McMaster University | University Secretariat

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UNDERGRADUATE COUNCIL

Tuesday, March 24, 2026 at 2:30 p.m.
Gilmour Hall, Council Room (Room 111)

AGENDA

Page

1. Call to Order

2. Minutes of the Previous Meeting - February 24, 2026
Approval

3 - 8 Minutes - Undergraduate Council - February 24, 2026

3. Business Arising

4. Chair's Remarks

5. Report from the Awards Committee
R. da Silva

9 - 10 Report from the Awards Committee

11 - 43 **1. Revisions to the Undergraduate Calendar for 2026-2027**
J. Charron
Approval

Memo: Revisions to the Undergraduate Calendar
Revisions to the Undergraduate Calendar

44 - 46 **2. Terms of Awards**
Approval

a. Proposed New Awards
b. Proposed New Bursaries
c. Changes to Award Terms
d. Changes to Bursary Terms
e. Changes to Department Name
f. Academic Grants to be Removed from the Undergraduate Calendar

Report from the Office of the Registrar: Student Services & Financial Support

6. Report from the Committee on Certificates, Diplomas and Microcredentials
A. Schat

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48 - 55 **1. Certificate of Completion in Transcranial Magnetic Stimulation (TMS)**
R. da Silva
Approval

Certificate of Completion in Transcranial Magnetic Stimulation (TMS)

56 - 59 **2. Revisions to Concurrent Certificate Program**
R. Whyte
Approval

Concurrent Certificate in Human Anatomy (CCHA)

7. Report from the Curriculum & Admissions Committee
B. Marquis

60 - 61 Report from the Curriculum & Admissions Committee

62 - 191 **1. Addenda to Curriculum Revisions for Inclusion in the 2026-2027 Undergraduate Calendar**
Approval

a. Office of the Registrar
b. Faculty of Engineering
c. Faculty of Humanities
d. Faculty of Science

8. Other Business

9. Adjournment

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Meeting Minutes of the Undergraduate Council

Tuesday, February 24, 2026 at 2:30 p.m.
Gilmour Hall, Council Room (Room 111)

Attendance: Kim Dej (*Chair)*, Zubair Azizi, Sean Corner, Rosa da Silva, Gonzalo Dejo Mau, Mohammed Hussein, Ayesha Khan, Vivian Lewis, Karen McGarry, Caitlin Mullarkey, Beth Marquis, Eliza Ritchie, Aaron Schat, Mohammad Salhia, Rob Whyte, Michelle Zheng (*Associate University Secretary*), Kelly Snow (*Assistant University Secretary*)

Consultants: Cait Brooks, Jordan Charron, Lynn Giordano, Jennifer Hamilton, Carla Hodal, Cathy Mackenzie, Liz Maguire, Sarah Robinson, Greg Rombough, Maria White

Invited: Elliott Jeyaseelan, *Facility Technology Administrator, Facility Services*
Babu James, *Strategic Project Manager, Strategic Implementations, Office of the AVP and CTO*
Avi Khurana, *Business Analyst, UTS - IT Strategic Implementations*
Randall Walinga, *Director - Information Technology and Digital Learning Services at McMaster University - DeGroote School of Business*

Regrets: Blake Clayton, Sarah Dickson-Anderson, Sean Van Koughnett

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1. Call to Order

Kim Dej, *Chair of the Undergraduate Council,* called the meeting to order.

2. Minutes of the Previous Meeting - January 27, 2026

It was duly moved and seconded,

that the Undergraduate Council approve the minutes of the meeting held on January 27, 2026, as circulated.

The motion was ***Carried.***

3. Business Arising

There was no business arising.

4. Chair's Remarks

K. Dej noted that the Ontario government recently announced a $6.4 billion investment in the University sector, including an initial tuition increase with variable adjustments afterward and changes to Weighted Grant Units (WGU). At the same time, OSAP changes were introduced without consultation with universities and include reduced grants, which raises concerns about student affordability. While universities have limited control over tuition, housing, and cost of living, McMaster is exploring ways to reduce costs in areas such as textbooks and library resources.

5. Report from the Awards Committee

Rosa da Silva, *Chair of the Awards Committee,* presented the report.

1. Revisions to the University Aid and Awards Policy

At its meeting on February 3, 2026, the Undergraduate Council Awards Committee reviewed and approved revisions to the University Aid and Awards Policy. Jordan Charron, *Senior Associate Registrar, Student Services and Financial Support*, provided an overview.

From the list of equity-deserving groups, there was a suggestion to amend the terminology from “Latin American background” to “Latinx background”.

It was duly moved and seconded,

that the Undergraduate Council approve, for recommendation to the Senate, the proposed revisions to the University Aid and Awards Policy, effective March 11, 2026, as amended.

