3I03 - Introductory Immunology
· HTHSCI 3K03 - Introductory Virology
· HTHSCI 4II3 - Advanced Concepts in Immunology
· HTHSCI 4O03 - Principles of Virus Pathogenesis
which must include one of:
· BIOCHEM 4F09 A/B - Senior Thesis
· BIOCHEM 4T15 A/B - Senior Thesis
· BIOCHEM 4Z03 - Senior Project
(See *Program Note 2* above.)
3-6 units
- **Electives**

Requirements For Students Who Entered Prior to September 2020
120 units total (Levels I to IV), of which no more than 48 units may be Level I

Level I: 30 Units
30 units
· Completed prior to admission to the program
Level II: 30 Units
12 units
· BIOCHEM 2B03 - Nucleic Acid Structure and Function
· BIOCHEM 2BB3 - Protein Structure and Enzyme Function
· BIOCHEM 2L06 A/B - Inquiry in Biochemical Techniques
3 units
· BIOLOGY 2C03 - Genetics
3 units from
· the *Biochemistry Course List* (See *Program Note 4* above.)
6 units
· CHEM 2OA3 - Organic Chemistry I
· CHEM 2OB3 - Organic Chemistry II
6 units
· Electives
Level III: 30 Units
3 units
· BIOCHEM 3D03 - Metabolism and Regulation
3-6 units from
· BIOCHEM 3A03 - Biochemical Research Practice
· BIOCHEM 3LA3 - Advanced Biochemistry Techniques
· BIOCHEM 3R06 A/B S - Research Project
15 units from
· the *Biochemistry Course List* (See *Program Note 4* above.)
3 units
· STATS 2B03 - Statistical Methods for Science
3-6 units
· Electives

Level IV: 30 Units
3 units
· BIOCHEM 4E03 - Gene Regulation in Stem Cells and Development
9 units from
· the *Biochemistry Course List* (See *Program Note 4* above.)
12-15 units from
· Levels III, IV Biochemistry, Biology, Chemical Biology, Chemistry, Molecular Biology courses
· HTHSCI 3I03 - Introductory Immunology
· HTHSCI 3K03 - Introductory Virology
· HTHSCI 4II3 - Advanced Concepts in Immunology
· HTHSCI 4O03 - Principles of Virus Pathogenesis
which must include one of:
- BIOCHEM 4F09 A/B - Senior Thesis
· BIOCHEM 4T15 A/B - Senior Thesis
· BIOCHEM 4Z03 - Senior Project
(See *Program Note 2* above.)
3-6 units
· **Electives**

Justification 1.1 & 1.2: Alerting students interested in Honours Biochemistry – Biomedical Research Specialization to a mandatory supplementary application.

McMaster University

Faculty of Engineering By-laws

I THE FACULTY OF ENGINEERING

(i) Membership

(a) Ex Officio:

President
Provost
Vice-President (Research and Innovation)
~~and~~ Vice-President (International Affairs)
Vice-Provost and Dean of Graduate Studies ~~or delegate~~
Dean of the Faculty (Chair)
Associate Deans of the Faculty
Assistant Dean (Studies)
~~Director, Experiential Learning~~
~~co~~ ~~Director, Integrated Biomedical Engineering and Health Sciences Program~~
Director, Engineering and Management Program (when held by the Business Faculty)
~~Director, Engineering and Society Program~~
~~co Director, School of Biomedical Engineering~~
~~Director, School of Computational Science and Engineering~~
~~Director, Walter G. Booth School of Engineering Practice and Technology~~
~~Directors of Senate-approved Offices, Centres and Institutes in which Engineering is involved (see Schedule A)~~
~~Chairs of the Departments of Chemistry and Chemical Biology, Mathematics and Statistics, and Physics and Astronomy~~
Director, Finance and Administration
Director, Outreach and Engagement

(b) Faculty:

All faculty members holding appointment at the rank of Lecturer or higher in the Departments of Chemical Engineering, Civil Engineering, Computing and Software, Electrical and Computer Engineering, Engineering Physics, Materials Science and Engineering and Mechanical Engineering, as well as in the Walter G. Booth School of Engineering Practice and Technology, and in such other Departments, schools and

Commented [TM1]: The inclusion of so many directors is not consistent with other Faculty committees around campus and seems unjustified when the Chairs themselves are not listed. These are all faculty members of the Faculty and are eligible to attend and vote under (b)

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Commented [CA7]: Remove??

Commented [CA8]: Updated name of the department

Commented [CA9]: Consider if these department chairs should remain as ex-officio members. If so, should other chairs be added from FHS and Business, or should the elected Faculty Representatives replace these roles.
"One full-time faculty member from each of the Faculties of Business, Health Sciences, Humanities, Science, and Social Sciences as elected by their respective faculty members."

Commented [CA10]: Remove

		programs as may be added to the Faculty of Engineering by the Senate
		One full-time faculty member from each of the other Faculties
(c)	Staff:	Three full-time staff members in the Faculty of Engineering, elected for two-year terms, one to be elected by and from each of the following groups: Professional/Management, Technical, and Clerical/Secretarial
(d)	Students:	The President of the McMaster Engineering Society and four undergraduate students, elected annually by and from the full-time undergraduate students in the Faculty of Engineering The president of the Engineering Graduate Society and two graduate students selected annually by and from the students sitting on the Engineering Graduate Society Council. Students may be asked to withdraw when the cases of specific students are under consideration, but on other matters they shall have full voting privileges.
(e)	Secretary: (non-voting)	Secretary of the Senate or delegate
(f)	Affiliated full-time Members: (non-voting)	Such other faculty members, holding appointments, as shall from time to time be designated by the Faculty of Engineering to hold membership, for any period designated by the Faculty, by virtue of their responsibilities for, or interest in, the work and the students of the Faculty.

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(ii) Regular Meetings

(a) The Faculty shall meet at least five times during the period September to June, inclusive. A notice of meeting shall normally be circulated at least one week before a meeting, and an agenda shall be circulated not less than forty-eight hours before a meeting.

(b) Meetings of the Faculty shall be conducted in accordance with the rules and procedures of the Senate with the provision that matters related to individual cases or records be dealt with in Closed Session.

(c) A quorum shall consist of those present at the meeting, provided that the meeting has been properly called and that regrets have not been received by the Secretary from more than one half of the members of the Faculty. However, for action on items not on the circulated agenda, a quorum shall consist of one half of the members of the Faculty.

(d) In the absence of the Dean of the Faculty, the Chair shall be one of the Associate Deans of the Faculty or, in their absence, a member of the Faculty designated by the Dean.

(iii) Special Meetings

Special meetings may be called, under the same conditions of notice and agenda, at the request of the Dean of the Faculty or upon the submission of a written request to the Dean by ten or more voting members of the Faculty.

(iv) Authority of the Faculty

(a) The Faculty shall, within its area of jurisdiction and subject to the constraints imposed by these By-laws, determine the various levels of responsibility within the Faculty and establish appropriate Standing and *Ad Hoc* Committees.

(b) Under the authority of these By-laws, which are subject to approval and amendment by the Senate, the Faculty shall determine the functions and powers that may be delegated to subordinated bodies.

II DEAN'S COUNCIL

Functions:

To deal with such matters as may be referred to it by the Dean of the Faculty or by the Faculty; to act on behalf of the Faculty in the period between the last regular Faculty meeting of one academic year and the first regular Faculty meeting of the succeeding academic year, submitting a written report to the Faculty at that latter meeting on all actions taken; to advise the Dean on matters of concern; to make recommendations to the Faculty on any appropriate matter.

To do short-term and long-term planning for the Faculty; to establish the objectives and priorities of the Faculty within the context of a comprehensive Faculty plan and in consultation with the individual Departments in the Faculty and its programs and schools; to be responsible for the planning of the Faculty's physical facilities and services.

To act as a nominating committee, as set out in Sections V (i) and V (ii) below.

Composition:

Chair:	Dean of the Faculty
Ex Officio:	President Provost Associate Deans of the Faculty Assistant Dean (Studies) Any Engineering faculty member(s) elected to the University Planning Committee Director, Experiential Learning co-Director (Engineering), Integrated Biomedical Engineering and Health Sciences Director, Engineering and Management Program Director, Engineering and Society Program co-Director, School of Biomedical Engineering Director, Walter G. Booth School of Engineering Practice and Technology Chairs of Departments in the Faculty Director, Finance and Administration Director, Outreach and Engagement
Secretary: (non-voting)	Secretary of the Senate or delegate

Commented [CA12]: Replaces the role of Director, Engineering I

Commented [CA14]: Updated name of School

III DEAN'S OPERATING COMMITTEES

The Dean of the Faculty may appoint Dean's Operating Committees for assistance and advice in the operation of the Faculty, or as requested by the Faculty, and the Faculty shall be informed regarding the function and the composition of any such committees. Such committees shall report, at least annually, to the Faculty.

All such committees shall annually review and update their operating procedures and file a copy in the Office of the Dean.

(i) Engineering and Management Operating Committee

Functions:

To develop curriculum recommendations for the Engineering and Management program to the Undergraduate and Curriculum Policy of the Faculty of Engineering, and the Faculty of Business where appropriate.

To work closely with the Engineering and Management Industrial Advisory Council by seeking advice on the continuing development of the Engineering and Management program and career development component of the program.

Composition:

Chair: Director, Engineering and Management Program

Ex Officio: President
Provost
Dean, Faculty of Business
Dean, Faculty of Engineering
Associate Dean (Academic), Faculty of Business
Associate Dean (Academic), Faculty of Engineering

Faculty: Seven faculty members from each of the Faculties of Business and Engineering, representing the different Departments and Areas, to be appointed by their respective Deans on the recommendations of their Department or Area Chairs, for staggered three-year terms

Students: One undergraduate student, registered in the Engineering and Management program, to be appointed by both Deans on the recommendation of the executives of the McMaster Engineering and Management Society, for a one-year term

Consultants: Assistant Dean (Studies), Faculty of Engineering
(non-voting) Manager, Academic Programs Office, at the Faculty of Business
Resource Staff, as appropriate

Secretary: Administrative Coordinator, Engineering Five-Year Programs (non-voting)

(ii) Engineering and Society Operating Committee

Functions:

To consider and make recommendations regarding the operation of the Engineering and Society program. This includes developing curriculum recommendations for the Undergraduate and Curriculum Policy Committee of the Faculty of Engineering.

Composition:

Chair:	Director, Engineering and Society Program
Ex Officio:	President Provost Dean, Faculty of Engineering Associate Dean (Academic), Faculty of Engineering
Faculty:	One faculty member representative from each department in the Faculty, appointed by the Dean in consultation with Dean's Council
Students:	One undergraduate student, registered in the Engineering and Society program, to be appointed by the Dean on the recommendation of the executives of the Engineering and Society Student Association, for a one-year term
Consultants: (non-voting)	Assistant Dean (Studies), Faculty of Engineering
Secretary: (non-voting)	Administrative Coordinator, Engineering Five-Year Programs

(iii) Engineering I Operating Committee

Commented [CA15]: Engineering I Operating Committee was added to the By-laws

Function:

To consider and make recommendations regarding the operation of Engineering 1 (Canadian Engineering Accreditation Board Accreditation, Graduate Attribute reporting, student success, student success, students at risk of failure and opportunities for change and improvement).

Composition:

Chair: Director, Experiential Learning

Ex Officio: President
Provost
Dean of the Faculty
Associate Dean (Academic)
Assistant Dean (Studies)

Faculty: One faculty member representative from each department in the Faculty, appointed by the Dean in consultation with Dean's Council

Student: President, McMaster Engineering Society
Vice-President, Academic, McMaster Engineering Society
One Engineering I student appointed annually by the Director

Consultants: Undergraduate Student Advisor
(non-voting) Representative from other Faculties or groups appointed by the Chair, as required

(iv) Engineering Co-op Operating Committee

Functions:

To consider and make recommendations regarding the operation of all Faculty of Engineering Co-op programs.

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Composition:

Chair: Associate Dean (Academic)
Associate Dean of Graduate Studies (Engineering)

Ex Officio: President
Provost
Dean of the Faculty
Manager, Engineering Co-op & Career Services
President, McMaster Engineering Society
President, Engineering Graduate Society

Members: One faculty member per Department with one-year terms nominated by Departmental Chairs
Six undergraduate student representatives from the McMaster Engineering Society Executive Committee

Three graduate student representatives from the Engineering Graduate Society Executive Committee

IV STANDING COMMITTEES

General

The President, the Provost, and the Dean of the Faculty are *ex officio* members of all Standing Committees, except that the President and Provost are not ex *officio* members of the Tenure and Promotion Committee.

The Standing Committees listed below, and such other committees as the Faculty or the Dean's Council may establish, shall meet at the call of the Chair. With respect to the Committees that hear certain student appeals and cases of alleged academic dishonesty, the Senate policies governing such hearings shall prevail. Student members of committees may be asked to withdraw when cases of specific students are under consideration.

Unless otherwise specified, a quorum shall consist of one half of the voting committee members.

Any of the Standing Committees may establish sub-committees. The Chairs of any such sub-committees shall be appointed by the Committee, normally from among its members.

All Standing Committees shall annually review and update their operating procedures, and file a copy in the Office of the Dean.

All Standing Committees shall report to the Faculty at least annually.

(i) Undergraduate Recruiting and Admissions Committee

Functions:

1. To make recommendations for the Faculty on admission of applicants to Level I; to make recommendations to the Faculty on undergraduate admissions policy;

2. To plan, for approval by the Faculty, the secondary school student liaison and recruitment activities; to assist in the organization of, and to attend, Faculty-approved events (e.g. Experience Weekend, Discovery Days, design competitions, Open House, Science and Engineering Fairs, etc.) for recruiting of students.

Composition:

Chair:	Associate Dean, Academic
Ex Officio:	President Provost Dean of the Faculty Assistant Dean (Studies) Director, Experiential Learning co-Director (Engineering), Integrated Biomedical Engineering and Health Sciences Director, Engineering and Management Program Director, Engineering and Society Program Manager, Engineering Co-Op and Career Services and Internship Program Registrar
Faculty:	One member selected by and from each Department in the Faculty One member selected by and from the Walter G. Booth School of Engineering Practice and Technology
Student:	President, McMaster Engineering Society (MES) (or delegate) One undergraduate student appointed annually by the Dean
Consultants: (non-voting)	Director, Finance and Administration Director, Alumni Advancement (or delegate) Manager, Strategic Recruitment & Enrolment Representatives of other Faculties and groups as required High School Teacher/Counsellor, appointed by the Dean of the Faculty (as required)
Secretary: (non-voting)	To be provided by the Office of the Associate Dean (Academic) of the Faculty

(ii) Undergraduate Reviewing Committee

Functions:

To review, at the end of an academic session, the grades of all students registered in undergraduate programs in the Faculty of Engineering; to make recommendations to the Faculty concerning the status of in-course students; and to recommend to the Faculty candidates for undergraduate degrees.

Composition:

Chair:	Associate Dean (Academic)
Ex Officio:	President Provost Dean of the Faculty Assistant Dean (Studies) Director, Experiential Learning co-Director (Engineering), Integrated Biomedical Engineering and Health Sciences Program Director, Engineering and Management Program Director, Engineering and Society Program Registrar
Faculty:	One member selected by and from each Department in the Faculty One member selected by and from the Walter G. Booth School of Engineering Practice and Technology
Consultants: (non-voting)	Associate Registrar (Records and Registration) Faculty of Engineering Undergraduate Student Advisor

(iii) Undergraduate Curriculum and Policy Committee

Functions:

To make recommendations to the Faculty on all matters of curriculum policy, including consideration of the requirements of the Canadian Engineering Accreditation Board; to make recommendations on curriculum changes to the Faculty, arising from the consideration of Departmental proposals and from the curriculum policies adopted by the Faculty; to report to the Faculty on the curricula of programmes in the Faculty; to ensure that the undergraduate calendar contains up-to-date programme curricula; to consider and make recommendations to the Faculty concerning course evaluation procedures, and to review the effectiveness of such evaluations.

Composition:

Chair:	Associate Dean (Academic)
Ex Officio:	President Provost Dean of the Faculty Assistant Dean (Studies) Director, Experiential Learning co-Director (Engineering), Integrated Biomedical Engineering and Health Sciences Program Director, Engineering and Management Program Director, Engineering and Society Program
Faculty:	One member selected by and from each Department in the Faculty, such member normally to be the Chair of the Departmental Undergraduate Curriculum Committee or equivalent Two members selected by and from the Walter G. Booth School of Engineering Practice and Technology, one to represent the four-year programs, one to represent the degree completion programs
Student:	One undergraduate student appointed annually by the Dean of the Faculty
Consultants: (non-voting)	The member of Undergraduate Council elected by the Faculty
Secretary: (non-voting)	To be provided by the Office of the Associate Dean (Academic) of the Faculty

(iv) Undergraduate Student Awards Committee

Functions:

To make recommendations to the Undergraduate Council for the award of prizes and scholarships restricted to undergraduate students in the Faculty of Engineering; to prepare information for the use of committees responsible for university-wide awards such as the Chancellor's Gold Medal and the Governor General's Medal; to make recommendations to the Undergraduate Council concerning the establishment of new awards and other related matters; to rank the applicants for other competitive awards; and to initiate and coordinate Faculty-sponsored events which recognize academic excellence.

Composition:

Chair:	To be appointed by the Dean of the Faculty in consultation with Dean's Council
Ex Officio:	President Provost Dean of the Faculty Associate Dean (Academic)
Faculty:	Three or more members, representing at least three Departments in the Faculty, appointed by the Dean in consultation with Dean's Council
Consultants: (non-voting)	Director, Student Financial Aid and Scholarships Director, Finance and Administration The Committee shall have power to add additional members, including non-faculty members, where such are needed to meet the requirements attendant on making an award.

(v) Undergraduate Graduate Attributes Committee

Functions:

In accordance with the Washington Accord, all engineering programs accredited by the Canadian Engineering Accreditation Board (CEAB) must demonstrate that the graduates of their programs possess the attributes designated by the CEAB. The functions of this committee are:

To have oversight on the outcomes-based assessment and the resulting continuous improvement processes for all Faculty undergraduate engineering programs accredited by the Canadian Engineering Accreditation Board (CEAB);

To develop, review and modify (as necessary) indicators for each of the graduate attributes specified by the CEAB;

To review and approve curriculum maps and indicator measurement maps for all programs and options;

To review stakeholder engagement reports from all departments;

To review and approve regular reports from all programs on methods of indicator data collection, analyses and conclusions made from programs;

To ensure continuous improvement in programs by making recommendations to the Departments on specific curricular or other program improvements, improvements in the achievement of graduate attributes, and/or improvements in the graduate attributes assessment process itself.

Composition:

Chair: Associate Dean (Academic)

Ex Officio: President
Provost
Dean of the Faculty
Assistant Dean (Studies)
Director, Experiential Learning
co-Director (Engineering), Integrated Biomedical Engineering and Health Sciences Program
Director, Engineering and Management Program
Director, Engineering and Society Program

Faculty: One member selected by and from each Department in the Faculty which offers a Canadian Engineering Accreditation Board (CEAB) accredited engineering program.

Student: One undergraduate student appointed annually by the Dean of the Faculty

Consultants: The member of Undergraduate Council elected by the Faculty
(non-voting)

Secretary: To be provided by the Office of the Associate Dean (Academic)
(non-voting) of the Faculty

(vi) Faculty Awards Committee

Commented [CA16]: Engineering I Operating Committee was added to the By-laws

Functions:

To encourage, develop and promote applications for prestigious awards for Engineering faculty. Awards can be international, national or specific to the University. Such awards include, but are not limited to, the Killam Award, membership in the Royal Society of Canada, membership in the Canadian Academy of Engineers, the NSERC Steacie Award and the 3M Teaching awards. To encourage and develop applications for prestigious awards t alumni and friends of the Faculty. The Committee will work with the Faculty Advancement Officer to ensure that awards recipients are appropriately recognized within the Faculty.

Composition:

Chair: Associate Dean, Research, Innovation and External Relations

Ex Officio: President
Provost
Dean of the Faculty

Members: One faculty member from each academic Department

Secretary/
Consultant: Advancement Officer of the Faculty of Engineering

(vii) Graduate Curriculum and Policy Committee

Functions:

To make recommendations to the Faculty on matters of graduate policy, on curriculum changes arising from consideration of Departmental proposals and from the curriculum policies adopted by the Faculty, and on new Programs and fields of study, arising from Departmental proposals; and to deal with matters referred to it by the Graduate Admissions and Study Committee.

Composition:

Chair: Associate Dean of Graduate Studies (Engineering)

Ex Officio: President
Provost
Dean of the Faculty
Vice-Provost and Dean of Graduate Studies

Faculty: One member selected by and from each Department offering graduate work in the Faculty
One member selected by and from each of the Schools offering graduate programs in the Faculty

Students: One Engineering graduate student from each department and school currently offering graduate work in the Faculty. Students currently sitting on the Engineering Graduate Society Council will represent their department or school on the committee. If no representative is available from the Engineering Graduate Society Council, one will be appointed from the department or school by

the Engineering Graduate Society Council in conjunction with the department or school's administration.

Consultants: The three members of the Graduate Council elected by the Faculty
(non-voting)

Secretary: Secretary of the School of Graduate Studies or delegate
(non-voting)

(viii) Graduate Admissions and Study Committee

Functions:

To rule on the admissibility of applicants to Graduate Programs in the Faculty; to oversee the progress of students in course; to recommend to the Graduate Council, and to report to the Faculty, students to receive graduate degrees; to refer, before taking action, to the Graduate Curriculum and Policy Committee, any matter deemed by either the Associate Vice-President and Dean of Graduate Studies or the Committee to involve matters of precedent or policy; and to consider and make decisions on petitions from graduate students with respect to off-campus or part-time study, extension of time to complete degree requirements, etc.

Composition:

Chair: Associate Dean of Graduate Studies (Engineering)

Ex Officio: President
Provost
Dean of the Faculty
Vice-Provost and Dean of Graduate Studies
Associate Registrar (Graduate Studies)

Faculty: One member selected by and from each Department offering graduate work in the Faculty
One member appointed by the Graduate Council from Departments other than those of the Faculty
One member selected by and from each of the Schools offering graduate work in the Faculty

Consultant: Director, Finance and Administration
(non-voting) Director, Alumni Advancement (or delegate)
Manager, Strategic Recruitment & Enrolment
Graduate Coordinator

Secretary: Secretary of the School of Graduate Studies or delegate
(non-voting)

(ix) Faculty Committee on Scholarships

Functions:

To rank scholarship applicants in compliance with the eligibility criteria and selection instructions of the Tri-Council agencies (NSERC, CIHR and SSHRC) and Ontario Ministry of Training, Colleges and Universities.

Composition:

Chair: Associate Dean of Graduate Studies, Engineering

Ex Officio: President
Provost
Dean of the Faculty

Members: Two faculty members per Department with one-year terms nominated by Departmental Chairs

(x) Student and Professional Affairs Committee

Functions:

To initiate short-term and long-term planning, and to recommend to the Faculty policies and actions regarding: relations among the faculty, students and alumni; improving student engagement; student employment and career development; interactions with industry, governmental bodies, professional organizations, professional societies, and the general public; and professional development and continuing education.

Composition:

Co-Chairs:
President, McMaster Engineering Graduate Society

Ex Officio: President
Provost
Dean of the Faculty
Associate Dean (Academic)
Associate Dean of Graduate Studies (Engineering)
Director, Experiential Learning

Commented [CA17]: Replaces the role of Director, Engineering I

co-Director (Engineering), Integrated Biomedical Engineering and Health Sciences
Director, Engineering and Management Program
Director, Engineering and Society Program
co-Director, School of Biomedical Engineering
Director, Walter G. Booth School of Engineering Practice and Technology
Director, Outreach and Engagement
Director, Finance and Administration

Faculty: Two members from the Faculty selected by the Dean

Students: Six undergraduate students chosen by the McMaster Engineering Society Executive, representing the leadership of student clubs and teams.
Two graduate students, appointed by the Engineering Graduate Society from the students sitting on the Engineering Graduate Society Council.

Consultants: Manager, Strategic Communications
(non-voting) Manager, Engineering Co-Op and Career Services and Internship Program
Manager, Engineering Alumni Office

Quorum: A quorum shall consist of those present at the meeting, provided that that meeting has been properly called and that regrets have not been received from more than one half of the membership of the Committee. However, for action on items not on the circulated agenda, a quorum shall consist of one half of the membership of the Committee.

(xi) Student Academic Accommodation Committee

Functions:

The committee constitutes the Faculty of Engineering's Academic Accommodation Team as described under the 2017 Senate Policy "Academic Accommodation of Students with Disabilities". The committee shall be an informal network of individuals within academic units in the Faculty who have the knowledge and expertise required to inform decisions related to Academic Accommodations. The committee complements the expertise residing centrally in Student Accessibility Services and support the Associate/Assistant Deans in

the consideration of complex and/or retroactive Academic Accommodation decisions and appeals.

Composition:

Co-Chairs: Associate Dean (Academic)
Associate Dean of Graduate Studies (Engineering)

Ex Officio: Assistant Dean (Studies)
Graduate Coordinator

Faculty: Three members from the Faculty, selected by the Dean

Consultants: Director, Student Accessibility Services
Associate Vice-President, Equity and Inclusion
Director, Human Rights and Dispute Resolution

Quorum: A quorum shall consist of those present at the meeting, provided that the meeting was called with at least five days' notice and three voting members of the Committee are in attendance, with at least one of the attending members being a co-chair.

Meetings:

This Committee shall be called together only at certain times of year based on a need to consider complex and/or retroactive Academic Accommodation decisions and appeals.

The agenda items are decided prior to the meeting by the Co-Chairs of the Committee, the Associate Dean (Academic) and the Associate Dean of Graduate Studies (Engineering).

(xii) Microcredentials Committee

Functions:

To make recommendations to the Faculty on matters specifically concerning microcredentials, on the creation and delivery of associated learning activities, on changing approved learning activities, and on approval of co-curricular and external learning activities that will not be recorded on a student's transcript.

Composition:

Chair: To be appointed by the Dean of the Faculty in consultation with Dean's Council

Ex Officio: ~~President~~
~~Provost~~
Dean of the Faculty
~~Associate Deans of the Faculty~~
Dean's representative

Faculty: One member selected by and from each participating department, school, or program ~~Department~~ in the Faculty
~~One member selected by and from the Walter G. Booth School of Engineering Practice and Technology~~

Staff: Director, Finance and Administration
Designated Project Manager (Faculty of Engineering)

~~Student: One undergraduate and graduate student appointed annually by the Dean~~

Consultants: ~~Director, Finance and Administration~~
(non-voting) Associate Deans
Director, Outreach and Engagement
~~Assistant Dean (Studies)~~
~~Graduate Coordinator~~

Secretary: To be provided by the ~~Associate~~ Dean ~~(Academic)~~ of
(non-voting) the Faculty

(xiii) Faculty Joint Health and Safety Committee

Functions:

For all buildings and areas under the control of the Faculty:

to receive information on safety and hazards from the University and other sources, and disseminate it to faculty members, staff and students as needed;

to provide advice to the Dean of the Faculty, Department Chairs, faculty members, staff or students, wherever appropriate, concerning potential hazards;

to assist in formulating policy relating to the safe conduct of undergraduate laboratories and research laboratories, in consultation with teaching assistants, graduate students, and research staff;

to monitor compliance by McMaster University with the spirit and the letter of the Ontario Occupational Health and Safety Act and other relevant legislation,

and to report to the Dean of the Faculty on any departure from the above, for action;

to remind all employees, including teaching assistants, of their rights and responsibilities under the Ontario Occupational Health and Safety Act and other relevant legislation; and,

to represent the Faculty of Engineering legally in all matters of health and safety designated under the Occupational Health and Safety Act.

Composition:

Co-Chairs:	One to be appointed by the Dean of the Faculty One to be selected by and from the elected Committee members
Ex Officio:	President Provost Dean of the Faculty
Members:	One employer-designated member from each Department/Unit One elected committee member from the Health and Safety Committee of each Department/Unit, selected by the elected members of the Department/Unit Additional members as may be appointed by the Co-Chairs, in consultation with the Dean, from other groups which use the facilities of the Faculty of Engineering, as long as the total number of elected members on the Committee comprises at least 50% of the Committee membership
Consultants: (non-voting)	Manager, Environmental and Occupational Health Support Services Safety Specialist, Environmental and Occupational Health Support Services Additional resource persons appointed by the Co-Chairs as required by the legislation
Secretary: (non-voting)	Assigned by Dean's Office

Department/Unit Health and Safety Committees

Functions:

To provide advice to the Department Chair or Unit Director concerning health and safety matters having to do with the safe conduct of undergraduate laboratories and all research activities at the Department/Unit level and to report to the Department Chair or Unit Director on potential hazards; to conduct safety surveys within the Department/Unit in accordance with the Ontario Occupational Health and Safety Act; and to provide representation to the Faculty Joint Health and Safety Committee

Composition:

Co-Chairs:	One person to be appointed by the Department Chair/Unit Director from among the faculty members in that Department/Unit
	One person to be selected by and from the non-supervisory employees
Ex Officio:	President
	Provost
	Dean of the Faculty
Members:	One or more non-supervisory employees to be elected by and from the non-supervisory employees of the Department/Unit, one of whom shall be a non-supervisory technician
	One graduate student to be elected by and from the graduate students in the Department/Unit
	One person to be appointed by the Department Chair or Unit Director from among the employed members of the Department/Unit

(xiv) Tenure and Promotion Committee

Functions:

To receive from Chairs of Departments, and to consider, all recommendations for the granting or withholding of tenure or permanence. For each candidate, the Committee shall recommend to the Senate Committee on Appointments that (a)

tenure or permanence be granted, (b) the appointment be allowed to lapse, (c) the period of the appointment be extended, or (d) no action be taken on the case.

To receive from Chairs of Departments, and to consider, all recommendations for promotion, and to recommend to the Senate Committee on Appointments the granting or withholding of promotion.

Composition:

Chair: Dean of the Faculty

Faculty: Six tenured members of the full-time rank elected from those holding the rank of Professor or Associate Professor. Of these, at least three shall be Professors and at least one shall be an Associate Professor. They shall be elected for staggered three-year terms by the full-time members of the faculty.

Quorum: Faculty Dean and the rest of the Committee save one.

(xv) Engineering and Management Policy Committee

Functions:

To consider and make recommendations regarding the operation of the Engineering and Management Program; to recommend, to the appropriate Faculty committees, policy on admission numbers and major Program changes; and to consider proposals from the Director requiring policy decisions.

Composition:

Chair: Dean of the Faculty of Engineering and Dean of the Faculty of Business, alternately, for two-year terms

Ex Officio: President
Provost
Dean of the Faculty of Business, when not serving as Chair
Dean of the Faculty of Engineering, when not serving as Chair
Director, Engineering and Management Program
Associate Dean of Business (Academic)
Associate Dean (Academic) of Engineering

Secretary: Administrative Coordinator, Engineering Five-Year Programs
(non-voting)

(xvi) Engineering and Society Policy Committee

Functions:

To consider and make recommendations regarding the operation of the Engineering and Society Program; to make recommendations, to the appropriate Faculty committees, on policy changes; and to consider proposals from the Director requiring policy decisions.

Composition:

Chair: Dean of the Faculty

Ex Officio: President
Provost
Director, Engineering and Society Program
Associate Dean (Academic)
One member to be appointed by the Director

V ELECTIONS

(i) Elections of Faculty of Engineering representatives to the Senate, the Graduate Council, and the Undergraduate Council, and to fill vacancies on the Faculty's Standing Committees, shall be held before the end of April each year. The Dean's Council shall prepare sufficient nominations to ensure an election for all such positions. The nominations shall be mailed to all members of the electorate, at their University address, giving members the opportunity to nominate, within a designated period, additional candidates for any vacancy, any such nominations to be supported by five members of the electorate. The elections shall be conducted by the Secretary of the Senate by means of ballots mailed to the University address of each member of the electorate.

(ii) The Dean's Council shall nominate a representative of the Faculty of Engineering, for a three-year renewable term, to each of the other Faculties in which the Faculty of Engineering has representation. Additional nominations may be made by members of the Faculty of Engineering within a designated period, any such nomination to be supported by five members of the Faculty of Engineering. If an election for any of these representatives be necessary, it shall be held concurrently with the election of members of Standing Committees.

(iii) Appointments to all Standing Committees from Departments shall be forwarded by the Department Chairs to the Dean prior to July 1 of each year.

(iv) The electorate shall consist of all faculty members holding the rank of Lecturer and above in Departments in the Faculty of Engineering, except insofar as the electorate

for the Tenure and Promotion Committee is restricted by Senate to full-time faculty members.

(v) All elections shall be conducted in accordance with the single transferable vote procedure.

(vi) In the election of faculty members from the Faculty of Engineering to the Senate, of the three allotted seats, at least one shall be filled by a professor and at least one by an associate or assistant professor.

(vii) The conduct of the election of undergraduate students to the Faculty is the responsibility of the Dean of the Faculty, who will normally delegate the task to the McMaster Engineering Society, in consultation with the Associate Dean (Academic).

(viii) In the election of staff members to the Faculty, of the three allotted seats, one shall be filled for each of the following categories: professional/management, technical and clerical/secretarial. Elections shall be conducted by the Office of the Dean.

(ix) If a position on a standing committee, except for the Tenure and Promotion Committee, becomes vacant, the Faculty Council may fill that position for the remainder of the term. In the case of the Tenure and Promotion Committee, a by-election shall be held to fill the position for the remainder of the term.

(x) All committee memberships shall take effect from July 1, with the exception of the Undergraduate Hearings Committee, for which membership will take effect from September 1.

(xi) The terms of office of Standing Committee members and Chairs shall normally be two years, staggered, unless otherwise specified.

(xii) Elections of the student members to the Graduate Council shall be held before the end of August. The Engineering Graduate Society Council shall provide the student members for the Graduate Council in accordance with the by-laws of the Engineering Graduate Society and the Senate.

VI AMENDMENTS TO THE BY-LAWS

(i) Any amendment to these By-laws shall require the approval of the Senate.

(ii) A recommendation to the Senate for any amendment to any By-law, or for any new By-law, shall be made only after the proposed change in the By-laws has been approved at a meeting of the Faculty. Notice of motion to request such amendment shall be given at a previous meeting of the Faculty, or in writing to all members of the Faculty at least four weeks before the Faculty meeting.

VII IMPLEMENTATION

The date of effect for these By-laws, and any amendments thereto, shall be the date on which they receive the approval of the Senate.

Approved by Senate: June 9, 1982
Amended: May 16, 1984; December 11, 1985; May 11, 1987; June 14, 1989; March 13, 1991; February 12, 1992; February 10, 1993; October 11, 1995; September 11, 1996; Editorial revision July 1, 1998 to reflect new Departmental structure, effective on that date, November 12, 2003; June 13, 2007; June 3, 2009; June 2, 2010; June 3, 2015; October 14, 2015

Faculty of Engineering By-laws: Schedule A

Senate approved Offices, Centres and Institutes in which the Faculty of Engineering is involved:

Centre for Effective Design of Structures (CEDS)
Centre for Emerging Device Technologies (CEDT)
Centre for Research in Micro-and-Nano-Systems
General Motors Centre for Automotive Materials and Corrosion (CAMC)
McMaster Centre for Software Certification (McSCert)
McMaster Centre for Automotive Research and Technology (MacAUTO)
McMaster Institute for Energy Studies (MIES)
McMaster Manufacturing Research Institute (MMRI)
McMaster Steel Research Centre
Project Centre for Biomedical Engineering and Advanced Manufacturing (BEAM)
McMaster Institute for Research on Aging (MIRA)
McMaster Institute for Transportation and Logistics (MITL)
McMaster Nuclear Reactor

Faculty Approved Research Centre
McMaster Centre for Pulp and Paper
Center of Excellence in Protective Equipment and Materials (CEPEM)

Reports to the VPR
Institute for Multi-Hazard Systemic Risk Studies (Interface)
Brockhouse Institute for Materials Research
Canadian Centre for Electron Microscopy (CCEM)

Commented [CA19]: Remove – does not officially exist (as per Sarah N. Feb 17/21

Commented [CA20]: will be going for Senate approval soon

I THE FACULTY OF ENGINEERING

(i) Membership

(a) Ex Officio:
President
Provost
Vice-President (Research and Innovation)
Vice-President (International Affairs)
Vice-Provost and Dean of Graduate Studies
Dean of the Faculty (Chair)
Associate Deans of the Faculty
Assistant Dean (Studies)
Director, Engineering and Management Program
(when held by the Business Faculty)
Director, Finance and Administration
Director, Outreach and Engagement

(b) Faculty:
All faculty members holding appointment at the rank of Lecturer or higher in the Departments of Chemical Engineering, Civil Engineering, Computing and Software, Electrical and Computer Engineering, Engineering Physics, Materials Science and Engineering and Mechanical Engineering, as well as in the Walter G. Booth School of Engineering Practice and Technology, and in such other Departments, schools and programs as may be added to the Faculty of Engineering by the Senate

One full-time faculty member from each of the other Faculties

(c) Staff:
Three full-time staff members in the Faculty of Engineering, elected for two-year terms, one to be elected by and from each of the following groups: Management, Technical, and Administrative

(d) Students:
The President of the McMaster Engineering Society and four undergraduate students, elected annually by and from the full-time undergraduate students in the Faculty of Engineering

		The president of the Engineering Graduate Society and two graduate students selected annually by and from the students sitting on the Engineering Graduate Society Council. Students may be asked to withdraw when the cases of specific students are under consideration, but on other matters they shall have full voting privileges.
(e)	Secretary: (non-voting)	Secretary of the Senate or delegate
(f)	Affiliated Members: (non-voting)	Such other faculty members, holding full-time appointments, as shall from time to time be designated by the Faculty of Engineering to hold membership, for any period designated by the Faculty, by virtue of their responsibilities for, or interest in, the work and the students of the Faculty.

(ii) Regular Meetings

(a) The Faculty shall meet at least five times during the period September to June, inclusive. A notice of meeting shall normally be circulated at least one week before a meeting, and an agenda shall be circulated not less than forty-eight hours before a meeting.

(b) Meetings of the Faculty shall be conducted in accordance with the rules and procedures of the Senate with the provision that matters related to individual cases or records be dealt with in Closed Session.

(c) A quorum shall consist of those present at the meeting, provided that the meeting has been properly called and that regrets have not been received by the Secretary from more than one half of the members of the Faculty. However, for action on items not on the circulated agenda, a quorum shall consist of one half of the members of the Faculty.

(d) In the absence of the Dean of the Faculty, the Chair shall be one of the Associate Deans of the Faculty or, in their absence, a member of the Faculty designated by the Dean.

(iii) Special Meetings

Special meetings may be called, under the same conditions of notice and agenda, at the request of the Dean of the Faculty or upon the submission of a written request to the Dean by ten or more voting members of the Faculty.

(iv) Authority of the Faculty

(a) The Faculty shall, within its area of jurisdiction and subject to the constraints imposed by these By-laws, determine the various levels of responsibility within the Faculty and establish appropriate Standing and *Ad Hoc* Committees.

(b) Under the authority of these By-laws, which are subject to approval and amendment by the Senate, the Faculty shall determine the functions and powers that may be delegated to subordinated bodies.

II DEAN'S COUNCIL

Functions:

To deal with such matters as may be referred to it by the Dean of the Faculty or by the Faculty; to act on behalf of the Faculty in the period between the last regular Faculty meeting of one academic year and the first regular Faculty meeting of the succeeding academic year, submitting a written report to the Faculty at that latter meeting on all actions taken; to advise the Dean on matters of concern; to make recommendations to the Faculty on any appropriate matter.

To do short-term and long-term planning for the Faculty; to establish the objectives and priorities of the Faculty within the context of a comprehensive Faculty plan and in consultation with the individual Departments in the Faculty and its programs and schools; to be responsible for the planning of the Faculty's physical facilities and services.

To act as a nominating committee, as set out in Sections V (i) and V (ii) below.

Composition:

Chair: Dean of the Faculty

Ex Officio:
- President
- Provost
- Associate Deans of the Faculty
- Assistant Dean (Studies)
- Any Engineering faculty member(s) elected to the University Planning Committee
- Director, Experiential Learning
- co-Director (Engineering), Integrated Biomedical Engineering and Health Sciences Program
- Director, Engineering and Management Program
- Director, Engineering and Society Program
- co-Director, School of Biomedical Engineering
- Director, Walter G. Booth School of Engineering Practice and Technology
- Chairs of Departments in the Faculty
- Director, Finance and Administration
- Director, Outreach and Engagement

Secretary: Secretary of the Senate or delegate
(non-voting)

III DEAN'S OPERATING COMMITTEES

The Dean of the Faculty may appoint Dean's Operating Committees for assistance and advice in the operation of the Faculty, or as requested by the Faculty, and the Faculty shall be informed regarding the function and the composition of any such committees. Such committees shall report, at least annually, to the Faculty.

All such committees shall annually review and update their operating procedures and file a copy in the Office of the Dean.

(i) Engineering and Management Operating Committee

Functions:

To develop curriculum recommendations for the Engineering and Management program to the Undergraduate and Curriculum Policy of the Faculty of Engineering, and the Faculty of Business where appropriate.

To work closely with the Engineering and Management Industrial Advisory Council by seeking advice on the continuing development of the Engineering and Management program and career development component of the program.

Composition:

Chair:	Director, Engineering and Management Program
Ex Officio:	President Provost Dean, Faculty of Business Dean, Faculty of Engineering Associate Dean (Academic), Faculty of Business Associate Dean (Academic), Faculty of Engineering
Faculty:	Seven faculty members from each of the Faculties of Business and Engineering, representing the different Departments and Areas, to be appointed by their respective Deans on the recommendations of their Department or Area Chairs, for staggered three-year terms
Students:	One undergraduate student, registered in the Engineering and Management program, to be appointed by both Deans on the recommendation of the executives of the McMaster Engineering and Management Society, for a one-year term
Consultants: (non-voting)	Assistant Dean (Studies), Faculty of Engineering Manager, Academic Programs Office, at the Faculty of Business Resource Staff, as appropriate

Secretary: (non-voting)	Administrative Coordinator, Engineering Five-Year Programs

(ii) Engineering and Society Operating Committee

Functions:

To consider and make recommendations regarding the operation of the Engineering and Society program. This includes developing curriculum recommendations for the Undergraduate and Curriculum Policy Committee of the Faculty of Engineering.

Composition:

Chair:	Director, Engineering and Society Program
Ex Officio:	President Provost Dean, Faculty of Engineering Associate Dean (Academic), Faculty of Engineering
Faculty:	One faculty member representative from each department in the Faculty, appointed by the Dean in consultation with Dean's Council
Students:	One undergraduate student, registered in the Engineering and Society program, to be appointed by the Dean on the recommendation of the executives of the Engineering and Society Student Association, for a one-year term
Consultants: (non-voting)	Assistant Dean (Studies), Faculty of Engineering
Secretary: (non-voting)	Administrative Coordinator, Engineering Five-Year Programs

(iii) Engineering I Operating Committee

Function:

To consider and make recommendations regarding the operation of Engineering I (Canadian Engineering Accreditation Board Accreditation, Graduate Attribute reporting, student success, student success, students at risk of failure and opportunities for change and improvement)

Composition:

Chair:	Director, Experiential Learning

Ex Officio:	President Provost Dean of the Faculty Associate Dean (Academic) Assistant Dean (Studies)
Faculty:	One faculty member representative from each department in the Faculty, appointed by the Dean in consultation with Dean's Council
Student:	President, McMaster Engineering Society Vice-President, Academic, McMaster Engineering Society One Engineering I student appointed annually by the Director
Consultants: (non-voting)	Undergraduate Student Advisor Representative from other Faculties or groups appointed by the Chair, as required

(iv) Engineering Co-op Operating Committee

Functions:

To consider and make recommendations regarding the operation of all Faculty of Engineering Co-op programs.

Composition:

Chair:	Associate Dean (Academic) Associate Dean of Graduate Studies (Engineering)
Ex Officio:	President Provost Dean of the Faculty Manager, Engineering Co-op & Career Services President, McMaster Engineering Society President, Engineering Graduate Society
Members:	One faculty member per Department with one-year terms nominated by Departmental Chairs Six undergraduate student representatives from the McMaster Engineering Society Executive Committee Three graduate student representatives from the Engineering Graduate Society Executive Committee

IV STANDING COMMITTEES

General

The President, the Provost, and the Dean of the Faculty are *ex officio* members of all Standing Committees, except that the President and Provost are not ex *officio* members of the Tenure and Promotion Committee.

The Standing Committees listed below, and such other committees as the Faculty or the Dean's Council may establish, shall meet at the call of the Chair. With respect to the Committees that hear certain student appeals and cases of alleged academic dishonesty, the Senate policies governing such hearings shall prevail. Student members of committees may be asked to withdraw when cases of specific students are under consideration.

Unless otherwise specified, a quorum shall consist of one half of the voting committee members.

Any of the Standing Committees may establish sub-committees. The Chairs of any such sub-committees shall be appointed by the Committee, normally from among its members.

All Standing Committees shall annually review and update their operating procedures and file a copy in the Office of the Dean.

All Standing Committees shall report to the Faculty at least annually.

(i) Undergraduate Recruiting and Admissions Committee

Functions:

To make recommendations for the Faculty on admission of applicants to Level I and to make recommendations to the Faculty on undergraduate admissions policy.

To plan, for approval by the Faculty, the secondary school student liaison and recruitment activities and assist in the organization of, and to attend, Faculty approved events (e.g. Experience Weekend, Discovery Days, design competitions, Open House, Science and Engineering Fairs, etc.) for recruiting of students.