The motion was ***Carried.***

2. Terms of Award

At the same meeting, the Undergraduate Council Awards Committee reviewed and approved terms of awards for recommendation to the Undergraduate Council.

a. Proposed New Awards

b. Proposed New Bursaries
c. Changes to Award Terms
d. Changes to Bursary Terms
e. Bursaries to be Removed from the Undergraduate Calendar
f. Academic Grants to be Removed from the Undergraduate Calendar
g. Award Value Changes (information)

It was duly moved and seconded,

that the Undergraduate Council approve the recommendations contained in the Report from the Office of the Registrar & Financial Support, as circulated.

The motion was ***Carried.***

6. Report from the Committee on Certificates, Diplomas and Microcredentials

Aaron Schat, *Chair of the Joint Committee on Certificates, Diplomas and Microcredentials,* presented the report.

1. New Academic Microcredential in Equitable Activity, Mobility, and Community Health

At its meeting on February 3, 2026, the Joint Committee on Certificates, Diplomas and Microcredentials reviewed and approved a new academic Microcredential in Equitable Activity, Mobility, and Community Health, as recommended by the Faculty of Science. Rosa Da Silva**,** *Associate Dean, Undergraduate Studies***,** provided an overview of the microcredential.

It was duly moved and seconded,

that the Undergraduate Council approve, for recommendation to the Senate, the academic *Microcredential in Equitable Activity, Mobility, and Community Health,* as recommended by the Faculty of Science for inclusion in the 2026-2027 Undergraduate Calendar, and as circulated.

The motion was ***Carried.***

2. Revisions to Certificate and Diploma Programs

At the same meeting, the Joint Committee on Certificates, Diplomas and Microcredentials reviewed and approved revisions to the McMaster English Language Development (MELD) Diploma and to the Concurrent Certificate in Business Technology Management**.**

a. Faculty of Humanities

Sean Corner**,** *Associate Dean, Undergraduate Studies***,** provided an overview of the revisions.

There was a brief discussion regarding what may occur if a student fails a course. S. Corner noted that the Faculty would attempt to reach out if there was an attendance issue and otherwise would work with students where possible.

It was duly moved and seconded,

that the Undergraduate Council approve the revisions to the *McMaster English Language Development (MELD) Diploma*, to be piloted over a period of four years, as recommended by the Faculty of Humanities for inclusion in the *2026–2027 Undergraduate Calendar*, and as circulated.

The motion was ***Carried.***

b. Faculty of Business

A. Schat provided a brief overview of the revisions.

It was duly moved and seconded,

that the Undergraduate Council approve the revisions to the *Concurrent Certificate in Business Technology Management*, as recommended by the Faculty of Business for inclusion in the *2026-2027 Undergraduate Calendar,* and as circulated.

The motion was ***Carried.***

7. **Report from the Curriculum & Admissions Committee**

Beth Marquis, *Chair of the Curriculum & Admissions Committee*, presented the Committee's report.

1. Addenda to Curriculum Revisions for the 2026-2027 Undergraduate Calendar

At its meeting on February 3, 2026, the Curriculum and Admissions Committee approved, for recommendation to Undergraduate Council, addenda to curriculum revisions contained in the following reports for

inclusion in the *2026-2027 Undergraduate Calendar.* All minor curriculum addenda will be encompassed by the omnibus motion.

a. Faculty of Science

R. da Silva provided a brief overview of the report.

b. Faculty of Health Sciences

Rob Whyte, *Vice-Dean, Education*, provided a brief overview of the report.

c. Faculty of Humanities

S. Corner provided a brief overview of the report.

It was duly moved and seconded,

that the Undergraduate Council approve, for recommendation to the Senate, the establishment of the *Combined Honours Music & Another Subject (Biology) (B.A.)* as a major modification to the existing Combined Honours Music & Another Subject (B.A.) program, as recommended by the Faculty of Humanities for inclusion in the *2026–2027 Undergraduate Calendar*, and as amended.

The motion was ***Carried.***

It was duly moved and seconded,

that the Undergraduate Council approve, for recommendation to the Senate, the establishment of the *Combined Honours Music & Another Subject (Mathematics) (B.A.)* as a major modification to the existing Combined Honours Music & Another Subject (B.A.) program, as recommended by the Faculty of Humanities for inclusion in the *2026–2027 Undergraduate Calendar*, and as circulated.

The motion was ***Carried.***

It was duly moved and seconded,

that the Undergraduate Council approve, for recommendation to the Senate, the establishment of the *Combined Honours Music & Another Subject (Physics) (B.A.)* as a major modification to the

existing Combined Honours Music & Another Subject (B.A.) program, as recommended by the Faculty of Humanities for inclusion in the *2026–2027 Undergraduate Calendar*, and as circulated.

The motion was ***Carried.***

d. Faculty of Business

A. Schat provided a brief overview of the report.

It was duly moved and seconded,

that the Undergraduate Council approve the curriculum addenda proposed by the Faculties of Science, Health Sciences, Humanities and Business for inclusion in the 2026-2027 Undergraduate Calendar, as amended.

There was a minor amendment related to updating the fees listing for the Faculty of Health Sciences, as well as adding the effective date for the PhD referral program on page 7.

The motion was ***Carried.***

8. Presentation - Smart Campus Project

Babu James, *Strategic Project Manager, Strategic Implementations, Office of the AVP and CTO,* Avi Khurana, *Business Analyst, UTS - IT Strategic Implementations*, Randall Walinga, *Director - Information Technology and Digital Learning Services at McMaster University - DeGroote School of Business*, and Elliot Jeyaseelan**,** *Facility Technology Administrator, Facility Services,* joined the meeting. Several attendees delivered the presentation on the Smart Campus Project.

9. Other Business

K. Dej called for any other business.

10. Adjournment

As there was no other business, the meeting adjourned at 3:46 PM.

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Report to the Undergraduate Council
from the
Awards Committee

FOR APPROVAL

1. Revisions to the Undergraduate Calendar for 2026-2027

At its meeting on March 3, 2026, the Undergraduate Council Awards Committee reviewed and approved minor revisions to the Undergraduate Calendar for 2026-2027.

It is recommended,

that the Undergraduate Council approve the proposed revisions to the Undergraduate Calendar for 2026-2027, as circulated.

2. Terms of Award

At the same meeting, the Undergraduate Council Awards Committee reviewed and approved terms of awards for recommendation to the Undergraduate Council.

a. Proposed New Awards

The Dr. Gary Kugler Scholarship for Nuclear Education

b. Proposed New Bursaries

The Gio Entrance Bursary

c. Changes to Award Terms

The D.M. Davies Prize
The Gabriele Erasmi Travel Scholarship to Italy

d. Changes to Bursary Terms

The William David Broadhead Memorial Bursary
The Helen Caldwell Bursary
The Eleanor Turner Carment Bursary
The Terry Seawright Bursary

e. Changes to Department Name

Office of the Registrar, Aid & Awards to Office of the Registrar, Student Services & Financial Support
The McMaster Fall/Winter Work Program
The R. Ross Craig Memorial Fund Work Program
The Hamlin Family Foundation Work Program
The Sally Horsfall Work Program
The Humanities Communications Centre Work Endowment
The McMaster Summer Work Program

f. Academic Grants to be Removed from the *Undergraduate Calendar*

The Julie Patel Foundation Academic Grant (20007528)

It is recommended,

that the Undergraduate Council approve the recommendations contained in the Report from the Office of the Registrar & Financial Support, as circulated.

McMaster University

To: Undergraduate Awards Committee

From: Jordan Charron, Senior Associate Registrar, Student Services & Financial Support, Office of the Registrar

March 3, 2026

Subject: 2026-27 Calendar Updates

Purpose

This memo provides a summary of the proposed changes to the 2026-27 Undergraduate Calendar sections for Aid & Awards.

Summary of Changes

1. References to the organizational unit, Aid and Awards, have been replaced by Student Services & Financial Support throughout the document due to the change in the name of the department.

2. References to the Ministry of Colleges and Universities (MCU) have been replaced by Ministry of Colleges and Universities, Research Excellence and Security (MCURES) due to the name change by the Ministry.

3. Website URL has been updated.

Aid & Awards

OFFICE OF THE REGISTRAR, ~~AID & AWARDS~~STUDENT SERVICES & FINANCIAL SUPPORT

Gilmour Hall, Room 120
McMaster University
Hamilton, Ontario, L8S 4L8
~~https://registrar.mcmaster.ca/aid-awards/~~https://registrar.mcmaster.ca/services/

SENIOR ASSOCIATE REGISTRAR ~~AID & AWARDS~~STUDENT SERVICES & FINANCIAL SUPPORT

~~Vacant~~ Jordan Charron/ Ed.D

ASSISTANT REGISTRAR ~~GOVERNMENT AID PROGRAMS~~FINANCIAL SUPPORT

Rita Mukherjee/B.Sc., M.B.A.

The Office of the Registrar, ~~Aid & Awards~~ Student Services & Financial Support delivers government and University aid and award programs that support access, financial wellness and excellence at the post-secondary level. Our academic grant, award, bursary and work programs encourage and support
diversity and inclusivity in the recruitment, retention, and recognition of students, including those from equity-deserving groups. ~~Aid & Awards~~ Student Services & Financial Support administers government student aid, such as the Ontario Student Assistance Program (OSAP) and the US Direct Loans
Program, on behalf of various federal and provincial governments. For more information about our programs and services, visit ~~registrar.mcmaster.ca/aid-awards/~~https://registrar.mcmaster.ca/services/.

Regulations for Aid and Awards

The University supports the financial wellbeing of students in the delivery of aid and award programs, ensuring equity, consistency and transparency in administration. The University operates within the Senate approved University Aid and Awards Policy. While all regulations for Aid and Awards are established within this approved policy, the University may choose to offer additional Aid and Award programs, establish regulations through which to administer these programs, and/or modify existing regulations with Senate approval after the Undergraduate Calendar has been published. It is important to note that Financial Awards are not covered by the University Aid and Awards Policy and are not administered through the Aid and Award regulations that follow. The University Aid and Awards Policy is publicly viewable through the University Secretariat website. Financial Awards support students in a manner consistent with the goals of the University, but do not necessarily meet all the policy regulations of established Aid and Award programs. Financial Awards may be administered centrally through the Office of the Registrar, ~~Aid & Awards~~ Student Services & Financial Support, through the School of Graduate Studies (SGS), or through designated representatives in University faculties and departments that have established processes to administer their own funds (e.g. Athletics and Recreation). Financial Awards are not Senate-approved awards and thus, are not recognized at convocation or included on University transcripts. Information about Financial Awards is made available through department websites.