Composition:

Chair:	Associate Dean, Academic
Ex Officio:	President Provost Dean of the Faculty Assistant Dean (Studies) Director, Experiential Learning co-Director (Engineering), Integrated Biomedical Engineering and Health Sciences Program Director, Engineering and Management Program Director, Engineering and Society Program Manager, Engineering Co-Op and Career Services and Internship Program Registrar
Faculty:	One member selected by and from each Department in the Faculty One member selected by and from the Walter G. Booth School of Engineering Practice and Technology
Student:	President, McMaster Engineering Society (MES) (or delegate) One undergraduate student appointed annually by the Dean
Consultants: (non-voting)	Director, Finance and Administration Director, Alumni Advancement (or delegate) Manager, Strategic Recruitment & Enrolment Representatives of other Faculties and groups as required High School Teacher/Counsellor, appointed by the Dean of the Faculty (as required)
Secretary: (non-voting)	To be provided by the Office of the Associate Dean (Academic) of the Faculty

(ii) Undergraduate Reviewing Committee

Functions:

To review, at the end of an academic session, the grades of all students registered in undergraduate programs in the Faculty of Engineering; to make recommendations to the Faculty concerning the status of in-course students; and to recommend to the Faculty candidates for undergraduate degrees.

Composition:

Chair:	Associate Dean (Academic)
Ex Officio:	President Provost Dean of the Faculty Assistant Dean (Studies) Director, Experiential Learning co-Director (Engineering), Integrated Biomedical Engineering and Health Sciences Program Director, Engineering and Management Program Director, Engineering and Society Program Registrar
Faculty:	One member selected by and from each Department in the Faculty One member selected by and from the Walter G. Booth School of Engineering Practice and Technology
Consultants: (non-voting)	Associate Registrar (Records and Registration) Faculty of Engineering Undergraduate Student Advisor

(iii) Undergraduate Curriculum and Policy Committee

Functions:

To make recommendations to the Faculty on all matters of curriculum policy, including consideration of the requirements of the Canadian Engineering Accreditation Board; to make recommendations on curriculum changes to the Faculty, arising from the consideration of Departmental proposals and from the curriculum policies adopted by the Faculty; to report to the Faculty on the curricula of programmes in the Faculty; to ensure that the undergraduate calendar contains up-to-date programme curricula; to consider and make recommendations to the Faculty concerning course evaluation procedures, and to review the effectiveness of such evaluations.

Composition:

Chair: Associate Dean (Academic)

Ex Officio: President
Provost
Dean of the Faculty
Assistant Dean (Studies)
Director, Experiential Learning
co-Director (Engineering), Integrated Biomedical Engineering and Health Sciences Program
Director, Engineering and Management Program
Director, Engineering and Society Program

Faculty: One member selected by and from each Department in the Faculty, such member normally to be the Chair of the Departmental Undergraduate Curriculum Committee or equivalent
Two members selected by and from the Walter G. Booth School of Engineering Practice and Technology, one to represent the four-year programs, one to represent the degree completion programs

Student: One undergraduate student appointed annually by the Dean of the Faculty

Consultants: (non-voting) The member of Undergraduate Council elected by the Faculty

Secretary: (non-voting) To be provided by the Office of the Associate Dean (Academic) of the Faculty

(iv) Undergraduate Student Awards Committee

Functions:

To make recommendations to the Undergraduate Council for the award of prizes and scholarships restricted to undergraduate students in the Faculty of Engineering; to prepare information for the use of committees responsible for university-wide awards such as the Chancellor's Gold Medal and the Governor General's Medal; to make recommendations to the Undergraduate Council concerning the establishment of new awards and other related matters; to rank the applicants for other competitive awards; and to initiate and coordinate Faculty-sponsored events which recognize academic excellence.

Composition:

Chair:	To be appointed by the Dean of the Faculty in consultation with Dean's Council
Ex Officio:	President Provost Dean of the Faculty Associate Dean (Academic)
Faculty:	Three or more members, representing at least three Departments in the Faculty, appointed by the Dean in consultation with Dean's Council
Consultants: (non-voting)	Director, Student Financial Aid and Scholarships Director, Finance and Administration The Committee shall have power to add additional members, including non-faculty members, where such are needed to meet the requirements attendant on making an award.

(v) Undergraduate Graduate Attributes Committee

Functions:

In accordance with the Washington Accord, all engineering programs accredited by the Canadian Engineering Accreditation Board (CEAB) must demonstrate that the graduates of their programs possess the attributes designated by the CEAB. The functions of this committee are:

To have oversight on the outcomes-based assessment and the resulting continuous improvement processes for all Faculty undergraduate engineering programs accredited by the Canadian Engineering Accreditation Board (CEAB);

To develop, review and modify (as necessary) indicators for each of the graduate attributes specified by the CEAB;

To review and approve curriculum maps and indicator measurement maps for all programs and options;

To review stakeholder engagement reports from all departments;

To review and approve regular reports from all programs on methods of indicator data collection, analyses and conclusions made from programs;

To ensure continuous improvement in programs by making recommendations to the Departments on specific curricular or other program improvements,

improvements in the achievement of graduate attributes, and/or improvements in the graduate attributes' assessment process itself.

Composition:

Chair:	Associate Dean (Academic)
Ex Officio:	President Provost Dean of the Faculty Assistant Dean (Studies) Director, Experiential Learning co-Director (Engineering), Integrated Biomedical Engineering and Health Sciences Program Director, Engineering and Management Program Director, Engineering and Society Program
Faculty:	One member selected by and from each Department in the Faculty which offers a Canadian Engineering Accreditation Board (CEAB) accredited engineering program.
Student:	One undergraduate student appointed annually by the Dean of the Faculty
Consultants: (non-voting)	The member of Undergraduate Council elected by the Faculty
Secretary: (non-voting)	To be provided by the Office of the Associate Dean (Academic) of the Faculty

(vi) Faculty Awards Committee

Functions:

To encourage, develop and promote applications for prestigious awards for Engineering faculty. Awards can be international, national or specific to the University. Such awards include, but are not limited to, the Killam Award, membership in the Royal Society of Canada, membership in the Canadian Academy of Engineers, the NSERC Steacie Award and the 3M Teaching awards. To encourage and develop applications for prestigious awards t alumni and friends of the Faculty. The Committee will work with the Faculty Advancement Officer to ensure that awards recipients are appropriately recognized within the Faculty.

Composition:

Chair:	Associate Dean, Research, Innovation and External Relations

Ex Officio: President
Provost
Dean of the Faculty

Members: One faculty member from each academic Department

Secretary/
Consultant: Advancement Officer of the Faculty of Engineering

(vii) Graduate Curriculum and Policy Committee

Functions:

To make recommendations to the Faculty on matters of graduate policy, on curriculum changes arising from consideration of Departmental proposals and from the curriculum policies adopted by the Faculty, and on new Programs and fields of study, arising from Departmental proposals; and to deal with matters referred to it by the Graduate Admissions and Study Committee.

Composition:

Chair: Associate Dean of Graduate Studies (Engineering)

Ex Officio: President
Provost
Dean of the Faculty
Vice-Provost and Dean of Graduate Studies

Faculty: One member selected by and from each Department offering graduate work in the Faculty
One member selected by and from each of the Schools offering graduate programs in the Faculty

Students: One Engineering graduate student from each department and school currently offering graduate work in the Faculty. Students currently sitting on the Engineering Graduate Society Council will represent their department or school on the committee. If no representative is available from the Engineering Graduate Society Council, one will be appointed from the department or school by the Engineering Graduate Society Council in conjunction with the department or school's administration.

Consultants: The three members of the Graduate Council elected by the Faculty (non-voting)

Secretary: Secretary of the School of Graduate Studies or delegate
(non-voting)

(viii) Graduate Admissions and Study Committee

Functions:

To rule on the admissibility of applicants to Graduate Programs in the Faculty; to oversee the progress of students in course; to recommend to the Graduate Council, and to report to the Faculty, students to receive graduate degrees; to refer, before taking action, to the Graduate Curriculum and Policy Committee, any matter deemed by either the Associate Vice-President and Dean of Graduate Studies or the Committee to involve matters of precedent or policy; and to consider and make decisions on petitions from graduate students with respect to off-campus or part-time study, extension of time to complete degree requirements, etc.

Composition:

Chair: Associate Dean of Graduate Studies (Engineering)

Ex Officio: President
Provost
Dean of the Faculty
Vice-Provost and Dean of Graduate Studies
Associate Registrar (Graduate Studies)

Faculty: One member selected by and from each Department offering graduate work in the Faculty
One member appointed by the Graduate Council from Departments other than those of the Faculty
One member selected by and from each of the Schools offering graduate work in the Faculty

Consultant: Director, Finance and Administration
(non-voting) Director, Alumni Advancement (or delegate)
Manager, Strategic Recruitment & Enrolment
Graduate Coordinator

Secretary: Secretary of the School of Graduate Studies or delegate
(non-voting)

(ix) Faculty Committee on Scholarships

Functions:

To rank scholarship applicants in compliance with the eligibility criteria and selection instructions of the Tri-Council agencies (NSERC, CIHR and SSHRC) and Ontario Ministry of Training, Colleges and Universities.

Composition:

Chair: Associate Dean of Graduate Studies, Engineering

Ex Officio: President
Provost
Dean of the Faculty

Members: Two faculty members per Department with one-year terms nominated by Departmental Chairs

(x) Student and Professional Affairs Committee

Functions:

To initiate short-term and long-term planning, and to recommend to the Faculty policies and actions regarding: relations among the faculty, students and alumni; improving student engagement; student employment and career development; interactions with industry, governmental bodies, professional organizations, professional societies, and the general public; and professional development and continuing education.

Composition:

Co-Chairs: President, McMaster Engineering Society
President, McMaster Engineering Graduate Society

Ex Officio: President
Provost
Dean of the Faculty
Associate Dean (Academic)
Associate Dean of Graduate Studies (Engineering)
Director, Experiential Learning
co-Director (Engineering), Integrated Biomedical Engineering and Health Sciences Program
Director, Engineering and Management Program
Director, Engineering and Society Program
co-Director, School of Biomedical Engineering

Director, Walter G. Booth School of Engineering Practice and Technology
Director, Outreach and Engagement
Director, Finance and Administration

Faculty: Two members from the Faculty selected by the Dean

Students: Six undergraduate students chosen by the McMaster Engineering Society Executive, representing the leadership of student clubs and teams.
Two graduate students, appointed by the Engineering Graduate Society from the students sitting on the Engineering Graduate Society Council.

Consultants: (non-voting) Manager, Strategic Communications
Manager, Engineering Co-Op and Career Services and Internship Program
Manager, Engineering Alumni Office

Quorum: A quorum shall consist of those present at the meeting, provided that that meeting has been properly called and that regrets have not been received from more than one half of the membership of the Committee. However, for action on items not on the circulated agenda, a quorum shall consist of one half of the membership of the Committee.

(xi) Student Academic Accommodation Committee

Functions:

The committee constitutes the Faculty of Engineering's Academic Accommodation Team as described under the 2017 Senate Policy "Academic Accommodation of Students with Disabilities". The committee shall be an informal network of individuals within academic units in the Faculty who have the knowledge and expertise required to inform decisions related to Academic Accommodations. The committee complements the expertise residing centrally in Student Accessibility Services and support the Associate/Assistant Deans in the consideration of complex and/or retroactive Academic Accommodation decisions and appeals.

Composition:

Co-Chairs: Associate Dean (Academic)
Associate Dean of Graduate Studies (Engineering)

Ex Officio: Assistant Dean (Studies)

Graduate Coordinator

Faculty: Three members from the Faculty, selected by the Dean

Consultants: Director, Student Accessibility Services
Associate Vice-President, Equity and Inclusion
Director, Human Rights and Dispute Resolution

Quorum: A quorum shall consist of those present at the meeting, provided that the meeting was called with at least five days' notice and three voting members of the Committee are in attendance, with at least one of the attending members being a co-chair.

Meetings: This Committee shall be called together only at certain times of year based on a need to consider complex and/or retroactive Academic Accommodation decisions and appeals.

The agenda items are decided prior to the meeting by the Co-Chairs of the Committee, the Associate Dean (Academic) and the Associate Dean of Graduate Studies (Engineering).

(xii) Microcredentials Committee

Functions:

To make recommendations to the Faculty on matters specifically concerning microcredentials, on the creation and delivery of associated learning activities, on changing approved learning activities, and on approval of co-curricular and external learning activities that will not be recorded on a student's transcript.

Composition:

Chair: To be appointed by the Dean of the Faculty in consultation with Dean's Council

Ex Officio: Dean of the Faculty
Dean's representative

Faculty: One member selected by and from each participating department, school, or program in the Faculty

Staff: Director, Finance and Administration
Designated Project Manager (Faculty of Engineering)

Consultants: (non-voting) Associate Deans
Director, Outreach and Engagement

Secretary: To be provided by the Dean of the Faculty
(non-voting)

(xiii) Faculty Joint Health and Safety Committee

Functions:

For all buildings and areas under the control of the Faculty:

to receive information on safety and hazards from the University and other sources, and disseminate it to faculty members, staff and students as needed;

to provide advice to the Dean of the Faculty, Department Chairs, faculty members, staff or students, wherever appropriate, concerning potential hazards;

to assist in formulating policy relating to the safe conduct of undergraduate laboratories and research laboratories, in consultation with teaching assistants, graduate students, and research staff;

to monitor compliance by McMaster University with the spirit and the letter of the Ontario Occupational Health and Safety Act and other relevant legislation, and to report to the Dean of the Faculty on any departure from the above, for action;

to remind all employees, including teaching assistants, of their rights and responsibilities under the Ontario Occupational Health and Safety Act and other relevant legislation; and,

to represent the Faculty of Engineering legally in all matters of health and safety designated under the Occupational Health and Safety Act.

Composition:

Co-Chairs: One to be appointed by the Dean of the Faculty
One to be selected by and from the elected Committee members

Ex Officio: President
Provost
Dean of the Faculty

Members: One employer-designated member from each Department/Unit

One elected committee member from the Health and Safety Committee of each Department/Unit, selected by the elected members of the Department/Unit

Additional members as may be appointed by the Co-Chairs, in consultation with the Dean, from other groups which use the facilities of the Faculty of Engineering, as long as the total number of elected members on the Committee comprises at least 50% of the Committee membership

Consultants: (non-voting)
Manager, Environmental and Occupational Health Support Services
Safety Specialist, Environmental and Occupational Health Support Services
Additional resource persons appointed by the Co-Chairs as required by the legislation

Secretary: (non-voting)
Assigned by Dean's Office

Department/Unit Health and Safety Committees

Functions:

To provide advice to the Department Chair or Unit Director concerning health and safety matters having to do with the safe conduct of undergraduate laboratories and all research activities at the Department/Unit level and to report to the Department Chair or Unit Director on potential hazards; to conduct safety surveys within the Department/Unit in accordance with the Ontario Occupational Health and Safety Act; and to provide representation to the Faculty Joint Health and Safety Committee

Composition:

Co-Chairs:
One person to be appointed by the Department Chair/Unit Director from among the faculty members in that Department/Unit
One person to be selected by and from the non-supervisory employees

Ex Officio:
President
Provost
Dean of the Faculty

Members:
One or more non-supervisory employees to be elected by and from the non-supervisory employees of the Department/Unit, one of whom shall be a non-supervisory technician
One graduate student to be elected by and from the graduate students in the Department/Unit

One person to be appointed by the Department Chair or Unit Director from among the employed members of the Department/Unit

(xiv) Tenure and Promotion Committee

Functions:

To receive from Chairs of Departments, and to consider, all recommendations for the granting or withholding of tenure or permanence. For each candidate, the Committee shall recommend to the Senate Committee on Appointments that (a) tenure or permanence be granted, (b) the appointment be allowed to lapse, (c) the period of the appointment be extended, or (d) no action be taken on the case.

To receive from Chairs of Departments, and to consider, all recommendations for promotion, and to recommend to the Senate Committee on Appointments the granting or withholding of promotion.

Composition:

Chair: Dean of the Faculty

Faculty: Six tenured members of the full-time rank elected from those holding the rank of Professor or Associate Professor. Of these, at least three shall be Professors and at least one shall be an Associate Professor. They shall be elected for staggered three-year terms by the full-time members of the faculty.

Quorum: Faculty Dean and the rest of the Committee save one.

(xv) Engineering and Management Policy Committee

Functions:

To consider and make recommendations regarding the operation of the Engineering and Management Program; to recommend, to the appropriate Faculty committees, policy on admission numbers and major Program changes; and to consider proposals from the Director requiring policy decisions.

Composition:

Chair: Dean of the Faculty of Engineering and Dean of the Faculty of Business, alternately, for two-year terms

Ex Officio: President
Provost

Dean of the Faculty of Business, when not serving as Chair
Dean of the Faculty of Engineering, when not serving as Chair
Director, Engineering and Management Program
Associate Dean of Business (Academic)
Associate Dean (Academic) of Engineering

Secretary: (non-voting) Administrative Coordinator, Engineering Five-Year Programs

(xvi) Engineering and Society Policy Committee

Functions:

To consider and make recommendations regarding the operation of the Engineering and Society Program; to make recommendations, to the appropriate Faculty committees, on policy changes; and to consider proposals from the Director requiring policy decisions.

Composition:

Chair: Dean of the Faculty

Ex Officio: President
Provost
Director, Engineering and Society Program
Associate Dean (Academic)
One member to be appointed by the Director

V ELECTIONS

(i) Elections of Faculty of Engineering representatives to the Senate, the Graduate Council, and the Undergraduate Council, and to fill vacancies on the Faculty's Standing Committees, shall be held before the end of April each year. The Dean's Council shall prepare sufficient nominations to ensure an election for all such positions. The nominations shall be mailed to all members of the electorate, at their University address, giving members the opportunity to nominate, within a designated period, additional candidates for any vacancy, any such nominations to be supported by five members of the electorate. The elections shall be conducted by the Secretary of the Senate by means of ballots mailed to the University address of each member of the electorate.

(ii) The Dean's Council shall nominate a representative of the Faculty of Engineering, for a three-year renewable term, to each of the other Faculties in which the Faculty of Engineering has representation. Additional nominations may be made by members of the Faculty of Engineering within a designated period, any such nomination to be supported by five members of the Faculty of Engineering. If an election for any of these representatives be necessary, it shall be held concurrently with the election of members of Standing Committees.

(iii) Appointments to all Standing Committees from Departments shall be forwarded by the Department Chairs to the Dean prior to July 1 of each year.

(iv) The electorate shall consist of all faculty members holding the rank of Lecturer and above in Departments in the Faculty of Engineering, except insofar as the electorate for the Tenure and Promotion Committee is restricted by Senate to full-time faculty members.

(v) All elections shall be conducted in accordance with the single transferable vote procedure.

(vi) In the election of faculty members from the Faculty of Engineering to the Senate, of the three allotted seats, at least one shall be filled by a professor and at least one by an associate or assistant professor.

(vii) The conduct of the election of undergraduate students to the Faculty is the responsibility of the Dean of the Faculty, who will normally delegate the task to the McMaster Engineering Society, in consultation with the Associate Dean (Academic).

(viii) In the election of staff members to the Faculty, of the three allotted seats, one shall be filled for each of the following categories: professional/management, technical and clerical/secretarial. Elections shall be conducted by the Office of the Dean.

(ix) If a position on a standing committee, except for the Tenure and Promotion Committee, becomes vacant, the Faculty Council may fill that position for the remainder of the

term. In the case of the Tenure and Promotion Committee, a by-election shall be held to fill the position for the remainder of the term.

(x) All committee memberships shall take effect from July 1, with the exception of the Undergraduate Hearings Committee, for which membership will take effect from September 1.

(xi) The terms of office of Standing Committee members and Chairs shall normally be two years, staggered, unless otherwise specified.

(xii) Elections of the student members to the Graduate Council shall be held before the end of August. The Engineering Graduate Society Council shall provide the student members for the Graduate Council in accordance with the by-laws of the Engineering Graduate Society and the Senate.

VI AMENDMENTS TO THE BY-LAWS

(i) Any amendment to these By-laws shall require the approval of the Senate.

(ii) A recommendation to the Senate for any amendment to any By-law, or for any new By-law, shall be made only after the proposed change in the By-laws has been approved at a meeting of the Faculty. Notice of motion to request such amendment shall be given at a previous meeting of the Faculty, or in writing to all members of the Faculty at least four weeks before the Faculty meeting.

VII IMPLEMENTATION

The date of effect for these By-laws, and any amendments thereto, shall be the date on which they receive the approval of the Senate.

Approved by Senate: June 9, 1982
Amended: May 16, 1984; December 11, 1985; May 11, 1987; June 14, 1989; March 13, 1991; February 12, 1992; February 10, 1993; October 11, 1995; September 11, 1996; Editorial revision July 1, 1998 to reflect new Departmental structure, effective on that date, November 12, 2003; June 13, 2007; June 3, 2009; June 2, 2010; June 3, 2015; October 14, 2015

Faculty of Engineering By-laws: Schedule A

Senate Approved Offices, Centres and Institutes in which the Faculty of Engineering is involved:

Centre for Effective Design of Structures (CEDS)
Centre for Emerging Device Technologies (CEDT)
Centre of Excellence in Protective Equipment and Materials (CEPEM)
Centre for Research in Micro-and-Nano-Systems
General Motors Centre for Automotive Materials and Corrosion (CAMC)
McMaster Centre for Software Certification (McSCert)
McMaster Institute for Energy Studies (MIES)
McMaster Manufacturing Research Institute (MMRI)
McMaster Steel Research Centre
Project Centre for Biomedical Engineering and Advanced Manufacturing (BEAM)
McMaster Institute for Research on Aging (MIRA)
McMaster Institute for Transportation and Logistics (MITL)
McMaster Nuclear Reactor

Faculty Approved Research Centre
McMaster Centre for Pulp and Paper

Reports to the VPR
Institute for Multi-Hazard Systemic Risk Studies (Interface)
Brockhouse Institute for Materials Research
Canadian Centre for Electron Microscopy (CCEM)

McMaster University

UNIVERSITY SECRETARIAT
- Board of Governors
- Senate

Gilmour Hall, Room 210
1280 Main Street West
Hamilton, Ontario, Canada
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REPORT TO SENATE

FROM THE

UNIVERSITY PLANNING COMMITTEE

1. PROPOSAL FOR THE ESTABLISHMENT OF THE CENTRE FOR EXCELLENCE IN PROTECTIVE EQUIPMENT AND MATERIALS (CEPEM)

At its meeting of April 21, 2021, the University Planning Committee approved the establishment of the CEPEM.

The University Planning Committee now recommends,

that Senate approve the establishment of the Centre for Excellence in Protective Equipment and Materials (CEPEM), as circulated.

2. PROPOSED REVISIONS TO THE GUIDELINES FOR THE GOVERNANCE AND REVIEW OF RESEARCH INSTITUTES, CENTRES, AND GROUPS

At its meeting of April 21, 2021, the University Planning Committee approved the revisions to the Guidelines for the Governance and Review of Research Institutes, Centres and Groups.

The University Planning Committee now recommends,

that Senate approve the revisions to the Guidelines for the Governance and Review of Research Institutes, Centres, and Groups, as circulated.