The following regulations apply to all Undergraduate Aid and Award Programs (and excludes Financial Awards, as detailed above):

Application Requirements

Some Aid and Awards require students to submit an application:

1. Application records for Aid and Awards, supporting documentation (e.g. transcripts, letters of reference, income tax notices of assessment, student loan entitlements, etc.) and responses to applications shall be handled by the administering office in accordance with the *Freedom of Information and Protection of Privacy Act (FIPPA)*.
2. Requirements for Aid and Awards by application typically include:
    - An online application submitted electronically through AwardSpring with completed consents and declarations or a completed signed paper-based application form
    - A completed common application submitted through AwardSpring for awards requiring a nomination
    - A statement of eligibility
    - An opportunity for applicants, particularly from equity-deserving groups, to voluntarily offer a narrative about their lived experiences
    - A curriculum vitae/academic resume
    - A transcript (McMaster University transcripts may be unofficial)
    - In addition, for the types of awards noted below, at least one academic or personal (non-family member) letter of reference may be required:
        i. University-wide Aid and Awards
        ii. Aid and Awards with a value exceeding $2000
        iii. Renewable Aid and Awards
        iv. Aid and Awards at the discretion of the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support
3. The University may choose to audit and verify any or all information provided to complete an Aid or Award Application.
4. Application records and supporting documentation are used by the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support, Award Chairs and Selection Committees for the sole purpose of administering Aid and Award programs, including, but not limited to, determining student eligibility.
5. All application records and supporting documentation will be retained for a minimum period of twelve months after last use.
6. All application records and supporting documentation remain the property of McMaster University.

Gender Criteria

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

Equity-Deserving Groups

Equity-deserving groups include Indigenous persons, members of racialized communities, women, and persons with disabilities. Indigenous, Black and Latinx students, students with disabilities and women in STEM fields are most underrepresented in universities as a consequence of individual bias and systemic barriers.

Maximums

To ensure a fair and wide allocation of Undergraduate Aid and Awards, the University restricts the number and value of aid and awards which students may receive for an academic year.

An eligible entering student may receive:

a. One Entrance Award granted solely on academic standing (e.g. the McMaster Award of Excellence); and
b. One Entrance Award, including those supporting Black, Racialized, Indigenous and International students, granted on the basis of academic standing and other forms of earned merit that requires an additional assessment process, including, but not limited to, application, interview and/or audition; and
c. One Entrance Academic Grant or Indigenous Student Entrance Academic Grant; and
d. One Entrance Bursary granted on the basis of earned merit that requires an additional assessment process, including, but not limited to, application, interview and/or audition, and additional bursary funding up to the amount eligible; and
e. Fall/Winter and Summer Work Program funding; and
f. Any number of Financial Awards

An eligible in-course or graduating student may receive:

a. Awards granted solely on academic standing, limited to either one award greater than or equal to $800 (considered a 'major' award) and one academic award less than $800 (considered a 'minor' award), or two academic awards less than $800; and
b. Two awards granted on the basis of academic standing and other forms of earned merit that requires an additional assessment process, including, but not limited to, application, interview and/or audition; and
c. Academic Awards continued from a previous year; and
d. Any number of prizes, which include non-monetary awards such as books and medals, and awards of nominal monetary value (currently $100 or less), whether based on academic standing or an additional assessment process; and
e. One Travel or Exchange Award; and
f. One Academic Grant (including any renewable Entrance, Indigenous Student Entrance, or In-Course Academic Grant continued from a previous year); and
g. One Community Contribution Award; and
h. One or more bursaries based on the student's financial situation up to the amount eligible; and
i. Fall/Winter and Summer Work program funding; and
j. Any number of Financial Awards

T4A tax slips are issued to students for all Aid and Award amounts received during the tax year.

It is important to note that Aid and Award income may affect federal and/or provincial government student aid (e.g. full-time OSAP) entitlements. Students are advised to review the status of their government student aid applications often and refer to the appropriate government website for further information.

Review of Aid and Award Decisions

1. Decisions made by Aid and Award selection committees are final. Students may not appeal these decisions.
2. Students who believe an error occurred at the University, that may have impacted an Aid and/or Award decision, are asked to write to the Senior Associate Registrar, ~~Aid & Awards~~Student Services & Financial Support requesting a review of their file.
3. Students who have compelling personal circumstances that preclude them from receiving initial payment and/or renewal of Aid and/or Award funding may submit a petition for special consideration to request that an exception to the policy and/or regulations be made. Petitions should be submitted to the Senior Associate Registrar, ~~Aid & Awards~~Student Services &

Financial Support and should include a cover letter explaining the need for special consideration, as well as any relevant documentation. Petitions must be submitted in a prompt and timely manner and will be accepted no later than one year after the decision being petitioned.

Privacy

1. When providing information to donors and others concerning award recipients (including publications such as convocation programs and award booklets), the release of such information shall comply with the *Freedom of Information and Protection of Privacy Act (FIPPA)* and the University's *Notice of Collection* statement. The University is permitted to publish an individual's name, Faculty, program, plan, level, and Award information. The University may publish the names of recipients of scholarships listed in the Undergraduate Calendar in the University's convocation program and other Award publications.
2. With permission, the University may also release an Aid recipient's first name, last name, Faculty, program, plan, level, Aid received and amount to the donor(s) of the Aid.
3. With permission, the University may also release an academic grant recipient's first name, last name, email id, faculty, program, plan, level, Academic Grant received and amount to the Faculty for the purpose of Faculty award ceremony invitations and Award booklets.
4. From time to time, the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support may reach out to Award recipients with requests for thank you letters, invitations to donor luncheons and events, invitations to discuss summer job opportunities or internships, interviews for McMaster University Advancement or Communications and Public Affairs, etc. Responses to these requests and/or attendance at these functions is entirely voluntary. While a response is appreciated, acceptance or rejection of these offers in no way impacts Aid and Award eligibility.
5. Mandatory annual reporting to Undergraduate Council Awards Committee, Undergraduate Council, and Senate include the release of an Award recipient's first name, last name, Faculty, program, plan, level, Award received and amount, submitted Travel Award reports, Aid and Award summary information and recognition of selection committee members.
6. Students with concerns regarding Aid and Award privacy, are asked to write to the Senior Associate Registrar, ~~Aid & Awards~~Student Services & Financial Support.

Entrance Bursaries

Entrance Bursary Regulations

1. Entrance Bursaries are non-repayable grants allocated on the basis of demonstrated financial need, which may also include a minimum expectation of academic standing or earned merit.
2. Entrance Bursaries are available to students admitted on the basis of high school admission requirements.
3. Entrance Bursaries are available to full-time and part-time students entering Level 1 of their first baccalaureate degree program.
4. Entrance Bursaries requiring full-time status are available to students enrolled in a full-time OSAP eligible full-time course load or equivalent in both the fall and winter terms.
5. Students who have enrolled at any post-secondary institution after graduation from high school are not eligible for Entrance Bursaries, unless:
    i. They are completing a certificate or diploma at McMaster University as a requirement of admission (e.g. the McMaster English Language Diploma), and/or
    ii. They have withdrawn from post-secondary studies before attending or before the deadline to drop and add courses in their first term of study.
6. Entrance Bursaries are available to students who are Canadian Citizens, Permanent Residents, Convention Refugees, or Protected Persons of Canada regardless of where they completed their high school education.
7. Entrance Bursaries are allocated on the basis of financial need, as demonstrated through a completed full-time Canadian federal and/or provincial government student aid application (e.g. full-time OSAP), for the academic year in which the student is entering Level 1 of their program.
8. Entrance Bursaries are allocated in adherence with the ~~Ministry of Colleges and Universities (MCU)~~ Ministry of Colleges, Universities, Research Excellence and Security (MCURES) policies, procedures and guidelines in place for the given academic year. The ~~MCU~~ MCURES Student Access Guarantee (SAG) currently specifies bursary amounts and payment deadlines for students in high tuition programs (e.g. Engineering, Business).
9. Entrance Bursary funds are limited.
10. Students may receive more than one Entrance Bursary to fill their Student Access Guarantee obligation or to meet the total bursary amount for their level of financial need.
11. In some cases, students may receive more than one Entrance Bursary (e.g. where a student meets a particular donor fund requirement or applies via a separate earned merit application process). In these cases, the bursary is awarded to the eligible student who demonstrates the greatest financial need as determined by the Office of the Registrar, Student Services & Financial Support.
12. Entrance Bursaries may specify a minimum admission average requirement and may consider one or more McMaster University calculated admission averages. An admission audition or portfolio score or equivalent may be included in the calculation of an average. Final grades for courses completed after June 30th in the year of admission application will not be considered in assessing eligibility for Entrance Bursaries.
13. Entrance Bursaries may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements including, but not limited to, submitting an application.
14. To be considered for an Entrance Bursary by application, students must submit a completed application by the specified deadline date.
15. Entrance Bursary applications which meet eligibility criteria are forwarded to a selection committee for review and ranking.
16. The greater calculated financial need is used to break any tie.