Senate: FOR APPROVAL
May 12, 2021

McMaster University

Vice-President (Research)

Gilmour Hall, Room 208
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L8S 4L8

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Ext. 27270
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Email: vprsrch@mcmaster.ca
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DATE: April 9, 2021

TO: University Planning Committee

FROM: Dr. Karen Mossman, Vice-President, Research

RE: Centre for Excellence in Protective Equipment and Materials (CEPEM)

==========

The Committee on Research Institutes and Centres has reviewed the attached Proposal for the Centre for Excellence in Protective Equipment and Materials (CEPEM) as per the policies and guidelines, and has been unanimously approved.

Please include this as an agenda item for the next University Planning Committee Meeting on April 21, 2021. Dr. Andy Knights and Dr. Ravi Selveganapathy will be available to attend the University Planning Committee meeting to discuss the proposed Centre in further detail. Please note that the appointment recommendation of Dr. Ravi Selvaganapathy as the inaugural Director of CEPEM is also being submitted to Senate Committees on Appointments for the April 26, 2021 meeting.

KM:jt

Attach.

cc: Provost and Vice-President (Academic)
Vice-Provost and Dean of Graduate Studies
Dean of Engineering
University Secretariat and Freedom of Information and Protection of Privacy Officer

Template for the Establishment of a McMaster Research Institute or Centre

Please provide the following documentation, in keeping with the ***Guidelines for the Governance and Review of Research Institutes, Centres and Groups***

To be recognized as a formal McMaster Centre or Institute, a proposal for consideration must be submitted to the Office of the Vice-President (Research) and approved by the following McMaster Committees and Governing Boards:

1. Committee on Research Centres and Institutes (CRI)
2. University Planning Committee (UPC)
3. Senate
4. Board of Governors (BofG)

The CRI will comprise the following: VPR (as Chair), the Provost (VP Academic), the Dean of Graduate Studies, the University Secretary, and the Faculty Deans relevant to the specific Institute or Centre. The CRI generally takes approximately two to three weeks to review and provide comments.

After CRI approval, the proposal is submitted to the other committees and boards which could take approximately two months to reach BofG for approval. Following proposal approval, paperwork to appoint a Centre/Institute Director should then be submitted following appropriate policies. For a listing of governance meeting dates, please visit: https://secretariat.mcmaster.ca/meetings/meeting-dates/

Proposal Outline/Template

Overview Please complete the "Overview" on page 2 of this document

Proposal Please complete a Proposal under the following headings (more details are provided on page 3):

A. Background
B. Objectives and Proposed Activities
C. Rationale for Establishment of the Research Centre or Institute
D. Criteria for expanding the membership beyond what is shown in the Overview
E. A detailed business plan that includes:
    i. Financial needs
    ii. Anticipated and Secured sources of support
    iii. Space needs
    iv. Human resource needs of the Research Institute or Centre

    The business plan should align with and expand upon that provided in Appendix A: Budget.
F. Organizational Structure - (see examples included in this document)
G. Plans for term review

Appendix A Budget including costs and sources of funds

Additional appendices to be added could include:

- List of current funded research projects
- List of planned grant applications

Proposal for the Establishment of…. an Institute [ ] a Centre [x]

Official Name of Research Institute or Centre CENTRE FOR EXCELLENCE IN PROTECTIVE EQUIPMENT AND MATERIALS (CEPEM)

Submitted by PROF. P. RAVI SELVAGANAPATHY, FACULTY OF ENGINEERING

Core Members *Please define what constitutes a "core member" for this Institute or centre:*
Definition: core members are the leading experts required to oversee each area of research/operations. Since March 2020, this team has been leading and coordinating the activities that CEPEM would be formalizing through this Centre.

Name	Faculty	Expertise
P. RAVI SELVAGANAPATHY Professor, Mechanical and Biomedical Engineering, Tier 1 Canada Research Chair in Biomicrofluidics	ENGINEERING	CENTRE DIRECTOR
ISHWAR K. PURI Dean & Professor, Mechanical Engineering	ENGINEERING	CHAIR, MANAGEMENT (LEADS) TEAM
CHARLES DE LANNOY Assistant Professor, Chemical Engineering	ENGINEERING	SUSTAINABILITY LEAD
ZEINAB HOSSEINIDOUST Assistant Professor, Chemical and Biomedical Engineering	ENGINEERING	STANDARDS LEAD
DAVID LATULIPPE Associate Professor, Chemical Engineering	ENGINEERING	TESTING LEAD
JOHN PRESTON ADR & Professor, Engineering Physics	ENGINEERING	MATERIALS LEAD
RAKESH SAHU Adjunct Assistant Professor, Materials Science and Engineering	ENGINEERING	DESIGN LEAD
MICHAEL THOMPSON AD Graduate & Professor, Chemical Engineering	ENGINEERING	MANUFACTURING LEAD
ALISON FOX-ROBICHAUD Professor, Medicine	FACULTY OF HEALTH SCIENCES	CLINICIAN, MEDICAL LEAD
CATHERINE CLASE Associate Professor, Medicine, Nephrology; Health Research Methods, Evidence, and Impact	FACULTY OF HEALTH SCIENCES	CLINICIAN, MEDICAL LEAD
MYRNA DOLOVICH Professor, Medicine, Division of Respirology	FACULTY OF HEALTH SCIENCES	CLINICIAN, MEDICAL LEAD

Associate Members *Please define what constitutes an "associate member" for this Institute or Centre.*
Definition: *This encompasses the ~20 faculty members that have been engaged in research projects in partnership with the core members. Their research has been foundational to the development of the Centre's activities.*

Name	Faculty	Expertise
SEE APPENDIX 1 – ASSOCIATE MEMBER LIST		

Space Needs	Sq. Ft	New space required?		Yes	x	No	
	1750	Location?	ABB 1ST FL CHEM WING (RM #108)	Confirmed	x	Proposed	
		Space cost allocation covered by lead Faculty?		Yes	x	No	
		If no, specify:					
Plans for Organizational Review		Frequency of Internal:	Once every five years				
		Frequency of External:	Once every five years				

Please provide names below and check box to verify that approval has been obtained from each:		Check box
Department Chair/ Area Director	Marilyn Lightstone, Chair, Dept. Mechanical Engineering	✓
Faculty Dean or Director of Administration	Ishwar K. Puri (Dean), Nancy Balfoort (Director, Administration)	✓
Other (specify)	John Preston (ADR)	✓

A. Background:

- ***What events led to this proposal for a new Centre/Institute?***

The COVID-19 pandemic, which has thrown global supply chains into chaos and jeopardized the reliable sourcing of masks and other personal protective equipment (PPE) needed for frontline health care professionals, long term care workers and the general public, has also brought about a renaissance in Canadian manufacturing of these products. A nascent industry for manufacturing filter materials, masks, gowns, face shields, air purification products and allied products has quickly developed over the past year (2020). Many of the companies in this industry had no prior experience in PPE manufacturing and pivoted to this industry from apparel or automotive manufacturing. A team of researchers (>20) from McMaster quickly responded in March of 2020 to assist these companies and the government in this area by developing design, manufacturing, testing and validation expertise for filter materials, face masks and other PPE. This initiative, funded by the Faculty of Engineering, quickly attracted a large number of companies (<40) and government agencies (e.g. NRC and Ontario Procurement) seeking assistance in various aspects of developing PPE locally. This collaborative effort led to several companies producing millions of PPE with Health Canada approval and eased the PPE supply chain issues in Canada. Our team has become the leading academic group interacting with Canadian companies in this area. During this collaborative effort, our team identified several areas of PPE design, manufacturing, materials, testing and validation that could benefit from research and development (R&D). A new Centre of Excellence for Protective Equipment and Materials (CEPEM) will solidify these initial efforts and enable us to conduct R&D to produce next generation PPE that can benefit all the industry and governmental partners as well as the broader public.

- ***How do those events relate to academic/research priorities?***

From manufacturing to materials, the current PPE industry has not incorporated the latest advancements in technology into its product development and its standards are dated. The scope for technological innovation in this industry is high. We have identified several thematic research areas that could lead to innovation in this industry, which closely align with existing research priorities at McMaster. These include 1) evidence-based design of new PPE; 2) advanced nanotechnology-based manufacturing; 3) incorporation of new functional materials in PPE; 4) new testing and validation methods; 5) evidence-based standards for PPE; and 6) methods for recycling and reuse to minimize environmental damage. As CEPEM, we have assembled a diverse team whose research interests and expertise are aptly suited to contribute to these thematic areas of research. They are already working with several industrial/governmental partners and have applied for and were awarded multiple research grants. The crystallization of these efforts into a Centre of Excellence will further enhance the visibility of the work and position McMaster as a leading university advancing knowledge and producing evidence in this fast-growing area of research and development.

In addition, due to the rapid growth of this industry in Canada, there is a critical shortage of trained personnel within industry and government with expertise in this area. The formation of a Centre will provide the organizational capacity to produce the first graduate level training program in protective equipment and materials in Canada. In addition, it can also serve as a forum for the industry, government and the general public to interact and jointly direct the development of research and technology in this fast-developing sector of the economy.

- ***How will creating this Centre/Institute improve and enhance research that will address these priorities?***
  The formation of a Centre will provide a forum for researchers, industry participants, government officials and NGOs both within and external to McMaster to interact, share expertise, build teams to address larger multi-dimensional research problems, define industry standards, raise issues of long-term impact such as environmental effects of widespread PPE usage and seek wholistic solutions that span disciplinary boundaries. The Centre will also provide a high level of visibility to the research activities on-going at McMaster while attracting industry and governmental partners both from within Canada and internationally to further advance research and development in thematic areas. The organizational structure provided by the Centre will allow us to address research challenges that are multi-disciplinary and beyond the expertise of a small group of collaborating researchers. Finally, the Centre will provide a means to interact with other institutions (both governmental and non-governmental) internationally to share expertise and knowledge.

  The Centre will host the most advanced infrastructure and equipment for research and development of PPE and other protective equipment in Canada. A recent proposal from the CEPEM to Ontario Together funding has been approved and this will facilitate the establishment of the core infrastructure. The infrastructure will provide the researchers affiliated with the Centre access to the equipment to further research in this area. It will also attract companies interested in the development of next generation PPE and enable them to use this infrastructure to collaborate with the members of the Centre and participate in research projects through various research funding mechanisms available at the provincial and federal levels. The Centre will host an annual meeting that will provide a forum for all industry members, governmental representatives, researchers and students to meet, interact and discuss the state of the industry and chart a roadmap for future technological development in this area. Finally, the Centre will also establish collaborations with other such Centres internationally to facilitate student and researcher exchanges in the future.

B. Objectives and Proposed Activities:

i. Objectives

- The main objective of the Centre is to serve as the nucleus of research and development activities in the area of protective materials and equipment in Canada. Sub-objectives include 1) developing a world leading advanced infrastructure and equipment platform for research and development in this area; 2) developing an educational training program for high quality personnel in this fast-emerging area; and 3) bringing together a critical mass of various stakeholders from academia, industry and government to facilitate the rapid development of knowledge, know-how and trained personnel.

- ***Discuss impact on key stakeholders***
  Ours is currently the only team available in Canada that can provide comprehensive research, development, manufacturing, testing and validation assistance to newly established manufacturers of PPE and guide them to create value added products that can provide competitive edge to them in global markets while also serving Canadian needs.

  McMaster rapidly pivoted to support Ontario companies that wanted to help meet Ontario's Personal Protective Equipment (PPE) needs. Since its creation, CEPEM has been assisting >40 companies with R&D in design, manufacture and testing of PPE. We are currently the largest and most comprehensive academic Centre with this capability. Several companies (Niko apparel, Woodbridge, Vitacore, Whitebird) have partnered with us and transitioned to manufacturing PPE, running stable production operations, manufacturing tens of thousands of units per week, helping to meet domestic demand. This collaborative effort led to several companies producing millions of PPE with Health Canada approval and eased the PPE supply chain issues in Canada. Our team has become the leading academic group interacting with Canadian companies in this area. Many companies (RONCO,

Swenco, Big Nano etcetera) are in various stages of development of PPE with our assistance. We are assisting with new meltblown and nanofiber production in Canada which will benefit all manufacturing operations. We also operate a comprehensive testing facility and have assisted companies in optimizing their products and develop their own test facilities. This has led to job creation and retention. Finally, we are developing new standards for PPE which will enable Canada to become a leader in this area.

In addition, CEPEM has served as a forum for researchers from McMaster and other universities to collaborate on research related to protective equipment and materials. Research on PPEs was non-existent at McMaster and the Centre played a significant role in fostering collaborations from a diverse team in this area. The Centre will continue to foster such collaborative work and expand beyond PPEs into other areas of protective materials and equipment.

- ***Potential for collaboration***
  HIGH: CEPEM will be a critical resource for Ontario companies hoping to either pivot or engage in PPE design and manufacture. CEPEM will be unique in Ontario and in Canada and will be a hub for the newly emerging PPE industry. CEPEM's mission is perfectly aligned with the supply chain needs of the Province of Ontario and the entire country. Both the provincial and federal governments have made a conscious decision to in-source the manufacture of critically needed PPE. Since it is a new industry in Canada, manufacturers need considerable support in design, manufacturing and testing of their products. CEPEM is, on a day-to-day basis, consulting with all the major players in the newly emerging industry and assisting them to improve their capabilities and R&D activities. This work will enable manufacturers to produce high quality PPE, ensuring we can in-source production within Canada protecting the province and the country from supply chain shocks in the future. It will also result in new networks for our researchers within industry and government that can lead to myriad other opportunities.

ii. Proposed Activities

- ***Research Projects***
  The activities of CEPEM will be focused on the following thematic areas, all designed based on the needs of our industry and governmental partners:
  1) Design and Development of PPE**:** Existing PPE, such as face masks and face shields, were not specifically designed for medical use and have dated designs that don't incorporate the latest advancement in materials and manufacturing technology. Research at the Centre will focus on design and develop the next generation of PPE that use functional materials and incorporate the needs and requirements of medical professionals, industrial workers or the general public.
  2) Advanced Manufacturing: A significant effort within the Centre will be on the development of new advanced manufacturing processes for meltblown and electrospun materials to produce functional hybrid composites that will enable high performance of protective equipment.
  3) Functional Materials: Currently, the materials used in protective materials are simple polymers such as polypropylene. One of the focus areas is the development of new materials such as polymer blends and additives that can provide additional functional properties such as antimicrobial, antiviral, self cleaning, air purifying, pathogen and chemical sensing, active water and blood repelling, humidity and thermal control.
  4) Testing and validation: A core area within the Centre will be a well-validated and robust testing facility capable of performing assessments on barrier properties (air flow resistance, particulate and bacterial filtration efficiency, quantitative fit testing, aerosol distribution visualization), mechanical integrity (tensile, bulge, adhesion, pull, flexural and fatigue) and materials properties (microscopic structure, pore size, fiber uniformity, composition, leaching, degradation).
  5) Standards: Current standards for PPE are not intended or specifically designed with their medical uses in mind. The Centre will work with national agencies to define Canadian and international standards for testing of PPE.

6) Sustainability: A key long-term focus of the Centre will be the development of PPE using natural polymers such as cellulose and with biodegradable properties that can avoid use of fossil fuels in their manufacture and limit use of petroleum derived materials and contribution to climate change.

Some of the specific projects that the members of the Centre are currently pursuing include:

1) Development of next generation face shields
2) Development of viral filtration standards
3) Evaluation of cloth masks and development of standards
4) Development of universal fitting adapter for respirators
5) Next generation manufacturing for nanofilters
6) Antibacterial and Antiviral nanofilters
7) New anti bacterial and antiviral non-woven materials
8) Air purifying HVAC systems
9) Integration of sensors in PPE
10) Generating evidence for appropriate PPE use in medical settings
11) Generating evidence for appropriate PPE use in public settings

- ***Educational outreach***

  The educational mission of the Centre will be exemplified through the following activities:
  - Workshops, conferences, presentations
  - Industry, faculty guest lectures, seminars, colloquia
  - Supporting Co-op work terms for undergraduate and graduate students
  - Supporting NSERC USRA and Dean's Excellence summer research placements
  - Graduate student training

C. Rationale for Establishment of the Research Centre or Institute:

- ***Why is there a need for this Centre/Institute?***

  The recent COVID pandemic has provided a stark reminder than Canada is excessively dependent on global supply chains that risk becoming fragile or overwhelmed in the event of adverse impacts. There has been a strategic reassessment at both the provincial and the federal level to localize some of the manufacturing relating to protective equipment and this has led to a rapid emergence of new companies both local and international manufacturing this equipment in Canada. This new industry in Canada lacks research and development support as well as high quality trained personnel that are needed to make it world class and to develop new products with advanced technology. The Centre is designed to meet this need and to serve as a nucleus for the fast-emerging industry.

  The Centre has received a $1.2 Million award from the Ontario Together Fund to establish infrastructure to develop research and training program in the area of protective materials. This funding and the associated expertise make CEPEM the leading Centre in Canada and the world devoted to research and training in all aspects of protective equipment and materials.

  Further, a forum or venue where industry, academia, governmental agencies and the public can come together and discuss challenges, opportunities, outlook and vision for this area does not exist in Canada. CEPEM will serve as the hub for interaction and will bring together industrial partners from across the value chain from equipment manufacturers, material manufacturers and suppliers to PPE manufacturers and companies involved in testing and validation. In the future, the CEPEM will assist with the setting up of an industry association, partner with governmental agencies and standards associations to formulate regulations. It will also provide expertise to chart public policy in this area. Finally, CEPEM will be critical in forming international collaborations with similar Centres and institute elsewhere and facilitate international exchange both for graduate students as well as for researchers and faculty members.

- ***Discuss the alignment with McMaster's Strategic Research Plan***

  CEPEM's mandate, to employ advanced manufacturing knowledge and techniques in partnership with government and industry to develop next-generation protective equipment from sustainable materials for the purpose of advancing global health and fostering economic prosperity, directly aligns with the overarching themes of the McMaster Strategic Research Plan and contributes to the advancement of many of its specific core research initiatives. Each of the thematic research areas described in Section B.ii pertain to a specific core initiative within the Plan, for example:

  Advanced Materials and Manufacturing

  Our research program will focus on the design and development of next generation PPE that provide superior performance in filtration and will incorporate functional materials that confer antiviral, antibacterial, air purifying and sensing functions. Advanced manufacturing methods that integrate the new materials in a scalable and cost-effective manner will be developed.

  Equitable, Prosperous and Sustainable Societies

  CEPEM seeks to facilitate innovative knowledge transfer to enable Canadian companies to pivot their operations in response to COVID-19 and future needs. Canadian standards will be developed in collaboration with the National Research Council (NRC) and Canadian Standards Association (CSA), thereby affecting local, provincial and national policy and municipalities' ability to respond to needs and protect their citizens. New approaches for incorporation of environmentally sustainable materials for protective equipment will be developed.

  Understanding and Responding to Infectious Disease, Addressing the Growing Burden of Chronic Disease

  The CEPEM team and partners have deep expertise in various aspects of human health and the research generated by the group has far reaching applications for healthcare practitioners across a variety of sectors. The knowledge generated through the process of identifying and testing new functional materials and their properties for antimicrobial, antiviral, self cleaning, air purifying, pathogen and chemical sensing, active water and blood repelling, humidity and thermal control applications, has far research application for the further study of additional viruses, infectious diseases and other chronic diseases. The design and development of new PPE can also serve to enhance the equipment, tools and devices used by medical practitioners, first responders and patients with a broad range of respiratory and protective needs.

- ***Discuss the expected regional, provincial, national, global impact***

  The funding will assist CEPEM in sustaining and enhancing the number of interactions with local, national and global industries and it will help our industrial partners in developing and optimizing their products so they can get them to market faster. The funding also helps with generating new technology that will increase their competitive edge over products from other jurisdictions.

  Since mid-March, CEPEM has served as a resource for Canadian companies (>40) in validating materials, designs and developing new methods of production of the filter materials to overcome supply chain bottle necks. For example, we have assisted Woodbridge (Level 3 - Health Canada approval obtained), Vitacore (N95 – Health Canada approval obtained) and Niko (Level 1). These and other companies are producing millions of masks per week in Canada. CEPEM accelerated their technology development and adoption process. We are currently assisting manufacturers (RONCO, Swenco, Ontario Die, Aztex, Redwood Classics, Big-nano, Crossover, Stitch-it, Myant, etc) on production and serve as a resource for integrated testing and validation. These will lead to high-paying manufacturing jobs in Ontario. CEPEM has a comprehensive test facility comprising of breathability, particulate filtration efficiency, bacterial filtration efficiency, blood splatter resistance and fit testing. We are creating new tests for mechanical reliability, aerosol distribution, viral filtration and anti-viral resistance. We are developing new technology and providing Ontario companies with intellectual property helping them make superior products and enabling them to compete in the global marketplace. We are assisting the Government of Ontario in testing and validating their supplies of PPE and can also assist other provinces and the federal

government. Our Centre is the only one currently available in Canada that can provide comprehensive research, development, manufacturing, testing and validation assistance to newly established manufacturers of PPE and guide them to create value added products that can provide competitive edge to them in global markets while also serving Canadian needs.

CEPEM will expand beyond McMaster to include members from various universities in Canada who are interested in research and training in the area of protective equipment and materials. Already, we have members from the University of Toronto (see associated members list) and the interest is likely to expand as this sector of the economy grows. We envision forming a national network of interested researchers which will facilitate research funding support from the federal government in this area. Finally, CEPEM will also collaborate in research and participate in exchange programs with similar Centres around the world in various areas of research within protective equipment and materials.

D. Criteria for expanding the membership:

- ***Could other academia, industry and government partners be added to membership at a later date?***
  Yes. As the value proposition of the CEPEM becomes evident, the avenues for alternative funding that will allow the CEPEM to become self-sustaining will increase as will the user base. A key driver for the CEPEM is to sustain and enhance the number of interactions with industry and to help our industrial partners in developing and optimizing their products and get them to market faster. We also anticipate that additional funding will be leveraged to help generate new technology that will increase their competitive edge over products from other jurisdictions. Further, it follows that the expertise of CEPEM membership will necessarily broaden to include members with significant expertise in areas such as health and bioinnovation, advanced manufacturing and materials, business, entrepreneurship and commercialization, and the Canadian and global regulatory frameworks and mechanisms both internal and external to the University and at various levels of government and industry. These partners will also help to bring in additional funding, through grants and fee-for-service contracts.

- ***If so, what are the expectations and criteria for membership?***
  - Faculty members: The main expectation for faculty members who wish to become members is that they hold expertise related to protective equipment and materials in one of the thematic areas of research outlined above. Another expectation is willingness to collaborate with other members of the Centre and to contribute to the Centre's operations through the use of equipment in the Centre (user fees) as well as including operational cost in proposals that they write in the area of protective equipment and materials. Members will also be expected to contribute their expertise to the training program that will be setup in the future.
  - Industry Partners: Industry partners in the area of protective equipment and materials will be made associate members and are expected to participate/support projects (grants, donations as well as contribute to HQP Training (grad students, coop placements) Some of the industry partners will be invited to participate on the industry advisory committee for the Centre to help drive its direction.