17. Students may receive a maximum of one Entrance Bursary by application.
18. Students must be enrolled in at least the full-time OSAP eligible course load used to determine their eligibility for the Entrance Bursary to have the Entrance Bursary payment processed.
19. All Entrance Bursary payments are disbursed through the McMaster Student Account and are applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support.
20. Entrance Bursaries are typically disbursed September through the end of December.
21. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture or adjustment in the value of the Entrance Bursary. Students are advised to consult with the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support, prior to making any changes to their program of study or course load.
22. Students withdrawing from courses without failure by default in the Fall term may see an adjustment in the value of their Entrance Bursary or see the full amount returned to the University.
23. Any adjustment made to a student's account, in order to return all or a portion of an Entrance Bursary to the University, will consider the balance available at the time of the adjustment and may put a student's account into deficit.
24. Some Entrance Bursaries may be renewable (see In-Course and Renewal Bursary Regulations).
25. The University may choose not to grant an Entrance Bursary in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools for bursaries by application, where complete applications have not been received.
26. The University may remove specific Entrance Bursaries from the University Calendar, may revise the terms and stated value and/or suspend the granting of Entrance Bursaries (e.g. donor funds).
27. Entrance Bursaries supported by donor funds may have additional eligibility requirements.

In-Course Bursaries

In-Course and Renewal Bursary Regulations

1. In-Course Bursaries are non-repayable grants, allocated on the basis of demonstrated financial need, which may also include a minimum expectation of academic standing or earned merit.
2. In-Course Bursaries are available to full-time and part-time students enrolled in an undergraduate degree program, excluding the Physician Assistant, and M.D., and Nursing Program (at the Mohawk site). Physician Assistant and M.D. can access In-Course Bursaries through the relevant program office. A limited number of bursaries are also available to true part-time students enrolled in diploma and certificate programs offered through McMaster Continuing Education, who have completed at least 50% of that course work on a part-time basis.
3. In-Course Bursaries requiring full-time status are available to students enrolled in an OSAP eligible full-time course load or equivalent in both the fall and winter terms.
4. Second degree students are eligible for In-Course Bursaries
5. In-Course Bursaries are available to students who are Canadian Citizens, Permanent Residents, Convention Refugees and Protected Persons of Canada.
6. Students who are not Canadian Citizens, Permanent Residents, Convention Refugees or Protected Persons of Canada, who are enrolled in Level 2 or higher, are eligible to be considered for a limited number of In-Course Bursaries for International students.
7. In-Course Bursaries are allocated on the basis of financial need, as demonstrated through a completed Canadian federal and/or provincial government student aid application (e.g. full-time OSAP), completed standard University need profiles and/or discussions with designated staff on campus (e.g. a Student Loans Officer) who confirm the need for bursary assistance through submission of additional supporting documentation, for the academic year in which the student is being considered.
8. In-Course Bursaries are allocated in adherence with the ~~Ministry of Colleges and Universities (MCU)~~ Ministry of Colleges, Universities, Research Excellence and Security (MCURES) policies, procedures and guidelines in place for the given academic year. The ~~MCU~~ MCURES Student Access Guarantee (SAG) specifies payment deadlines for students in high tuition programs (e.g. Engineering, Business).
9. In-Course Bursaries for non-SAG students are allocated according to financial need based on government student aid entitlements, or equivalent, with higher bursary amounts assigned to students demonstrating higher levels of financial need. Bursary amounts are set by the Office of the Registrar, Student Services & Financial Support annually.
10. In-Course Bursary funds are limited.
11. Students may receive more than one In-Course or Renewal Bursary as part of their Student Access Guarantee allocation or up to the total bursary amount for which they are eligible.
12. In some cases, students may receive more than one bursary (e.g. where a student meets a particular donor fund requirement or applies via a separate earned merit application process). In these cases, the bursary is awarded to the eligible student who demonstrates the greatest financial need as determined by the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support.
13. The greater demonstrated financial need is used to break any tie.
14. In-Course Bursaries may consider one or more McMaster University calculated averages (e.g. Cumulative Grade Point Average).
15. In-Course Bursaries may specify a minimum average requirement.
16. In-Course Bursaries may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements including, but not limited to, submission of an application.

17. To be considered for an In-Course Bursary by application, students must submit a completed application by the specified deadline date.
18. In-Course Bursary applications which meet eligibility criteria are forwarded to a selection committee for review and ranking.
19. Students must be enrolled in at least the course load used to determine their eligibility for the In-Course Bursary to have the In-Course Bursary payment processed.
20. Students must meet the renewal requirements specified in the terms of their Entrance or In-Course Bursary to receive a renewal payment.
21. All In-Course Bursary payments are disbursed through the McMaster Student Account and are applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support.
22. MAPS bursary payments are disbursed in the fall, winter and spring/summer terms, once the drop and add period for the term has passed. All In-Course Bursaries are typically disbursed no later than mid-February (the ~~MCU~~ MCURES winter term payment deadline).
23. Forfeiture of a renewable Entrance or In-Course Bursary also cancels all future instalments of the bursary.
24. Students wishing to defer the benefits of bursary renewal to the next academic year should make the request in writing to the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support. Approval is not automatic and deferments are not normally granted for more than one academic year.
25. Students holding a renewable Entrance or In-Course Bursary who choose to accelerate their program and to complete their degree earlier than normal by completing Spring/Summer courses and who wish to employ the benefits of their renewable bursary to defray the tuition and compulsory fees for those courses should make the request in writing to The Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support.
26. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture or adjustment in the value of the In-Course Bursary. Students are advised to consult with the Office of the Registrar, prior to making any changes to their program of study or course load.
27. Students who withdraw may see an adjustment in the value of their In-Course or Renewal Bursary or see the full amount returned to the University.
28. Any adjustment made to a student's account, in order to return all or a portion of an In-Course or Renewal Bursary to the University, will consider the balance available at the time of the adjustment and may put a student's account into deficit.
29. The University may choose not to grant an In-Course Bursary in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools for bursaries by application, where complete applications have not been received.
30. The University may remove specific In-Course Bursaries from the University Calendar, may revise the terms and stated value and/or suspend the granting of In-Course Bursaries (e.g. donor funds).
31. In-Course Bursaries supported by donor funds may have additional eligibility requirements.