E. Detailed business plan:

- **Financial needs:**
  - ***Discuss/explain operating budget and attach Appendix A (Budget template)***

  The capital cost is approximately 1.6 million. 1.2 million has been provided by the Province via the Ontario Together Fund. 0.2 million has been provided by McMaster Engineering and an additional 0.2 million will be sought from the University Research Infrastructure Oversight Board, as CEPEM will function as a core platform at McMaster.

The Centre is expected to have an operating budget of $400,000 annually at steady state. This budget will support a research staff ($100,000/annum) to take care of core equipment in the Centre related to manufacturing and will also serve as the lab manager. It will also support another research staff ($100,000/annum) to take care of the testing and validation equipment and will also serve as the business development manager. The Centre also anticipates a capital equipment and materials budget of $100,000/annum.

- ***What is the amount of funding required?***

This will be raised in several ways. We anticipate that $100,000/annum will be a revenue to the Centre from the user fees from academic projects as well as materials budget from those project that use the equipment in the Centre. Another $70,000/annum will be from user fees of equipment from external users (industry). Finally, we anticipate incorporating $130,000/annum in research staff support in the various proposals that the members will write for research funding involving equipment associated with the Centre. User fee rates will be in line with other core facilities at McMaster, making CEPEM affordable, but allowing the Centre to be sustainable in the long run.

- **Anticipated and secured sources of support:**
  - ***Start-up funds?***
    - During the initial start up phase the Centre will require an injection of $400,000. The faculty of engineering has already contributed $200,000 to the Centre to build the initial testing infrastructure. We will apply for core facility status for the Centre and seek the remaining $200,000 from the central funds that the VP research office has setup to support core facilities. The Ontario Together funding that the Centre has obtained will require a matching contribution of $404,000 from McMaster internal sources which these two contributions together will be able to provide.

      - ***Secured:*** In addition to the start-up funds, members of CEPEM have secured more than $2 million in funding over the past 9 months, for infrastructure support as well as to conduct research:
        - *Ontario Together Fund – CEPEM* – PI: Ravi Selvaganapathy - $1,212,000 - This funding will support the buildup of infrastructure for manufacturing of non-woven materials, functional textiles and smart materials for application in protective equipment.
        - *Department of National Defense - Cold Plasma for Super Sanitizing Indoor Workplace and Sensitive Equipment* – PI: Ravi Selvaganapathy - $200,000 - This funding is to support research and product development for Defense Canada to develop a cold plasma-based treatment that can render many of the contact surfaces to be antibacterial and antiviral.
        - *CIHR- Establishing A Research Platform for Investigating and Optimizing PPE Filtration/Barrier Efficiencies Against Aerosolized Bacteria and Viruses in Clinical Healthcare Settings* – PI: Zeinab Hosseinidoust - $287,000 - this grant is for the development of new test methods to evaluate bacterial and viral filtration properties of masks.
        - *Ontario Together - Effectiveness of Masks in Limiting COVID-19 Transmission* – PI: Benzhong Zhao - $105,000 - This grant is to visualize aerosol distribution in free space and to use it as a tool to determine effectiveness of PPE.
        - *Department of National Defense - RepelWrap: a self-cleaning plastic wrap for keeping sensitive equipment and workplaces pathogen-free* - PI: Leyla Soleymani - $200,000 - This funding is to support development of pathogen-resistant materials for healthcare and other applications.

      - ***Anticipated:***
        - *FedDev: Strengthening Canada's Supply Chain through Technology Adoption to Create Impact Hub (iHub): Centre for Adoption of Digital and Electrified Technologies* (CEPEM funding – $2,200,000): CEPEM is part of a larger ask to FEDDEV from various research groups in McMaster. CEPEM funding request is 1/5th of the total ask.

- *NSERC/OCE:* We are in the process of writing several research proposals with company partners to support the research activities in the Centre.

- **Space needs:**
  - ***Please expand on the detail from the "overview" page, identifying the existing or new space requirements for the Centre or Institute, noting whether the Faculty Dean has approved use of that space for this purpose.***

    CEPEM requires space to house equipment for manufacturing of PPE, its testing, characterization and validation as well as for aerosol visualization.

    CEPEM has been provided with ~1750 sqft of space in the renovated ABB first floor to house the equipment that is currently being purchased through the Ontario Together grant and another 200 sq ft for graduate students. The ABB space will be the main facility which will house all the equipment related to testing and validation. These include equipment for particulate filtration, bacterial filtration, breathability testing, flame testing and mechanical testing. It will also support some of the manufacturing equipment such as the roll to roll electrospinning and the melt electrowriting equipment. It will house a biological safety laboratory that will be capable of handling BSL 2 viruses and bacteria.

    In addition, some equipment will be housed in other areas within the Faculty. Some manufacturing equipment will be located within the polymer processing laboratory in MMRI (JHE 106). This lab is suited for handling high temperature polymers that is required for equipment for melt blowing. In addition, some of the components that are being purchased are add-on equipment to convert the twin screw extruder in MMRI into a melt blowing unit and therefore it will be housed there.

    Finally, the aerosol visualization lab will be housed in ABB tower. This will be 150 sq ft space that will be used to visualize aerosol generation and distribution in open spaces using laser illumination system.

  - ***Identify the plans for the location and coverage of the space costs. Has this been approved by the Faculty Dean?***

    The Faculty of Engineering's Director, Finance and Administration is leading the planning for the required facility to be situated on the first floor of ABB, Chem Wing. The plans have been approved and costs will be covered by the Faculty of Engineering.

- **Human Resource needs:**
  - ***Explain how the day-to-day operations will be managed.***
    - A core team of six along with the Centre manager will facilitate the day-to-day operation and management of the Centre. These include the Centre director (Dr. Ravi Selvaganapathy), Design lead (Dr. Rakesh Sahu), Manufacturing lead (Dr. Michael Thompson), Materials lead (Dr. John Preston), Testing lead (Dr. David Latulippe), Standards lead (Dr. Hosseinidoust) and sustainability lead (Dr. de Lannoy). In addition, the Dean of Engineering (Dr. Puri) will serve as the Chair of the management team.
    - The day-to-day management and maintenance of the equipment will benefit from the established procedures at the MMRI as well as the CEPEM for equipment access, user fees, maintenance of equipment and priority of access to users. Projects related to COVID-19 research will have a reduced rate and top priority for access to the equipment.

  - ***Will there be hiring of employees?***
    - Yes. Two research staff will be hired who will share technical duties as well as managerial ones. One research staff will be assigned to take care of core equipment in the Centre related to manufacturing and will also serve as the Centre (lab) manager. Another research staff will take care of the testing and validation equipment and will also serve as the business development manager.

- ***Use of students?***
    - Graduate and undergraduate students belonging to the research groups of the member faculty will have an opportunity to work on the projects associated with the Centre. Student participation in the Centre's activities will be hands-on; meaning student researchers will be playing a vital role in the operation of the centre in collaboration with faculty and staff. In addition to their own research activities, student researchers will be involved in centre governance, maintenance and identifying new strategic opportunities. Specifically, senior graduate students will be assigned super user roles for specific equipment and will provide training to newer graduate students interested in the use of the equipment. They will also participate in maintaining the equipment as well as in maintaining user logs, SOPs and safety regulations associated with the equipment. Some of the students will be members of the user group that will involved in the continuous improvement process at the Centre designed to increase the effectiveness of equipment usage and suggest any modifications in the processes or procedure that will facilitate that.

- ***Add detail regarding roles of research and administrative personnel***
    - The Centre manager will be in charge of the day-to-day operations of the Centre. Specifically, they will be in charge of the lab access, lab safety, equipment access and billing. In addition, they will also lead the training of graduate students and external users for equipment associated with manufacturing as well as facilitating access to these equipment. They will further be responsible for the maintenance of the equipment and its repair in case the equipment breaks down.
    - Another research staff will lead the training of graduate students and external users for equipment associated with testing and validation as well as facilitating access to these equipment. They will further be responsible for the maintenance of the equipment and its repair in case the equipment breaks down. Further, they will be responsible for interacting with company partners, reaching out to new companies and governmental agencies for partnerships as well as facilitating collaborations with other research Centres internationally.

F. Organizational Structure

If a potential inaugural director is named in the proposal, ensure that appropriate Senate Committee on Appointments (SCA) paperwork and governance approvals are submitted after Centre/Institute approval.

The Engineering ADR Office will facilitate SCA paperwork and establishment as a Core Facility.

Director: P. Ravi Selvaganapathy

An Institute and a Centre is led by its Director, who is normally appointed for a five-year term.

Advisory Committee:

The Director establishes an Advisory Committee (AC) whose purpose is to provide advice to the Director with regard to scientific or scholarly priorities and direction for the Institute or Centre. The AC is chosen by the Director, and is consulted at least every two years, or more frequently at the discretion of the Director.

- **Please list Committee members who have agreed to serve or who will be approached.**

The advisory committee will consist of:

- John Preston (Engineering Physics)
- Representative from National Research Council (NRC)
- Representative from Canadian Standards Association (CSA)
- 2 Representatives from industry (RONCO, Vitacore)

- 2 Representatives from Academia
  - Prof. Orlando Rojas, Dept. Chemistry, University of British Columbia
  - Prof. Cynthia Goh, Dept. Chemistry, University of Toronto

- **Governing Board and Role in Annual Review:**

  For Centres: *Final authority for all matters regarding the direction and operation of the Centre rests with the Dean of the Faculty appropriate to the Centre, or with the VPR for Centres for whom a substantial fraction of their membership is drawn from more than one Faculty. The Dean (or VPR) or designate does not report to Senate, and instead (in the case of the Dean) reports to the VPR for information only. In all other respects its governance structure is that of an Institute which resides principally within a single Faculty. The Centre's GB is normally chaired by the appropriate Dean (or VPR) or designate and is composed of the Chairs (or designates) of the Departments most affected by the success or failure of the Centre. The GB should monitor the activity of Centres every year.*

  The CEPEM Director will provide an annual report to the governing board ahead of the annual review

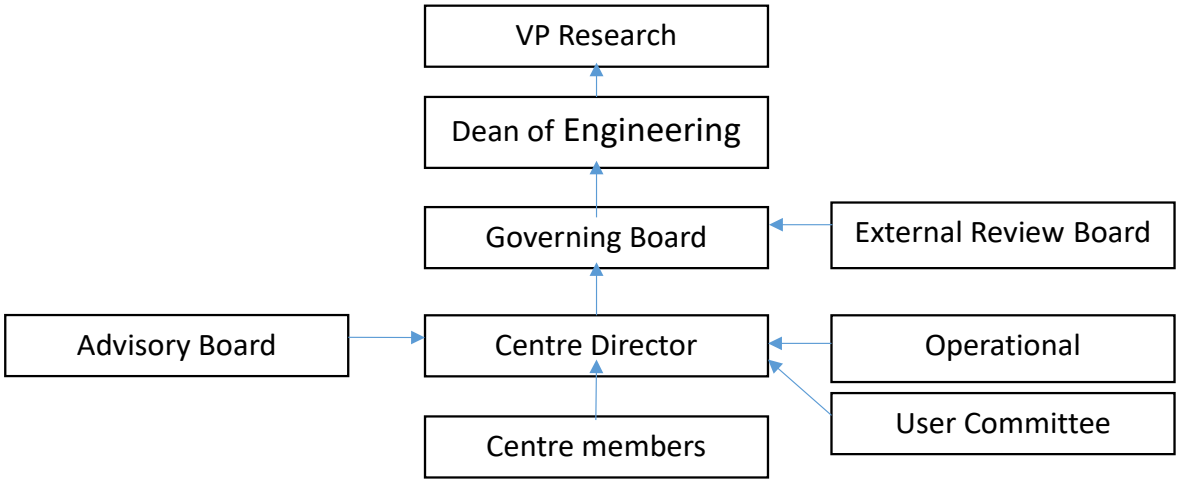
- **Please list Board members who have agreed to serve or who will be approached for either the Institute or Centre.**

  The Governing board will consist of:
  - Dean, Faculty of Engineering (or delegate)
  - Engineering Department Chairs: Mechanical Engineering, Chemical Engineering, Engineering Physics, Materials Science and Engineering

  User Committee: This will consist of the top five users (graduate students and post docs) of the Centre's equipment as well as two external users in addition to the two research staff. The user committee will meet once every six months and chart a continuous improvement process for optimizing the usage of equipment in the lab.

  Operational committee: This will consist of the lab director, theme leads and the two research staff. The operational committee will meet quarterly to determine the operational issues arising, new membership, health and safety as well as financial matters including budget and usage charges. It will also be responsible for a training program that will be initiated by the Centre in the future.

Organizational Chart - Reporting Lines for University Centres:



G. Plan for Five Year External Review

- ***Please provide a plan for an end of term (usually five year) external review for the Institute or Centre.***
  We will model the plans for the review and the meeting on those of existing Senate-approved Centres and will work with the Office of the VPR to ensure plans are in alignment with University expectations.

- *Please provide suggestions and rationale for the composition of the External Review Board which will be determined by the Governing Board. For example: two academics, one government, one private sector individual.*
  Membership will be determined in line with university policy at the time of the review.

- *The Director will complete a detailed report which is provided to the External Review Board. The ERB will assess the RCI performance. Please provide some aspects that might be reviewed, for example: operations/financials, research projects, engagement with industry/government, etc.*
  A report will be developed and provided ahead of the review, which will include (but not be limited to) operations/financials, research projects, engagement with industry/government, educational outreach/student engagement and HQP training.

- *Please see Review of Institutes/Review of Centres expectations which can be found at https://secretariat.mcmaster.ca/app/uploads/Governance-and-Review-of-Research-Institutes-Centres-and-Groups-Guidelines-for-the.pdf*

APPENDIX 1: ASSOCIATED MEMBER LIST

FIRST NAME	LAST NAME	FACULTY	DEPARTMENT/AFFILIATION
CARLOS	FILIPE	ENGINEERING	CHEMICAL ENGINEERING
TODD	HOARE	ENGINEERING	CHEMICAL ENGINEERING
HEATHER	SHEARDOWN	ENGINEERING	CHEMICAL ENGINEERING
BOYANG	ZHANG	ENGINEERING	CHEMICAL ENGINEERING
WAEL	EL-DAKHAKHNI	ENGINEERING	CIVIL ENGINEERING
MOHAMED	ELTORKI	ENGINEERING	CIVIL ENGINEERING
MOHAMMED	EZZELDIN	ENGINEERING	CIVIL ENGINEERING
BENZHONG	ZHAO	ENGINEERING	CIVIL ENGINEERING
MICHAEL	NOSEWORTHY	ENGINEERING	ELECTRICAL & COMPUTER ENGINEERING, BIOMEDICAL ENGINEERING
QIYIN	FANG	ENGINEERING	ENGINEERING PHYSICS
LEYLA	SOLEYMANI	ENGINEERING	ENGINEERING PHYSICS
KATHRYN	GRANDFIELD	ENGINEERING	MATERIALS SCIENCE & ENGINEERING
TOHID	DIDAR	ENGINEERING	MECHANICAL ENGINEERING
MO	ELBESTAWI	ENGINEERING	MECHANICAL ENGINEERING
GREGORY	WOHL	ENGINEERING	MECHANICAL ENGINEERING
COLIN	MCDONALD	ENGINEERING	MECHANICAL ENGINEERING, ENG 1
NABIL	BASSIM	ENGINEERING	CCEM, MATERIALS SCIENCE & ENGINEERING,
ANDY	KNIGHTS	ENGINEERING	CEDT, ENGINEERING PHYSICS
SUVOJIT	GHOSH	CIRC/FYELABS	CIRC
MATT	LUKAS	ENGINEERING	HATCH CENTRE FOR EXPERIENTIAL LEARNING
JIM	CLEAVER	ENGINEERING	MACHINE SHOP, MECHANICAL ENG
JOHN	COLENBRANDER	ENGINEERING	MACHINE SHOP, MECHANICAL ENG
MARK	MACKENZIE	ENGINEERING	MACHINE SHOP, MECHANICAL ENG
SIMON	OOMEN-HURST	ENGINEERING	MMRI, MECHANICAL ENGINEERING
STEVEN	REMILLI	ENGINEERING	MMRI, MECHANICAL ENGINEERING
BRADY	SEMPLE	ENGINEERING	MMRI, MECHANICAL ENGINEERING
STEPHEN	VELDHUIS	ENGINEERING	MMRI, MECHANICAL ENGINEERING
MICHELLE	MACDONALD	HEALTH SCIENCES	BIOCHEMISTRY & BIOMEDICAL SCIENCES, IBOMED
CHAGLA	ZAIN	HEALTH SCIENCES	MEDICINE
JENNIFER	ROBERTSON	HEALTH SCIENCES	MEDICINE
JOSEPH	HAYWARD	HEALTH SCIENCES	RADIOLOGY
MICHAEL	BROOK	SCIENCE	CHEMISTRY
ANDREA	FEINLE	SCIENCE	CHEMISTRY
DARKO	LJUBIC	SCIENCE	CHEMISTRY
BRYAN	HERECHUK (HHS)	HAMILTON HEALTH SCIENCES	DIRECTOR, QUALITY & VALUE IMPROVEMENT AT HAMILTON HEALTH SCIENCES
FIROUZI	DARIUSH	RONCO SAFETY	RSCH DEVELOPMENT PRODUCT MGR
CYNTHIA	GOH	UNIVERSITY OF TORONTO	CHEMISTRY
FRANK	GU	UNIVERSITY OF TORONTO	CHEMICAL ENGINEERING

APPENDIX A

Research Centre or Institute Budget Template ***Please include additional detail in Proposal if necessary***

	2021	2022	2023	2024	2025	Total	$ Secured	$ Anticipated
OPENING BALANCE/CARRY FORWARD		**$ 125,965**	**$ 210,929**	**$ 295,894**	**$ 380,859**		**$ 200,000**	**$ 200,000**

REVENUE - indicate whether secured or anticipated	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Total	$ Secured	$ Anticipated
Please ensure that any anticipated revenue from grant funding will only support costs eligible for that grant and note funding available for indirect or general operations.								
Internal User Fees		$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 400,000		$ 400,000
Materials & Supplies (from internal user grants)	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 500,000		$ 500,000
External User Fees		$ 70,000	$ 70,000	$ 70,000	$ 70,000	$ 280,000		$ 280,000
Ontario Together Fund - Equipment	$ 1,200,000					$ 1,200,000	$ 1,200,000	
Faculty of Engineering OTF	$ 200,000					$ 200,000	$ 200,000	
Core Facilities contribution	$ 200,000					$ 200,000		**$ 200,000**
Contribution of rsch staff salary from grants by core CEPEM members	$ 130,000	$ 130,000	$ 130,000	$ 130,000	$ 130,000	$ 650,000		$ 650,000
Faculty of Engineering ABB Space Renovation	$ 100,000					$ 100,000	$ 100,000	
TOTAL REVENUE	**$ 1,930,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**	$ 3,530,000	**$ 1,500,000**	**$ 2,030,000**

EXPENSES	2021	2022	2023	2024	2025	Total	$ Secured	$ Anticipated
Administrative Expenses: ***(add rows as required)***								
Administrative Personell						$ -		
Research Engineer I (Business Dev + Testing/Validation)	25,000	25,000	25,000	25,000	25,000	$ 125,000		
Research Engineering II (Lab Mgr + Core Equipment)	25,000	25,000	25,000	25,000	25,000	$ 125,000		
Office Supplies:						$ -		
standard office supplies	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 5,000		
Office Equipment:						$ -		
Computing Needs	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 5,000		
Travel:						$ -		
advisory, governing board meetings (annual to start)	$ -	$ 4,000	$ 4,000	$ 4,000	$ 4,000	$ 16,000		
External review every 5 years					$ 4,000	$ 4,000		
Meeting expenses:						$ -		
(anticipating a return to campus, hosting industry/partners...)	$ 500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 6,500		
Workshops, hosted seminars		$ 2,500	$ 2,500	$ 2,500	$ 2,500	$ 10,000		
Advisory/Governing Board Meetings (reports, catering, other expenses)	$ -	$ 2,500	$ 2,500	$ 2,500	$ 2,500	$ 10,000		
Communications:						$ -		
reports, publications, advertisements, website	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 5,000		
Renovations:						$ -		
ABB Space to accomodate new equipment	$ 100,000					$ 100,000		
Ongoing costs for space:						$ -		
Phone	$ 35.30	$ 35.30	$ 35.30	$ 35.30	$ 35.30	$ 177		
TBC - renovation not yet complete.						$ -		

Total Administrative Expenses	**$ 153,535**	**$ 63,535**	**$ 63,535**	**$ 63,535**	**$ 67,535**	**$ 411,677**	$ -	$ -
Research Expenses: ***(add rows as required)***								
Research Personnel:						$ -		
Research Engineer (Core Equip, Lab Mgr)	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 375,000		
Research Engineer (testing/validation, bus dev mgr)	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 375,000		
Research Supplies:						$ -		
Materials, Chemicals, Supplies, Lab Needs	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 500,000		
Research Equipment:						$ -		
Ontario Together Fund & Engineering contribution	$ 1,300,000					$ 1,300,000		
Travel:						$ -		
Partner meetings, business development/outreach	$ 500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 6,500		
Renovations:						$ -		
ABB Space to accomodate new equipment (F. Eng support per OTF)	$ 100,000					$ 100,000		
Total Research Expenses	**$ 1,650,500**	**$ 251,500**	**$ 251,500**	**$ 251,500**	**$ 251,500**	**$ 2,656,500**		
TOTAL EXPENSES	**$ 1,804,035**	**$ 315,035**	**$ 315,035**	**$ 315,035**	**$ 319,035**	**$ 3,068,177**		
CUMULATIVE Surplus/ Deficit	**$ 125,965**	**$ 210,929**	**$ 295,894**	**$ 380,859**	**$ 461,824**			

Funding and Expense Summary	
Opening Balance (Year 1)	$ -
Total Revenue (Total Years)	$ 3,530,000
Total Available Funding	**$ 3,530,000**
Total Expenses (Total Years)	$ 3,068,177
Net Position	**$ 461,824**

McMaster University

Policies, Procedures and Guidelines

Complete Policy Title	Policy Number (if applicable)
Guidelines for the Governance and Review of Research Institutes, Centres and Groups	
Approved by	**Date of Most Recent Approval**
Senate / Board of Governors	~~**December 14, 2011**~~ ~~**December 15, 2011**~~
Date of Original Approval(s)	**Supersedes/Amends Policy dated**
May 17, 2005	~~**November 14, 2007**~~
Responsible Executive	**Policy Specific Enquiries**
Vice-President (Research)	Associate Vice-President (Research)
	General Policy Enquiries
	Policy (University Secretariat)

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

PREAMBLE

1. Excellence in research depends primarily on the efforts of our faculty members – efforts that may be amplified through, and participation in, a formal research organization. Such organizations allow faculty members to focus on the most pressing and demanding problems facing society, to pool their talents and resources, and to maximize institutional impact and output. They allow us to advance our strategic research objectives; to enhance research collaborations; to facilitate interdisciplinary research; to stimulate partnerships; to expand our research presence on the global stage; to increase our ability to secure funding for major research initiatives; and to strengthen the linkages between research and teaching.