Physician Assistant Education Program Bursaries

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Physician Assistant Program Bursary Regulations

1. Physician Assistant Bursaries are non-repayable grants, allocated on the basis of demonstrated financial need, which may also include a minimum expectation of academic achievement or other miscellaneous criteria.
2. Physician Assistant Bursaries are available to students enrolled in the Physician Assistant Program.
3. Physician Assistant Bursaries are available to students who are Canadian Citizens, Permanent Residents, Convention Refugees or Protected Persons of Canada.
4. Physician Assistant Bursaries are automatically allocated on the basis of financial need as demonstrated through a completed full-time OSAP application.
5. Physician Assistant Bursaries are allocated in adherence with the ~~Ministry of Colleges and Universities (MCU)~~ Ministry of Colleges, Universities, Research Excellence and Security (MCURES) policies, procedures and guidelines in place for the given academic year. The ~~MCU~~ MCURES Student Access Guarantee (SAG) currently specifies bursary amounts and payment deadlines for Physician Assistant Bursaries.
6. Physician Assistant Program students may receive more than one bursary up to the amount for which they are eligible.
7. The greater demonstrated financial need is used to break any tie.
8. Students must be enrolled in the Physician Assistant Program to have a bursary payment processed.
9. If a Physician Assistant Bursary is renewable, students must meet the renewal requirements specified in the bursary terms to receive a renewal payment.
10. All Physician Assistant Bursary payments are disbursed through the McMaster Student Account and are applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, ~~Aid & Awards~~ Student Services & Financial Support.
11. All Physician Assistant Bursary payments are typically disbursed no later than the end of November.
12. Forfeiture of a renewable Physician Assistant Bursary also cancels all future instalments of the bursary.
13. Students wishing to defer the benefits of bursary renewal to the next academic year should make the request in writing to the Physician Assistant Program Office. Approval is not automatic and deferments are not normally granted for more than one academic year.
14. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture or adjustment in the value of the Physician Assistant Bursary.
15. Students who withdraw may see an adjustment in the value of their Physician Assistant Bursary or see the full amount returned to the University.
16. Any adjustment made to a student's account, in order to return all or a portion of a Physician Assistant Bursary to the University, will consider the balance available at the time of the adjustment and may put a student's account into deficit.
17. The University may choose not to grant a Physician Assistant Bursary in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools for bursaries by application, where complete applications have not been received.
18. The University may remove specific Physician Assistant Bursaries from the University Calendar, may revise the terms and stated value and/or suspend the granting of Physician Assistant Bursaries (e.g. donor funds).
19. Physician Assistant Bursaries supported by donor funds may have additional eligibility requirements.

Work Programs

McMaster Work Program Regulations

1. Work Programs provide meaningful employment opportunities, with approved University employers, to students who demonstrate financial need.
2. Students with completed full-time Canadian federal and/or provincial government student aid applications (e.g. full-time OSAP) with a calculated entitlement of at least $1 demonstrate financial need for the purpose of Work Program participation.
3. Students without government aid applications, including Indigenous students, International students, students with government aid restrictions, students with permanent disabilities studying at a lesser course load, Nursing students at the Mohawk site, and students on Social Assistance who complete a standard University need profile and show at least $1 in need demonstrate financial need for the purpose of Work Program participation.
4. Students who meet with designated staff on campus (e.g. a Student Loans Officer) who confirm the need for Work Program assistance through submission of additional supporting documentation demonstrate financial need for the purpose of Work Program participation.
5. International Students with a valid study permit who reside in Canada for the duration of their period of employment are able to participate in Work Programs.
6. Students wishing to participate in the fall and/or winter terms must be enrolled in the terms in which they wish to participate and must submit a complete Fall/Winter Work Program application through AwardSpring by the specified deadline date.
7. Students wishing to participate in the summer term must have been in a full-time OSAP eligible course load in the preceding fall or winter term and must submit a complete Summer Work Program application through AwardSpring by the specified deadline date.
8. Students are encouraged to apply for Work Program Approval as soon as the Work Program applications open, as there are more students interested in participating in Work Programs than jobs available.
9. Students approved for Work Program participation are provided a Work Program Approval notification.
10. Students approved for Work Program participation apply for approved positions posted under Career Opportunities in Mosaic. Job posting dates are advertised on the Office of the Registrar website ~~https://registrar.mcmaster.ca/aid-awards/~~ https://registrar.mcmaster.ca/financial-support/
11. Students review approved positions and apply for those for which they feel they are qualified.
12. Students must provide a copy of their Work Program Approval when they apply to a position with a prospective employer.
13. Prospective employers review job applications and invite students to participate in their employee selection and hiring process. University employers use their own criteria for selecting eligible Work Program students for interview and/or hire.
14. Approval for Work Program participation does not guarantee the student will be hired for an approved Work Program position.
15. Approved Work Program students are restricted to accepting one Fall/Winter position and one Summer Work position in a given academic year.
16. Once hired, students may work no earlier than the published start date of the Work Program and no later than the published end date of the Work Program.
17. Employers and students must adhere to all applicable employment legislation and McMaster Human Resources' policies and guidelines.
18. Students must maintain satisfactory work performance and attendance.
19. University employers have the right to terminate student employment where work performance and/or attendance is unsatisfactory.