2. Research organizations may be located within a single Department or Faculty, or may cut across such boundaries and have a multi-Faculty or University-wide mandate. They may vary in type and structure depending on their objective and the scope of their activities. Some will require formal governance structures. Those whose activities are closely aligned with the University's strategic objectives, and whose success and failure may have financial and reputational implications for the University must receive approval for establishment from the Senate and the Board of Governors in accordance with the provisions of this Policy. As such, a central feature of this Policy is the description of the process to establish Research Institutes and Centres. This Policy also provides Directors of Research Institutes and Centres with guidance regarding governance and reporting and review obligations to the University. Informal research organizations are also recognized, and these organizations will be referred to as Research Groups. Their formation and governance are flexible and not covered by this policy.

3. Where Research Institutes and Centres house significant research infrastructure, this policy should be viewed in conjunction with McMaster's Guidelines for the Governance and Review of Core Research Platforms.

CATEGORIES OF RESEARCH ORGANIZATION

4. Research organizations fall into three categories: Institutes, Centres and Groups. At the outset of the process to establish a research organization, the prospective membership should consult with the relevant Faculty Dean(s) and/or the Vice-President, Research (VPR) to determine which category is appropriate. As research organizations evolve, the appropriate category may change. In such a case, research organizations should consider instigating a transition to a different category.

5. ***Institutes***
   Institutes are closely aligned with the strategic research interests of the University and play a critical role in advancing the University's research objectives. Their designation as an Institute is determined by virtue of one or more criteria which may include: comparative size; breadth of research; national and international impact of their work. In some cases, the membership of the Institute is predominantly based in a single Faculty and the Institute would thus report to the appropriate Faculty Dean. In others, the Institute will have membership spanning two or more Faculties and would report to the VPR or to the Dean of the most appropriate Faculty (in terms of membership or budgetary support). The success of the Institute will have significant implications for the University. Often, the Institute will be responsible for the operation and oversight of central research infrastructure. Some Institutes may be supported by major external funding.

6. ***Centres***
   Centres, like Institutes, support the strategic interests of the University, although their focus may be less broad and their operation may have smaller budgetary implications for the University. Research Centres normally report to the Dean of a Faculty, however in some cases a Centre will have membership spanning two or more Faculties. In this latter case, the Centre may report to the VPR or to the Dean of the most appropriate Faculty (in terms of membership or budgetary support). The Centre may be responsible for the operation and oversight of central research infrastructure. Some Centres may be supported by major external funding.

7. ***Groups***
   Groups are self-designated research organizations. They can be as small as two faculty members and their respective teams of highly qualified personnel. They may be expected to form, grow, and dissolve as members see fit. Their status, progress, and plans are not reported through the University's governing bodies.

ROLES AND RESPONSIBILITIES

8. **Vice-President (Research**): The Vice-President (Research) (VPR) is the senior academic leader responsible for oversight of McMaster's Research Institutes and Centres. In some cases, the VPR (or designate) may act as Chair of the Governing Board of a Research Centre or Institute.

9. **Dean**: When a Research Centre or Institute reports directly to a Faculty Dean, the Dean shall be responsible for the oversight of the research organization and provide information to the Vice-President (Research) to allow the latter to fulfill

their responsibilities. In this case, the Dean (or designate) is Chair of the Governing Board.

10. **Director**: A Research Institute or Centre is led by a Director who is appointed through the Senate Committee on Appointments, Senate, and Board of Governors for a fixed term, normally 5 years.

11. **Governing Board**: Each Research Institute or Centre is overseen by a Governing Board (GB). Authority for all matters regarding the direction and operation of the Research Institute or Centre rests with the GB.

12. **Advisory Committee**: The Advisory Committee (AC) will provide advice to the Director on scientific and scholarly priorities and strategic guidance for the Research Institute or Centre. The AC is consulted at least annually at the discretion of the Director.

13. **External Review Board**: An External Review Board (ERB) will assess the performance of the Institute and Director and the research which has taken place.

14. **Centre Review Board**: A Centre Review Board (CRB) will assess the performance of the Centre and Director and the research which has taken place.

15. **Committee on Research Institutes, Centres and Groups**: The Committee on Research Institutes, Centres and Groups (CRI) is responsible for reviewing proposals for the establishment of Research Institutes and Centres prior to submission to the University's governing bodies.

ESTABLISHMENT OF RESEARCH INSTITUTES AND CENTRES

16. ***Establishment***:
The lead participants of a proposed Research Institute or Centre should prepare a proposal for submission to the relevant Dean or VPR as appropriate. The proposal is considered by the Committee on Research Institutes, Centres and Groups (CRI), which is constituted of the VPR (Chair), the Provost and Vice-President (Academic), the Dean of Graduate Studies, the University Secretary, and the Faculty Deans relevant to the proposed Institute or Centre. The Proposal should be developed using the McMaster template (made available from the Office of the VPR) and will normally include:

    i. The name, objectives, and proposed activities of the Institute or Centre.

ii. A rationale for establishing the Institute or Centre.
iii. A list of participants and criteria for expanding the membership.
iv. A detailed business plan that includes the financial, space and human resource needs of the Institute or Centre. There must be an indication of the funding required to support the Institute or Centre, both initial start-up costs and the costs of on-going operations, and the internal and external sources of that funding.
v. A description of the Institute's or Centre's organizational structure, and its relationship (if any) with McMaster University affiliated hospitals or other institutions.
vi. An explanation as to why the Institute or Centre is consistent with the University's Strategic Research Plan.

17. If endorsed by the CRI, the proposal will be submitted to the University Planning Committee, who shall consider whether the proposal is consistent with the academic and research priorities of the University and whether the resource requirements and sources of funding have been appropriately considered. If endorsed by UPC, it will be recommended to the Senate and the Board of Governors for approval. The Research Institute or Centre will be formally established upon receiving the approval of the Board of Governors.

18. The University supports the integration of research and education. Research Institutes and Centres may be thus involved in the delivery of academic programs. The approval of such programs will follow the normal University procedures. Specifically, administration of academic programs must be carried out through the appropriate Dean or Associate Vice-President (Academic).

GOVERNANCE AND REVIEW OF INSTITUTES AND CENTRES

19. The University must be informed on the status, progress, and financial viability of Research Institutes and Centres. As such, the University's Research Institutes and Centres must adhere to general practices of good governance with reporting structures that seek expert national and international advice, and which ultimately inform the governing bodies as to their activities and standing within the international or national research community.

20. All Institutes, Centres and Groups are expected to adhere to the University's policies and procedures as established or amended from time to time. Ongoing University support for a Research Institute or Centre is not guaranteed.

21. Each Research Institute or Centre is overseen by a Governing Board (GB). The GB is normally chaired by the appropriate Dean (or designate) or by the VPR (or designate) and is composed of other participating Deans and/or Department Chairs (or designates) whose Faculties and Departments are most affected by the success or failure of the Institute or Centre. It may be appropriate that additional members of the GB are drawn from beyond the VPR, Deans and Chairs. Authority for all matters regarding the direction and operation of the Institute or Centre rests with the GB.

22. A Research Institute or Centre is led by its Director who is normally appointed for a 5-year term. The selection process is managed by the Chair of the GB who, along with board members, will establish a selection committee representing the Institute's or Centre's stakeholders. The selection committee will recommend a candidate to the GB. If the recommendation is accepted, the GB will recommend the candidate to the Senate and the Board of Governors which, upon acceptance, approves the appointment of the Director. The Director's term may be renewed, normally for a further 5 years, following assessment of the performance of the Institute or Centre by an External Review Board, or Centre Review Board. Normally, a Director will be limited to serving two consecutive terms, although some circumstances may lead to a Director serving more than two consecutive terms. In these instances, each renewal will follow assessment by the External Review Board or Centre Review Board. The selection process for a Director is separate from and additional to the establishment of a Research Centre or Institute.

23. In some exceptional circumstances, the appointment of a Director may occur as part of the process for hiring a new faculty member. Where the faculty hiring process also plans to appoint the new faculty member as Director of an Institute or Centre, the Chair of the Faculty Appointments Committee will inform the Chair of the Institute's or Centre's GB, at the outset of the hiring process. The Chair of the GB will be afforded the opportunity to comment on the appointment of a Director before the hiring process proceeds. Once a candidate accepts the offer, the Chair of the GB will be informed, and the Dean of the relevant Faculty will ensure that the Director appointment recommendation is provided as part of the appointment package to the Senate and Board of Governors for approval.

24. The Director, with the approval and agreement of the GB, establishes an Advisory Committee (AC) whose purpose it is to provide advice to the Director with regard to scientific and scholarly priorities and strategic guidance for the Institute or Centre. The AC is consulted at least annually at the discretion of the Director. The AC is normally constituted from members of the McMaster

community and external members with appropriate expertise relevant to the Research Institute or Centre.

25. ***Research Institutes - Annual Reporting***
The GB monitors the activity of the Institute following the annual submission of a Director's report to the GB. In the case of Institutes whose GB is Chaired by a Faculty Dean, the Dean will report on the Institute to the VPR for information. The VPR subsequently provides the University Planning Committee (UPC), Senate and Board of Governors with an annual report on the status of the Institute for information, as part of a summary document reporting on all Research Institutes.

26. Where Research Institutes house significant research infrastructure, and are deemed Core Platforms, the Director's report will be aligned with the reporting needs outlined in McMaster's Guidelines for the Governance and Review of Core Research Platforms.

27. ***Research Institutes – Performance Review***
The GB, in consultation with the Director, the AC, and members of the Institute, is responsible for periodically constituting an External Review Board (ERB). An ERB will review each Research Institute at least every five years and normally coincident with the final year of the Director's term. An external review may be called prior to a five-year lapse since Institute establishment or prior review, at the request of the Institute's GB.

The composition of the ERB will be determined by the GB and should take into account the aspirations of the Institute and the availability of funds to support the review. The ERB would normally comprise three high-caliber scholars with an international perspective, who must be at arms' length from the Institute. At least one of the ERB members should be external to the McMaster community. A member from the public or private sector could be considered as one of the three ERB members where such representation would be helpful in determining the value of the Institute's research. The ERB will assess the performance of the Institute Director and the research which has taken place. The ERB may use several metrics to determine performance including: the number and quality of publications; knowledge transfer to external partners; societal impact; and advancement of the University's strategic priorities. These should be compared to (a) similar metrics for the Institute prior to a previous review or, if this is the first review, with the expectations in the Institute establishment proposal; and (b) with the performance of Institutes of similar size in the same field of research. The ERB report will include recommendation for the renewal of the Director, and whether Institute performance is consistent with the status of an Institute at McMaster University. The report will be submitted in confidence to the Chair of

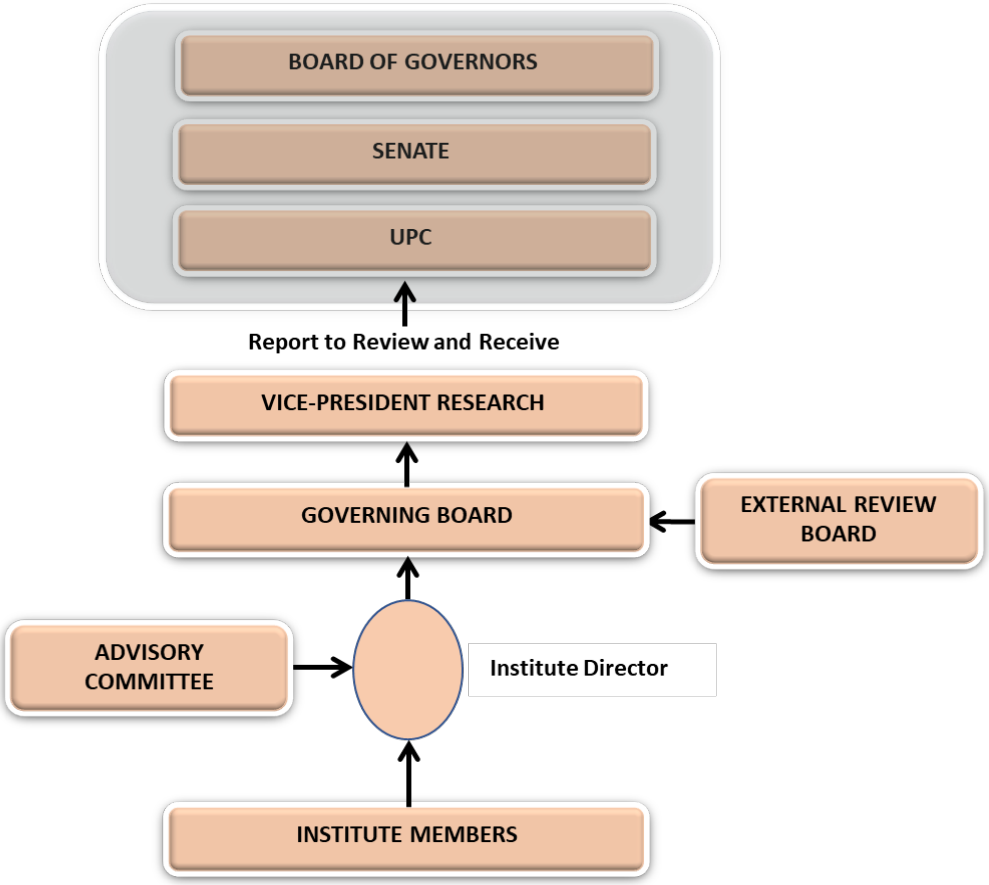
the GB and the VPR; and the Chair of the GB would normally share the ERB's report and its recommendations with the GB and either the current Director, or the successor to the current Director. The Director will prepare a response to the report to be shared with the GB and the VPR. Both the report and response will be provided to UPC, Senate and the Board of Governors to review and receive.

28. ***Research Centres - Annual Reporting***
The GB monitors the activity of the Centre following the annual submission of a Director's report to the GB. In the case of Centres whose GB is Chaired by a Faculty Dean, the Dean will report on the Centre to the VPR for information. The VPR subsequently provides UPC, Senate and Board of Governors with an annual status report for information, as part of a summary document reporting on all Research Centres.

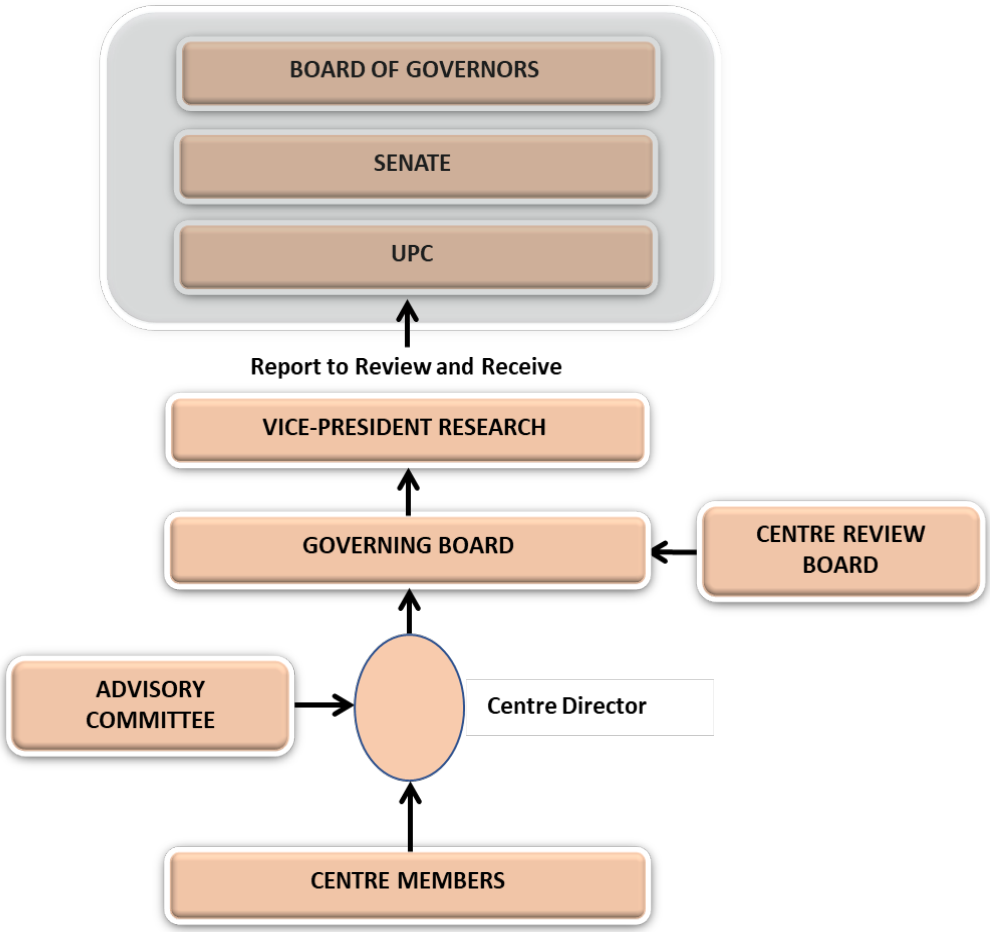
29. Where Research Centres house significant research infrastructure, and are deemed Core Research Platforms, the Director's report will be aligned with the reporting needs outlined in McMaster's Guidelines for the Governance and Review of Core Research Platforms.

30. ***Research Centres – Performance Review***
Each Centre will be reviewed at least every five years by a Centre Review Board (CRB). The composition of the CRB will be determined by the GB. The CRB would normally comprise three high-caliber scholars who may be internal or external to the McMaster community and who must be at arms' length from the Centre. The mandate of the CRB is similar to that described for the ERB for Institutes. The CRB report will be submitted in confidence to the Chair of the GB and the VPR and the Chair of the GB would normally share the CRB's report and its recommendations with the GB and either the current Director, or the successor to the current Director. The Director will prepare a response to the report to be shared with the GB and the VPR. Both the report and response will be provided to UPC, Senate and the Board of Governors to review and receive.

31. ***Flexibility for Governance and Review of Institutes and Centres in Exceptional Circumstances***
It is possible that the governance structure, reporting and review of Research Institutes and Centres may need to vary from those described above. For example, the Research Institute or Centre could also be required to report to an external funding body, and that body may have specific governance and reporting criteria. In such a case, the governance structure, reporting and review of the Research Institute or Centre must conform as closely as possible to that outlined above, while fulfilling the mandatory requirements of the external body.



Example structure for a Research Institute. In this case, the Chair of the Governing Board is a Faculty Dean. This structure is provided as one possible example and other structures which conform with this policy are not excluded.



Example structure for a Research Centre. In this case, the Chair of the Governing Board is a Faculty Dean. This structure is provided as one possible example and other structures which conform with this policy are not excluded.

TERMINATION AND TRANSITION OF INSTITUTES AND CENTRES

32. ***Transition or Termination of a Research Institute or Centre***

A review of an Institute or Centre may conclude that the performance is inconsistent with University expectations. In some instances, following a negative review, the membership of an Institute will re-form as a Centre or a Group; or in the case of a Centre the membership will re-form as a Group. It is also possible that, following consultation with the GB, the appropriate Faculty Dean or VPR will dismiss the incumbent Director and instigate a search for a new Director who can address the deficiencies of the negative review and better serve the interests of the Research Institute or Centre and the University. In other instances, a CRB may recommend that a Centre become an Institute, in which case a formal application should be made to the VPR and CRI for Institute status.

The objective of transition is to provide the researchers with sufficient flexibility to optimize their productivity and impact. It is thus possible that a Director, usually after consultation with the AC and membership, may seek transition at any time within the lifetime of the Institute or Centre (whether a review has been performed or not). This process is instigated through a request to the GB.

In some instances, a Director, usually in consultation with the AC and membership, may seek termination of the Institute or Centre (whether a review has been performed or not). For example, previously available funding to support the Institute or Centre may have ceased; or the Institute or Centre may have achieved its objectives removing the need for its existence. This process is instigated through a request to the GB.

The recommendation as to whether to terminate or transition a Research Institute or Centre, is made by the Institute's or Centre's GB. As establishment of an Institute or Centre is approved by UPC, Senate and the Board of Governors, approval for terminating or transitioning a Centre or Institute is also required from UPC, Senate and the Board of Governors.

RELATED POLICIES

Guidelines for the Governance and Review of Core Research Platforms

Financial Procedure for Research Grants

Indirect Costs Associated with Research

Internally Sponsored Research Accounts

Joint Intellectual Property Policy

Operating and Ancillary Budgets Policy

Research Accounts Policy

Research Ethics Policy

Research Integrity Policy

Research Residuals Policy

McMaster University

Policies, Procedures and Guidelines

Complete Policy Title:
Guidelines for the Governance and Review of Research Institutes, Centres and Groups

Policy Number (if applicable):

Approved by:
Senate
Board of Governors

Date of Most Recent Approval:
December 14, 2011
December 15, 2011

Date of Original Approval(s):
May 17, 2005

Supersedes/Amends Policy dated:
November 14, 2007
(Guidelines for the Establishment of Research Groups, Centres and Institutes)

Responsible Executive:
Vice-President (Research and International Affairs)

Enquiries:
University Secretariat

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

1. Preamble

The pursuit and encouragement of excellent scholarship and research at McMaster University is dependent principally upon the efforts of its faculty members. Faculty members may form organizations to address research problems that are of mutual interest to them. The development of such research organizations can serve a number of strategic objectives, for example creating a critical mass of researchers and increasing their potential impact, enhancing research collaborations, facilitating interdisciplinary research, increasing the visibility of research at McMaster University nationally and internationally, increasing McMaster University's ability to secure funding for major research infrastructure, and facilitating the linkages between research and education. These research organizations may be located within a Department or Faculty or they may cut across such boundaries and have a University-wide mandate. With the evolution of the modern research university, such organizations are increasingly a requirement to address the most pressing and demanding problems facing society and therefore facing the University. This policy is designed to encourage substantive collaborations and to facilitate the benefits that researchers may find in establishing research organizations.

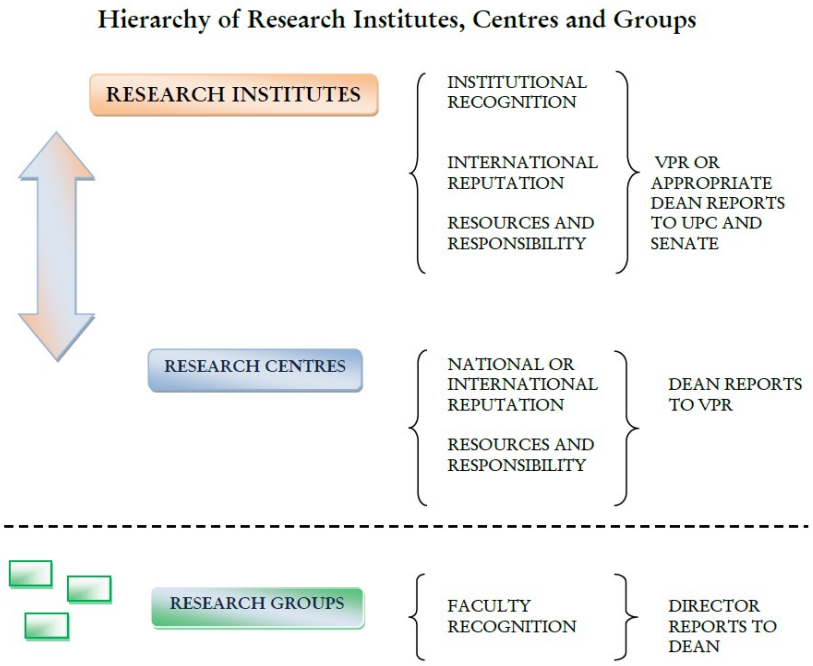
Research organizations can vary in type and structure depending on the objectives they are designed to accomplish and the scope of their activities. Some will require more formal governance structures than others. The ones whose activities are most closely aligned with the University's strategic objectives, and those whose success and failures

can have large financial implications for the University must receive approval from the Senate and the Board of Governors in accordance with the provisions of this Policy. Smaller research organizations may also form, and their needs and aspirations may be better met with a more flexible and nimble governance structure. In such cases, approval and financial implications would be more appropriately dealt with at the Faculty level.

A central feature of this Policy is the establishment of 3 categories for research organizations, which are referred to as Institutes, Centres, and Groups. These categories acknowledge both the spectrum of complexity that research organizations can achieve as well as the increased levels of governance required for the most complicated types of organizations. This Policy is also designed to provide guidance to faculty who are interested in establishing a research organization as well as to Directors of already established research organizations regarding their governance, reporting and review obligations to the University. The relative hierarchy of the research organizations and a summary of some of their characteristics and reporting are illustrated below.

2. Classes of Research Organizations:

Different research organizations may be formed to address certain types of research problems; to plan for, manage and optimally exploit certain common research infrastructure; and to otherwise advance the interests of a group of researchers. These will be organized into three groupings, hereafter referred to as Institutes, Centres, and Groups. It may be that at present there are research organizations which fit into one of these categories, but which do not carry with them the appropriate name (eg. a research organization which is, and has been, referred to as an Institute, but which is structured and administered as a Centre as described below). Such organizations should consider the relative costs and benefits of changing their names to Institute, Centre and Group, as will be employed by the University, at the next occasion of their review. The onus is on the research organization to make a compelling case that a significant benefit will be lost by changing their names to one consistent with McMaster's new structure for research organizations.



a. Institutes

Institutes are the research organizations most closely aligned with the strategic interests of the university, by virtue of one or more of several criteria: their size, breadth, or national and international impact on their focus area of research. Institutes normally report to the VP (Research and International Affairs) (VPR). The VPR, in consultation with the Dean or Dean(s) most directly involved in the Institute, then reports annually on the status, progress and plans of the Institute to the University Planning Committee (UPC) and to Senate. In some cases, the Institutes would be expected to have membership spanning two or more faculties, and would be supported by major external funding. In others, the membership of the Institute would be mainly based in a single Faculty in which case the Institute would report to the appropriate Faculty Dean, and he or she would consult with appropriate Departmental chairs. The success of the Institute may have significant financial and other implications for the University and they would often be responsible for the operation and oversight of central research infrastructure.

b. Centres

Centres are similar to Institutes. Their mission for research and scholarship with a national and international impact in their areas of interest is the same, but their interests are less closely aligned with the university's strategic interests and they may have smaller budgetary implications for the university. Although their interests will often be largely internal to a particular Faculty, in some cases their membership will cross two or more

Faculties. As such they would normally report to the appropriate Dean, to whom any requests for funding should be made. The Faculty Dean then reports for information on their status, progress, and plans to the VPR. There may also be instances where a Centre would report directly to the VPR, by virtue of having membership across more than one Faculty. The status, progress, and plans of Centres is not reported to Senate.

c. Groups

Groups are smaller research organizations, which can be as small as two faculty members and their respective teams of highly qualified personnel. They may be expected to form, grow, and dissolve on a relatively short time scale, although, in some cases, they can also be stable for relatively long time periods. They may or may not receive financial support from the University, and would normally report to the appropriate Faculty Dean, for groups whose research lies largely within the domain of a single Faculty, or to the VPR for groups whose research interests span the domains of two or more Faculties. Their status, progress, and plans are not reported to Senate.

3. Governance and Review of Institutes and Centres.

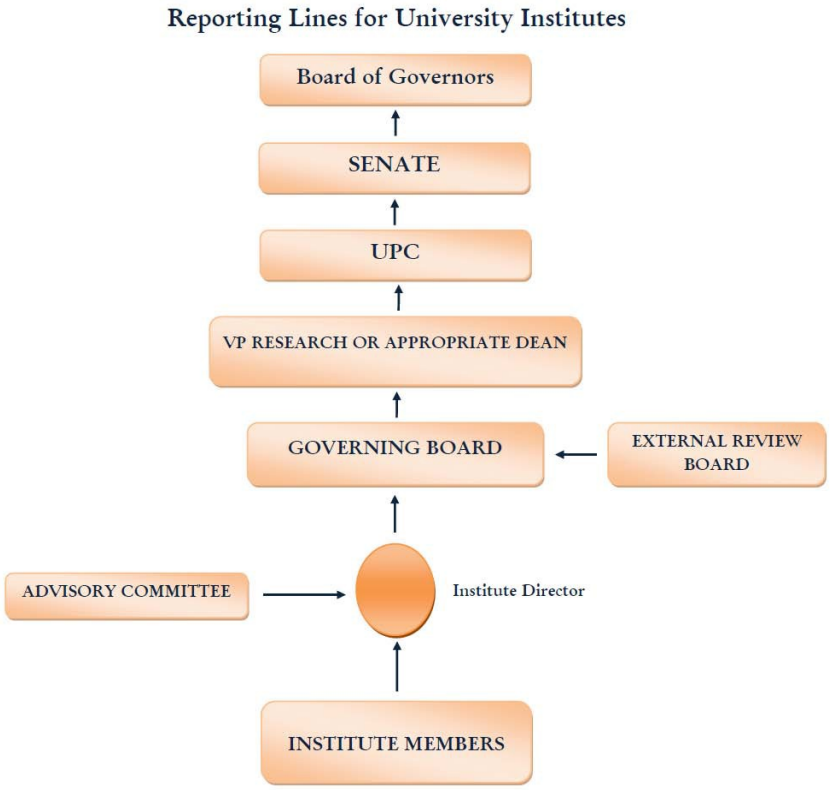
The University must be informed on the status, progress, and financial viability of the research organizations which carry out its strategic interests. As such the University's Institutes and Centres must adhere to general practices of good governance with reporting structures that seek expert national and international advice and which ultimately informs the VPR and the Faculty Dean as to their activities and standing within the international or national research community. In the case of Institutes, the VPR then reports on the status, progress, and plans of Institutes to the UPC and to Senate.

Furthermore, change and renewal are critical if universities are to meet the challenges of modern research. Research organizations wax and wane as a result of their performance, the state of their research fields and because of the fluidity of the academic community at large. Thus, none of the organizations described in this document can be considered permanent fixtures; survival is dependent on performance, which must therefore be monitored on a regular basis. What follows is a discussion of the governance and reporting structures for the research organizations and a statement of principles concerning the review process.

a. Governance of Institutes:

The governance structure of Institutes is illustrated below. An Institute is led by its Director, who is normally appointed for a 5 year term. The Director establishes an Advisory Committee (AC) whose purpose is to provide advice to the Director with regard to scientific or scholarly priorities and direction for the Institute. The AC is chosen by the Director, and is consulted at least every two years, or more frequently at the discretion of the Director.

The Institute Director reports to the Institute's Governing Board (GB) on an annual basis. The GB comprises the VPR (or designate) along with the Deans (or designate) from the Faculties which have a substantive investment in the success of the Institute. For Institutes which reside principally within a single Faculty, the GB is comprised of the Dean of the appropriate Faculty (or designate) and the Chairs of the Departments which have a substantive investment in the success of the Institute. The GB, in consultation with the Director, the AC, and members of the Institute, is responsible for constituting an External Review Board (ERB) at least every 5 years, and normally coincident with the final year of the Director's term.



The GB reports annually to the VPR or appropriate Dean for Institutes which reside principally within a single Faculty, and the final authority for all matters regarding the direction and operation of the Institute rests with the VPR, or appropriate Dean. In the case of Institutes which reside principally within a single Faculty, the appropriate Dean will report on the Institute to the VPR for information only. The VPR or appropriate Dean then reports annually on the status, progress, and future plans of the Institute to the UPC and to Senate.

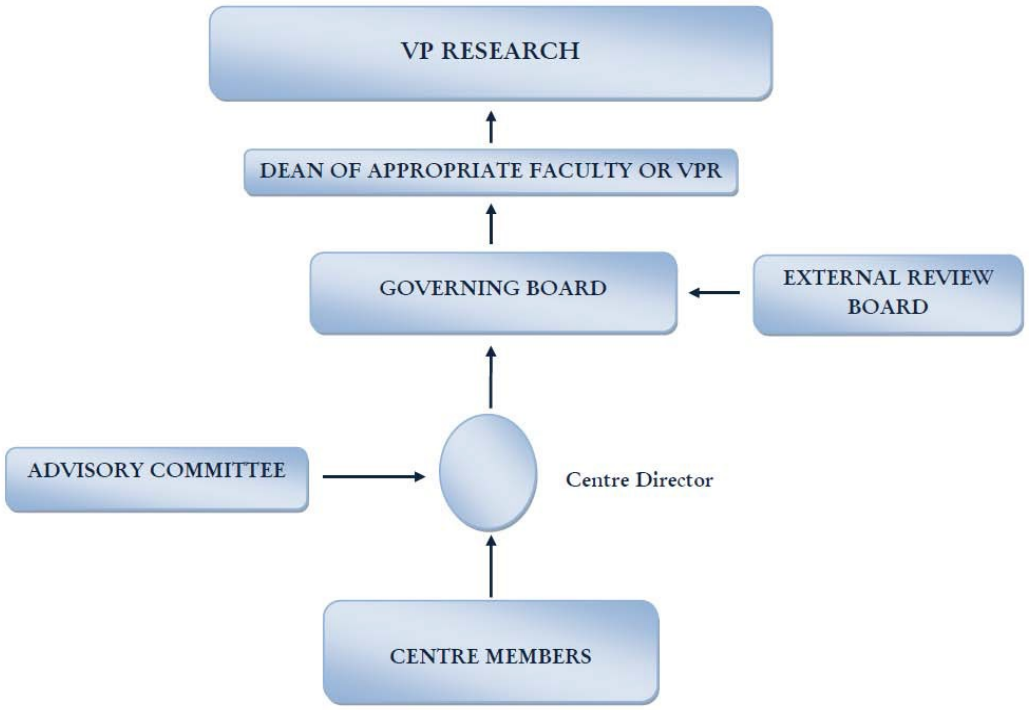
b. Review of Institutes:

An External Review Board (ERB) will review each Institute every 5 years or sooner at the request of the Institute's GB. The composition of the ERB will be determined by the GB and should take into account the aspirations of the institute and the availability of funds to support the review. The ERB would normally comprise 3 high caliber scholars with an international perspective, who must be arms length from the Institute. The ERB will assess the performance of the Institute's Director and its scientific program. The ERB will be furnished with documents describing the University's policy on Research Institutes and will be asked whether performance is compatible with expectations described in the policy. The ERB is expected to use accepted measures of performance such as publication number and impact to assess the Institute's contributions in comparison with those of (a) the Institute during the preceding 5 years and (b) with the performance of institutes of similar size in the same field of research. The recommendations of the ERB will include the renewal of the Director, and whether the Institute's performance is consistent with that of an Institute at McMaster University. Their report will be submitted in confidence to the VPR or appropriate Dean. Normally, the VPR would share the ERB's report or major recommendations from the ERB's report with either the current Director, or the successor to the current Director, so that the leadership of the Institute benefits from the perspective of the ERB.

c. Governance of Centres:

The governance structure of Centres is illustrated below. It differs from an Institute in the final authority for all matters regarding the direction and operation of the Centre rests with the Dean of the Faculty appropriate to the Centre, or with the VPR for Centres for whom a substantial fraction of their membership is drawn from more than one Faculty. The Dean (or VPR) or designate does not report to Senate, and instead reports to the VPR for information only. In all other respects its governance structure is that of an Institute which resides principally within a single Faculty. The Centre's GB is normally chaired by the appropriate Dean (or VPR) or designate, and is composed of the Chairs (or designates) of the Departments most affected by the success or failure of the Centre.

Reporting Lines for University Centres



d. Reviews of Centres:

Responsibility for monitoring the status, progress and plans for Centres resides with the Dean of the Faculty within which the members (or the majority of members) reside or with the VPR in cases where the Centre substantively spans more than one Faculty. Each Centre will be reviewed at least every 5 years. The composition of the ERB will be determined by the Dean or designate, or VPR or designate, as appropriate, and may consist of external or internal reviewers. The mandate of the review board is similar to that described for the ERB for institutes. A Governing Board chaired by the Dean or designate, or VPR or designate, and composed of the Departmental Chairs (or delegates) of the Centre members should monitor the activity of Centres every year.

4. Establishment, Termination and Transition of Research Institutes and Centres.

a. Establishment:

The lead participants in either a proposed Institute or Centre should prepare a proposal for submission to the relevant Dean or VPR, as appropriate. The proposal is then considered by the Committee on Research Institutes (CRI), which is constituted by the VPR (as Chair), the Provost (VP Academic), the Dean of Graduate Studies, the University Secretary, and the Faculty Deans relevant to the specific Institute or Centre. The proposal will normally include:

1- The name, objectives, and proposed activities of the Institute or Centre.
2- A rationale for establishing the Institute or Centre.
3- A list of participants and criteria for expanding the membership.
4- A detailed business plan that includes the financial, space and human resource needs of the Institute or Centre. There must be an indication of the funding required to support the Institute or Centre, both initial start-up costs and the costs of on-going operations, and the internal and external sources of that funding.
5- A description of the Institute's or Centre's organizational structure, and its relationship (if any) with our affiliated hospitals or other institutions.

In the case of a proposed Centre, the appropriate Dean or VPR, in consultation with the CRI, considers the proposal and makes a decision as to whether or not to support the new Centre.

In the case of a proposed Institute, the University Planning Committee (UPC) shall consider whether the proposal is consistent with the academic priorities of the University and whether the resource requirements and sources of funding have been appropriately considered. If the proposal is endorsed by the UPC, it will recommend it to the Senate and the Board of Governors for approval. The proposed Institute will be formally established upon receiving the approval of the Board of Governors.

With the University's emphasis on linking research and education, Institutes may be involved in the delivery of academic programs. While the approval of research and

academic programs may be linked, the approval of the academic component of such programs will follow the normal University procedures for approving academic programs. Administration of academic programs will be carried out through the appropriate Dean or Associate Vice-President (Academic).

An Institute will have a Director, appointed by the Senate and the Board of Governors, on the recommendation of a selection committee representing the stakeholders and chaired by the University officer to whom the Director of the Institute will report.

b. Termination:

An external review may conclude that the performance of an Institute or Centre is inconsistent with institutional expectations. The decision as to whether to disband the Institute or to transition it to a Centre is made by the Board of Governors, on the recommendation of the VPR or appropriate Dean, according to the Reporting Lines for University Institutes outlined on page 5. The decision as to whether to disband a Centre, or to transition it to a Group, shall rest with the Dean or VPR, on the advice of its Governing Board, and the recommendations of the relevant ERB.

c. Transitions:

i) In some instances, following a negative review, the membership of an Institute will regroup as a Centre or a Group. It is also possible the VPR or Dean will dismiss the incumbent Director and instigate a search for a new Director who can address the deficiencies of the negative review and better serve the interests of the Institute and University. In other instances, an ERB may recommend that a Centre become an Institute, in which case a formal application should be made to the VPR and CRI for Institute status. It is also understood that Centres may wish to remain as Centres following an excellent ERB review.

   The objective is to provide the institution's researchers with sufficient flexibility to optimize their productivity and impact.

ii) Institutes and Centres which currently exist may have different governance procedures and reporting structures than those described in this document. In most cases these organizations will adopt the procedures and structures described here in a timely manner, and which would, at the latest, coincide with the beginning of the next term of the Institute or Centre's Director. That is, all Institutes and Centres would be expected to have transitioned to the procedures and structures outlined in this policy by no later than July, 2016. The VPR may choose to waive this requirement for exceptional cases.

5. Financial Matters

All Institutes, Centres and Groups are expected to adhere to the University's financial policies and procedures as established or amended from time to time.

REPORT TO THE SENATE

FROM THE

COMMITTEE ON APPOINTMENTS

Open Session (Regular)

On April 26, 2021, the Committee on Appointments approved the following recommendations and now recommends them to Senate for approval:

1. **SPS A5 Revisions**

   It is now recommended,

   that Senate approve, for recommendation to the Board of Governors, the amendments to the SPS A5 policy, as circulated.

2. **ToR Revisions**

   a. **ToR Revisions – John A. Bauer Chair in Surgery**

      It is now recommended,

      that Senate approve the amendments to the terms of reference for the John A. Bauer Chair in Surgery, as circulated.

   b. **Name Change – W.H. Kwok Chair in Spine Surgery Research**

      It is now recommended,

      that Senate approve the renaming of the W.H. Kwok Chair in Orthopedic Spinal Surgery Research to the W.H. Kwok Chair in Spine Surgery Research.

   c. **ToR Revisions – Associate Deans**

      It is now recommended,

      that Senate approve the amendments to the terms of reference for the Associate Dean (Academic), Associate Dean of Graduate Studies (Science), and Associate Dean (Research & External Relations).

3. **Establishment of the Douglas Holder/PHRI Chair in Interventional Cardiology**

   It is now recommended,

   that Senate approve the establishment of the Douglas Holder/PHRI Chair in Interventional Cardiology.

SENATE: FOR APPROVAL
MAY 12, 2021

McMaster University

Policies, Procedures and Guidelines

Complete Policy Title: **Policy on Joint Appointments and Associate Membership**	Policy Number (if applicable): **SPS A5**
Approved by: **Senate** **Board of Governors**	Date of Most Recent Approval: **December 14, 2011** **December 15, 2011**
Date of Original Approval(s): **March 24, 1969**	Supersedes/Amends Policy dated: **April 11, 1979 (SPS 5)** **December 13, 1978 (SPS 6)**
Responsible Executive: **Provost and Vice-President (Academic)**	Enquiries: **Policy (University Secretariat)**

It is in the best interest of the University to encourage persons to participate when appropriate, in the work of more than one Department. Extensive participation in the work of two Departments should be recognized by a "joint appointment". *Joint appointments should be reserved for those who participate fully in the undergraduate (or undergraduate and graduate) work of two Departments* while those who participate less extensively, but nevertheless on a continuing basis, should receive associate memberships.

I Joint Appointments

a. Joint appointments, whether or not they involve financial contributions from two Departments can only be made on the recommendation of the two Departments concerned and with the approval of the Faculty Dean(s), Provost, and if graduate work is involved, the Dean of Graduate Studies.

b. The teaching responsibilities of joint appointees should be by agreement between the two departmental Chairs concerned and with the approval of the Faculty Dean(s).

c. For faculty members with joint appointments, it is the responsibility of both departments to make recommendations concerning tenure, permanence and promotion to the appropriate Faculty Tenure and Promotion Committee.

d. Faculty members on a joint appointment may not hold two different academic ranks, even if there are different levels of experience and proficiency in terms of the activities in the two departments of which they are a member.

e. For faculty members on joint appointments, the Chairs will make merit assessments for the purpose of salary determination and will forward these to their Dean.

In those cases where two Deans are involved, there must be joint consideration and agreement by the two Deans on the merit assessment. The agreement should clearly set out the factors and percentages used for evaluating teaching, research and service and how they align with the goals and expectation of the joint appointment. This agreement should be shared with Chairs and the faculty member annually, at most one month after the deadline of submitting their annual activity report, or at least one month after their start date for a new joint appointment.

II Associate Appointments

a. A member of one Department (Primary, P) may be an Associate Member of another Department (Secondary, S):
- on the invitation of Department S, and
- with the approval of the Chair of Department P, and
- with the approval of the Faculty Dean(s) concerned, and
- for a specified term, normally five years – renewable if the invitation is repeated and new approvals are obtained, and
- with specific responsibilities and the associated privileges as set out in the letter of appointment from the Provost and any attachments.

b. Although an Associate Member is properly counted as contributing some fraction of a full-time faculty member to the work of Department S and, by corollary, something less than full-time to the work of Department P, recommendations for salary, tenure, permanence, promotion, etc. will normally be sought from the Chair of Department P only. (In this respect, as in many others, the Associate Member's position differs from that of a person with a joint appointment in two departments).

McMaster University | HEALTH SCIENCES
Office of the Dean

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April 13, 2021

Senate Committee on Appointments
c/o University Secretariat
Gilmour Hall, Room 210

Re: Revised Terms of Reference for the John A. Bauer Chair in Surgery

On behalf of the Faculty of Health Sciences, I would like to recommend for approval revisions to the terms of reference for the John A. Bauer Chair in Surgery.

An endowment was been provided by the estate of Bertha T. Bauer in the late 1970s, in honour of the late John A. Bauer, Bertha's brother and a prominent Hamilton physician. The endowment is in support of a Chair in the field of medicine (with "medicine" being interpreted in a broad sense to encompass all possible sub-specialties). These funds are complemented by matching funds from the University.

In 2012, the terms were revised so that the Chair be directly associated with, and its tenure run concurrent with, an appointment to the position of Chair of the Department of Surgery.

The terms of reference are now being updated to allow the Chair to be directly associated with, and its tenure run concurrent with, an appointment to the position of Vice-Chair Clinical of the Department of Surgery, if the Chair of the Department of Surgery so chooses.

Thank you for considering this recommendation. Enclosed please find a copy of the original and revised terms of reference.

Yours sincerely,

Paul M. O'Byrne, MB, FRCP(C), FRSC
Dean and Vice-President
Faculty of Health Sciences

Encl.

PO/bvd

Revised Terms of Reference

TERMS OF REFERENCE

John A. Bauer Chair in Surgery

General

An endowment has been provided by the estate of Bertha T. Bauer, in honour of the late John A. Bauer, Bertha's brother and a prominent Hamilton physician. The endowment is in support of a Chair in the field of medicine (with "medicine" being interpreted in a broad sense to encompass all possible sub-specialties). These funds are complemented by matching funds from the University.

In revising the terms of reference for this Chair, it is the intent of all parties that the Chair be directly associated with, and its tenure run concurrent with, an appointment to the position of Chair of the Department of Surgery, McMaster University. If the Chair of the Department of Surgery so choses, the Chair may be directly associated with, and its tenure run concurrent with, an appointment to the position of Vice-Chair Clinical of the Department of Surgery, McMaster University

Details and Duties of the Chair

The holder of the Chair shall be an individual with sufficient experience and who has demonstrated interest in and capability to implement the objectives set out below.

Specifically the Incumbent Will:

- With focus in the field of surgery, address scientific uncertainty and include the calibre of scientific content displayed with other research projects ongoing at the University;
- Be an integral part of the institutional vision towards establishing and maintaining a world class Centre of Excellence which exemplifies the central values of the University and the Department of Surgery;
- Take a leadership role and contribute significantly to the body of scholarship in the area of surgery, whether through clinical work, education, research, or each of the aforementioned activities;
- Develop academic programs in surgery and be committed to working with other relevant academic departments, hospitals and facilities responsible for the provision of surgical services to ensure that the latest developments in the field are subjected to critical evaluation and that the highest levels of clinical practice are introduced to the community;
- Undertake the normal duties of a faculty member in the Faculty of Health Sciences, including participation in the education programs of the Faculty.

Selection Process

The holder of the endowed Chair shall be the Chair, Department of Surgery at McMaster University, or if they so choose the Vice-Chair Clinical, Department of Surgery at McMaster University.

Term

The term of the endowed Chair shall run concurrent with the Department Chair or Vice-Chair appointment.

Acknowledgement

The incumbent will acknowledge that they hold the "*John A. Bauer Chair in Surgery*" in all publications, lectures and any other activities supported through the fund and will participate in the annual donor recognition program.

Revised March 2021

Original Terms of Reference

TERMS OF REFERENCE

John A. Bauer Chair in Surgery

General

An endowment has been provided by the estate of Bertha T. Bauer, in honour of the late John A. Bauer, Bertha's brother and a prominent Hamilton physician. The endowment is in support of a Chair in the field of medicine (with "medicine" being interpreted in a broad sense to encompass all possible sub-specialties). These funds are complemented by matching funds from the University.

In revising the terms of reference for this Chair, it is the intent of all parties that the Chair be directly associated with, and its tenure run concurrent with, an appointment to the position of Chair of the Department of Surgery, McMaster University.

Details and Duties of the Chair

The holder of the Chair shall be an individual with sufficient experience and who has demonstrated interest in and capability to implement the objectives set out below.

Specifically the Incumbent Will:

- With focus in the field of surgery, address scientific uncertainty and include the calibre of scientific content displayed with other research projects ongoing at the University;
- Be an integral part of the institutional vision towards establishing and maintaining a world class Centre of Excellence which exemplifies the central values of the University and the Department of Surgery;
- Take a leadership role and contribute significantly to the body of scholarship in the area of surgery, whether through clinical work, education, research, or each of the aforementioned activities;
- Develop academic programs in surgery and be committed to working with other relevant academic departments, hospitals and facilities responsible for the provision of surgical services to ensure that the latest developments in the field are subjected to critical evaluation and that the highest levels of clinical practice are introduced to the community;
- Undertake the normal duties of a faculty member in the Faculty of Health Sciences, including participation in the education programs of the Faculty.

Selection Process

The holder of the endowed Chair shall be the Chair, Department of Surgery at McMaster University.

Term

The term of the endowed Chair shall run concurrent with the Department Chair appointment.

Acknowledgement

The incumbent will acknowledge that she/he holds the "*John A. Bauer Chair in Surgery*" in all publications, lectures and any other activities supported through the fund and will participate in the annual donor recognition program.

Revised February 2012

McMaster University | HEALTH SCIENCES
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April 15, 2021

Senate Committee on Appointments
c/o University Secretariat
Gilmour Hall, Room 210

Re: Recommendation of Name Change to the W.H. Kwok Chair in Spine Surgery Research

On behalf of the Faculty of Health Sciences, I would like to recommend the W.H. Kwok Chair in Orthopedic Spinal Surgery Research, approved in March 2021 be renamed to the W.H. Kwok Chair in Spine Surgery Research. This was on the advice of the Senate Committee on Appointments and has been approved by the donor Dr. Desmond Kwok.

The terms of reference for the Chair have been revised to include the new name change.

Yours sincerely,

Paul M. O'Byrne, MB, FRCP(C), FRSC
Dean and Vice-President
Faculty of Health Sciences

Encl.

PO/bvd

McMaster University | HEALTH SCIENCES

TERMS OF REFERENCE

W.H. Kwok Chair in Spine Surgery Research

General

A gift has been directed to the Faculty of Health Sciences to provide support for the *W.H. Kwok Chair in Spine Surgery Research*. The incumbent will have demonstrated excellence in the area of either orthopedic or neurosurgery in the focus area of the spine. The Chairholder will strive to push this area of specialty forward through advancing important scholarly research, with the specific focus of benefitting current patients.

Details and Duties

The holder of the Chair shall be an individual with sufficient research, education and clinical experience.

Specifically, the Chairholder will:

- Hold an appointment in the Department of Surgery in the Faculty of Health Sciences at McMaster University;
- Be an integral part of the institutional vision towards establishing and maintaining a world-class program in spinal surgery which exemplifies the central values of the University and the Department of Surgery;
- Contribute significantly to the body of scholarship in the area of spinal surgery through research and clinical work at McMaster University;
- Cultivate and nurture a cooperative approach to spine research from both the orthopedic surgery and neurosurgery disciplines;
- Ensure the enduring development of this discipline via the development/maintenance of a database to facilitate clinical research;
- Capture the importance of continuous quality improvement;
- Provide mentoring and leadership to future generations of academic health researchers in the Faculty of Health Sciences;
- Undertake the normal duties of a faculty member in the Faculty of Health Sciences and the Department of Surgery including participation in the education programs of the Faculty and Department.

Selection Process

The selection and designation of the Chairholder will be determined as follows:

- The Dean and Vice-President of the Faculty of Health Sciences will appoint an appropriate selection committee, which shall include, at a minimum, the Vice-Dean, Research, the Chair of the Department of Surgery, and the Associate Chair-Research of the Department of Surgery.
- The selection committee will invite and receive nominations for the Chair and make recommendations for the appointment to the Dean and Vice-President of the Faculty of Health Sciences for approval.
- Once approved, the Dean and Vice-President will forward the selection committee's recommendation to the Senate Committee on Appointments.

It is envisioned that the feasibility of a Division of Spine Surgery will be examined by the Chairholder, in collaboration with the Dean & Vice-President of the Faculty of Health Sciences and the Chair of the Department of Surgery. It is envisioned that faculty members from the orthopedic surgery and neurosurgery disciplines will alternate as holders of the Chair.

Term

An appointment to the Chair shall be for up to five (5) years, with the understanding that renewal for additional terms is possible based on satisfactory reviews.

Acknowledgement

The incumbent will acknowledge that they hold the *W.H. Kwok Chair in Spine Surgery Research* in all publications, lectures and any other activities supported through the fund.

March 2021

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April 19, 2021

To: Senate Committee on Appointments

From: Dr. Maureen J. MacDonald, Dean & Professor, Faculty of Science

Subject: **Amendments to Terms of Reference for Associate Deans, Faculty of Science**

Attached are amended Terms of Reference for the following academic administrative appointments in the Faculty of Science:

- Associate Dean (Academic)
- Associate Dean of Graduate Studies (Science)
- Associate Dean (Research & External Relations)

These new and amended Terms of Reference have been reviewed by Faculty Council of the Faculty of Science and the Associate Vice-President (Equity & Inclusion), as well as the Dean & Vice-Provost (Graduate Studies) (for the Associate Dean of Graduate Studies (Science) position).

If you have questions or would like me to appear at a Committee meeting to discuss these documents, please contact my office.

MJM/dob
Memo to SCA - Updates to ADs ToR - 2021-04-21 Revised FINAL.docx

McMaster University SCIENCE

Terms of Reference
Associate Dean (Academic), Faculty of Science

The Associate Dean (Academic), Faculty of Science is responsible for the Faculty's undergraduate academic and educational programs. ~~S/he~~The Associate Dean (Academic) will:

1. Provide leadership in defining, promoting, implementing, sustaining and evaluating teaching activity in the Faculty of Science that is consistent with the strategic priorities of the Faculty and the University.

2. Provide leadership in educational program development and implementation, including cross-departmental and cross-Faculty multidisciplinary initiatives.

3. Provide leadership in other academic matters and opportunities consistent with the strategic priorities of the Faculty and University.

4. Oversee the operations of the Office of the Associate Dean (Academic); direct a team of professional and administrative support personnel responsible for student recruitment/liaison, admission, registration, academic counseling, enrolment management, student records, academic program development, degree audit and review, curriculum and calendar matters, Science Career and Cooperative Education, among other responsibilities.

5. Work in conjunction with Departmental, Faculty, and University outreach and recruitment offices to raise the profile of the undergraduate programs in the Faculty of Science, in a manner that reflects the University and Faculty commitment to equity, diversity and inclusion (EDI), Indigenous priorities and accessibility aspirations, and to recruit the best students to the Faculty.

6. Develop educational policies and priorities and recommend these to the Dean and Faculty Council.

7. Liaise with the Office of the Associate Vice-President (Academic) and representatives of other Faculties on undergraduate-related matters.

8. Manage the budget of the Office of the Associate Dean (Academic).

9. Maintain liaison between undergraduate, graduate and research programs to ensure coherence and to promote integration.

10. Establish and maintain performance indicators to ensure benchmarking of educational performance. Work closely with Departments to review and evaluate existing programs.

11. Advise the Dean on resource needs, Faculty recruitment and mentoring.

12. Oversee various student groups in the Faculty of Science whose missions involve undergraduate matters, outreach, and education.

13. Communicate with students about individual situations related to academic matters (appeals, reinstatements, etc.) if necessary to clarify decisions made by the Office of the Associate Dean (Academic).

14. Chair, as requested by the Dean, review committees and other Faculty committees from time to time, as needed.

15. Discharge other such duties as may from time to time be assigned by the Dean.

16. On occasion, act as the Dean's delegate—specifically, in the absence of the Dean, the Associate Dean will represent the Dean on the various bodies, committees, or councils on which the Dean serves ex-officio; this representation will be assigned by the Dean as the occasion warrants.

17. Work closely with the Associate Dean ~~of~~ (Equity, Diversity ~~and~~ Inclusion & Indigeneity), Faculty of Science to assist with development, maintenance, improvement and integration of ~~Equity, Diversity and Inclusion~~EDI principles and practices in undergraduate programs, policies, and activities in the Faculty of Science.

18. Provide important leadership on initiatives that foster a culture of inclusion and accountability and that advance ~~Equity, Diversity, and Inclusion~~EDI goals consistent with the Faculty and University strategic priorities.

Normally, the term of the office of the Associate Dean (Academic) will be five years, renewable.

Membership on Faculty Standing Committees and Ad Hoc Committees

- ☐ Faculty Council
- ☐ Undergraduate Academic Planning and Policy Committee (Chair)
- ☐ Dean's Advisory Group
- ☐ Ad hoc committees on education, outreach, and other areas important for the Faculty

Membership on University Committees

- ☐ Undergraduate Council
- ☐ Enrolment Management Team
- ☐ Associate Deans' Group

Accountability: Dean, Faculty of Science

Note: The title and office of Associate Dean (Studies) changed to Associate Dean (Academic) effective July 1, 2012.

Terms of ReferenceAssociate Dean of Graduate Studies (Science)

The Associate Dean of Graduate Studies (Science) has the primary responsibility within the Faculty of Science for furthering McMaster's goals regarding graduate education and research training, and provides leadership and coordination of all activities related to those goals. The Associate Dean will normally have a five-year term of office, with the possibility of reappointment for a second term.

The Associate Dean reports to both the Vice-Provost and Dean of Graduate Studies and the Dean of the Faculty of Science. The Associate Dean works in a coordinated way with the Associate Deans of the Faculty of Science and the other Associate Deans of Graduate Studies to ensure that both Faculty-specific and University-wide goals are addressed.

Responsibilities include, but are not limited to:

~~a)~~ a) Working closely with the Vice-Provost and Dean of Graduate Studies and with the Dean of the Faculty of Science to assist with development, maintenance, and improvement of graduate programs in the Faculty of Science.

~~b)~~ b) Maintaining ongoing liaisons with the Associate Dean (Research and External Relations), Faculty of Science ~~and~~, the Associate Dean (Academic), Faculty of Science, and the Associate Dean (Equity, Diversity, ~~and~~ Inclusion & Indigeneity), Faculty of Science and the Associate Deans of Graduate Studies (Health Sciences, Engineering, Business, Humanities and Social Sciences) for matters relating to these areas as they affect graduate programs and research training.

~~c)~~ c) Providing input into and strategic planning for matters of graduate recruitment, admissions, and enrolment, development of new disciplinary and interdisciplinary programs, and student recruitment and retention that reflect the University and Faculty commitment to equity, diversity and inclusion (EDI), Indigenous priorities and accessibility aspirations.

~~d)~~ d) Overseeing quality assurance for new and on-going graduate programs within the Faculty of Science~~,~~ and facilitating internal and external reviews of graduate programs.

~~e)~~ e) Serving as a member on or Chair of University-wide and Faculty-specific committees

(including Chairing the Committee on Graduate Curriculum, Policy, Admissions and Study in the Faculty of Science, Co-Chairing the Scholarships Committee of the Graduate Council, Chairing, when so delegated by the Dean of the Faculty of Science, membership in the Graduate Council and Graduate Council Executive, and membership in the Faculty of Science Faculty Council).

~~f)~~ f) Interviewing candidates for tenured and tenure-track positions when requested, assessing the candidates' suitability for a faculty position at McMaster University, in alignment with Faculty and University Equity, Diversity and Inclusion priorities, particularly regarding graduate supervision.

g) Performing review and ranking of scholarship applications and chairing scholarship committees

h) Managing the graduate budget and identifying priorities to enhance graduate training and resource needs in the Faculty of Science.

~~g)~~ i) Performing functions specified in such documents as the Research Integrity Policy, including investigating allegations of research misconduct and, if found, represent the University's position at a Hearing~~.~~.

~~h)~~ j) Serving from time-to-time on bargaining teams in the University's negotiations (e.g., regarding the Teaching Assistant (TA) or Postdoctoral Fellow (PDF) collective agreements).

~~i)~~ k) Examining and proposing revisions to policies, procedures, and regulations to improve the operation of graduate programs and graduate student success.

~~j)~~ l) Encouraging and facilitating innovation in graduate education and research training within the Faculty of Science, and in conjunction with other Faculties in interdisciplinary programs.

~~k)~~ m) Working to enhance the quality of life and sense of community amongst the diverse group of graduate students and research trainees within the Faculty of Science and encourage their involvement in interdisciplinary activities.

~~l)~~ n) The evaluation of contracts involving graduate students (through the McMaster Industry Liaison Office (MILO)) and ensuring that such contracts do not breach the academic requirements of the University and the ability of the student to benefit from their own work.

~~m)~~ o) Discharging such duties as may be assigned by the Vice-Provost and Dean of Graduate Studies from time to time, including serving as Acting Dean in the Vice-Provost and Dean's absence.

~~n)~~ p) Meet with graduate program chairs and administrators on a regular basis to provide updates on decisions at Graduate Council, changes to operating procedures, and to solicit feedback on matters related to graduate studies and graduate students.

~~o)~~ q) Communicate best practices in graduate supervision and provide oversight and resolutions for graduate supervision issues, when necessary.

r) Work closely with the Associate Dean ~~of~~ (Equity, Diversity ~~and~~, Inclusion & Indigeneity), Faculty of Science to assist with development, maintenance, improvement and integration of ~~Equity, Diversity and Inclusion~~EDI principles and practices in graduate programs, policies, and activities in the Faculty of Science.

s) Provide important leadership on initiatives that foster a culture of inclusion and accountability and that advance EDI goals consistent with the Faculty and University strategic priorities.

The ideal candidate for this position will be an accomplished researcher, an excellent graduate mentor, and faculty member within the Faculty of Science. ~~He or she~~The candidate should have extensive experience in graduate education and research training, a strong understanding of and commitment to the role of graduate education in Science, demonstrated success in networking and collaboration, and excellent interpersonal and communication skills.

~~McMaster University is strongly committed to employment equity within its community and to recruiting a diverse faculty and staff. The University encourages applications from all qualified candidates, including women, members of visible minorities, Aboriginal persons, members of sexual minorities, and persons withdisabilities.~~

Approved by Senate June 7, 2017
Titles updated July 1, 2017

McMaster University

Policies, Procedures and Guidelines

Complete Policy Title:	Policy Number (if applicable):
Terms of Reference for Associate Dean (Research and External Relations) Faculty of Science	
Approved by: **Senate** **Board of Governors**	Date of Most Recent Approval: **October 12, 2005** **October 20, 2005**
Date of Original Approval(s):	Supersedes/Amends Policy dated:
Responsible Executive : **Dean of Science**	Enquiries: **University Secretariat**

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

Associate Dean, Research and External Relations

Terms of Reference

1) To promote leadership in defining, promoting, implementing, sustaining, and evaluating research activity in the Faculty of Science that is consistent with strategic priorities of the Faculty and University.

2) Provide leadership in the identification, promotion, and coordination of major research opportunities/initiatives with sponsored research programs from government, public, and private sectors.

3) Work in conjunction with Faculty and University advancement offices and public relations to raise profile of research in the Faculty of Science within the University and externally, and to identify new opportunities.

4) Develop research policies and priorities and recommend these to the Dean and Faculty Executive.

5) Develop strategies to enhance research funding and success from major provincial, national and international granting agencies, non-profit organizations, and private sectors.

6) Provide leadership in identification, coordination, and promotion of research partnerships internally, within the University, and externally.

7) Lead the design and implementation of an optimal research support infrastructure in the Faculty.

8) Liaison with the Office of the Vice President, Research and International Affairs, Office of Research Services, and Office of Research Contracts and Intellectual Property on research-related activities.

9) Maintain liaison between graduate and research programs to ensure coherence.

10) Inform strategic recruitment of Faculty and graduate students~~.~~ in a manner that reflects University and Faculty commitments to equity, diversity and inclusion (EDI), Indigenous priorities and accessibility aspirations.

11) Establish performance indicators to enable benchmarking research performance.

12) Management of Associate Dean's discretionary funds in support of research.

13) Chair, as requested by the Dean, review committees and other Faculty committees from time to time, as needed.

14) Discharge other such duties as may from time to time be assigned by the Dean.

15) Work closely with the Associate Dean ~~of~~ (Equity, Diversity, ~~and~~ Inclusion & Indigeneity), Faculty of Science to assist with development, maintenance, improvement and integration of EDI principles and practices in research programs, policies, and activities in the Faculty of Science.

16) Provide important leadership on initiatives that foster a culture of inclusion and accountability and that advance EDI goals consistent with the Faculty and University strategic priorities.

Membership on Faculty Standing Committees and Ad Hoc Committees

Faculty Council
Ad Hoc committees on strategic planning/advisory groups in research, education, and other areas important for the Faculty

Accountability
Dean, Faculty of Science


McMaster
University

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April 13, 2021

Senate Committee on Appointments
c/o University Secretariat
Gilmour Hall, Room 210

Re: Establishment of the Douglas Holder/PHRI Chair in Interventional Cardiology

On behalf of the Faculty of Health Sciences, I would like to recommend the establishment of the Douglas Holder/PHRI Chair in Interventional Cardiology.

Research overhead funding held within the Department of Medicine is being endowed and the Department of Medicine has committed annual matching funds to permanently support this position. The Chair will establish and maintain a world-class program in interventional cardiology.

The terms of reference for the Chair are attached.

Yours sincerely,

Paul M. O'Byrne, MB, FRCP(C), FRSC
Dean and Vice-President
Faculty of Health Sciences

Encl.

PO/bvd

TERMS OF REFERNCE

Douglas Holder/PHRI Chair in Interventional Cardiology

GENERAL

A transfer of funds has been directed to the Faculty of Health Sciences to provide support for the *Douglas Holder/PHRI Chair in Interventional Cardiology*. This Chair is created to support the research activity of an individual who has already achieved international leadership in the relevant area of research. This Chair is intended to strengthen the continued development of the program of research in interventional cardiology at PHRI. The incumbent will have demonstrated excellence in the area of interventional cardiology and cardiovascular research.

DETAILS AND DUTIES

The holder of the Chair shall be an individual with sufficient research, education and/or clinical experience to lead and develop a clinical research program in the area of Interventional Cardiology. Specifically, the Chair holder will:

- Be an active faculty member in the Department of Medicine in the Faculty of Health Sciences at McMaster University and a researcher at PHRI at the designation of Scientist or higher. The Chair holder will spend at least 50% of their time in research;
- Participate in the institutional vision towards establishing and maintaining a world-class program in Interventional Cardiology which exemplifies the central values of the University, the Department of Medicine and PHRI;
- Contribute significantly to the body of scholarship in the area of Interventional Cardiology through research at McMaster University and PHRI;
- Mentor junior scientists, faculty and fellows and build capacity for research in the relevant area at PHRI and the Department of Medicine;
- Undertake the normal duties of a faculty member in the Faculty of Health Sciences and the Department of Medicine, including participation in the education programs of the Department.

NOMINATION AND DESIGNATION OF THE CLINICAL RESEARCH CHAIRHOLDER:

The selection and designation of the Chair holder will be determined as follows:

- The Dean and Vice-President of the Faculty of Health Sciences will appoint an appropriate ad-hoc selection committee, with recommendations sought from the Executive Committee of the PHRI.
- The Selection Committee shall include, at a minimum, the Vice Dean, Research, the Chair of the Department of Medicine and the Executive Director of the PHRI.
- The selection committee will invite and receive nominations for the newly created Chair and make recommendations for the appointment to the Dean and Vice-President of the Faculty of Health Sciences.

- The Dean and Vice-President will forward the ad hoc selection committee's recommendation to the Senate Committee on Appointments.

CHAIRHOLDER ELIGIBILITY:

- Hold an appointment in the Department of Medicine in the Faculty of Health Sciences at McMaster University;
- Hold a Scientist or higher designation at PHRI while the Clinical Research Chair designation is in effect;
- Holds or has recently held (within the last 2 years) at least two grants (at least one of which is a peer review grant);
- Have a sustained record of high levels of publications in high impact journals;
- Have supervised and/or mentored PhD or Master's level research students or junior faculty.

TERM:

An appointment to the Douglas Holder/PHRI Chair in Interventional Cardiology shall be for up to five (5) years, with the understanding that renewal for additional terms is possible based on satisfactory reviews.

USE of FUNDS:

The funds are provided to enhance research productivity. It can therefore be used to replace part of current clinical earnings, to be used to support fellows or junior faculty, or to initiate pilot studies or any other research related activities subject to approval of the Director of PHRI and the Chair of the Department of Medicine.

REPORTING, EVALUATION AND RENEWAL OF RESEARCH CHAIRS:

Annual reporting and formal 5-year reviews are required of all PHRI Research Chairs. The PHRI Executive Committee and the Chair of the Department of Medicine will establish a committee to review the renewal and submit a recommendation for renewal to the Dean and Vice-President of the Faculty of Health Sciences.

ACKNOWLEDGEMENT

The incumbent will acknowledge that they hold the "*Douglas Holder/PHRI Chair in Interventional Cardiology"* in all publications, lectures and any other activities supported through the fund and will use this designation on letter heads. They will also recognize PHRI and McMaster University through acknowledgements in publications.

The Chair will be named in honor of Dr. Douglas Holder who was instrumental in establishing the interventional cardiology program in Hamilton.

January 2021