20. Students are advised that employers may or may not recognize University mid-term recesses as a scheduled break from work and may or may not be able to accommodate requests for time off. Students should discuss work requirements with their employers.
21. Students must report enrolment status and work program earnings, as required, by their government aid program.
22. Students earn at least minimum wage and are paid by the hiring employer through Payroll.
23. The Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support, provides partial reimbursement of an approved Work Program student's salary to the employer from operating monies and donor trust funds.
24. The University may choose to no longer offer Work Programs and may choose to limit the number of approved participants due to funding limitations.
25. The University may remove specific Work Program funds from the University Calendar, may revise the terms and stated value and/or suspend the allocation of Work Program funds (e.g. donor funds).
26. Work Program participation supported by donor funds may have additional eligibility requirements.

Entrance Academic Grants

Entrance Academic Grant Regulations

1. Entrance Academic Grants are monetary awards allocated on the basis of academic standing, and in some cases other forms of earned merit, and demonstrated financial need.
2. Entrance Academic Grants are available to students admitted full-time on the basis of high school admission requirements.
3. Entrance Academic Grants are available to full-time and part-time students entering Level 1 of their first baccalaureate degree program.
4. Students who have enrolled at any post-secondary institution after graduation from high school are not eligible for Entrance Academic Grant, unless:
    i. They are completing a certificate or diploma at McMaster University as a requirement of admission (e.g. the McMaster English Language Diploma), and/or
    ii. They have withdrawn from post-secondary studies before attending or before the deadline to drop and add courses in their first term of study.
5. Entrance Academic Grants are available to students who are Canadian Citizens or Permanent Residents of Canada, Convention Refugees, or Protected Persons of Canada regardless of where they completed their high school education.
6. International students are not eligible for Academic Grants.
7. Entrance Academic Grants first consider one or more McMaster University calculated admission and scholarship averages (e.g. final admission average).
8. Students must achieve a minimum 80% in the average(s) used to determine Entrance Academic Grant eligibility. An admission audition, portfolio score, or equivalent may be included in the calculation of an average.
9. Averages for Entrance Academic Grants are calculated using the course grades that form the basis for admission to the Level 1 program. Final grades for courses completed after June 30th in the year of admission application will not be considered in assessing eligibility for Entrance Academic Grants.
10. Entrance Academic Grants requiring full-time status are available to students enrolled full-time or equivalent in both the fall and winter.
11. Entrance Academic Grants may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements including, but not limited to, submitting an application, participating in an interview, performing an audition, or developing a portfolio.
12. To be considered for an Entrance Academic Grant by application, students must submit a complete application by the specified deadline date.
13. Entrance Academic Grant applications which meet eligibility criteria are forwarded to a selection committee for review and ranking.
14. Entrance Academic Grants are allocated on the basis of an eligible course load and financial need as demonstrated through a completed Canadian federal and/or provincial government student aid application (e.g. full-time OSAP) or a completed standard University need profile for the academic year in which the student is entering Level 1 of their program.
15. The greater calculated financial need is used to break any tie.
16. Students may receive a maximum of one Entrance Academic Grant.
17. Students must be enrolled in at least the full-time OSAP eligible course load used to determine their eligibility to have an Entrance Academic Grant payment processed.
18. All Entrance Academic Grant payments are disbursed through the McMaster Student Account and are applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support.

19. Entrance Academic Grants are typically disbursed September through the end of December.
20. Entrance Academic Grant recipients will have their awards noted on their University transcript.
21. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture or adjustment in the value of the Entrance Academic Grant. Students are advised to consult with the Office of the Registrar prior to making any changes to their program of study or course load.
22. Students withdrawing from courses without failure by default in the Winter term will forfeit their Entrance Academic Grant.
23. Students who forfeit their Entrance Academic Grant will have their grant cancelled and their transcript notation removed. Students must return the Entrance Academic Grant funding to their McMaster Student Account.
24. Some Entrance Academic Grants are renewable (see In-Course and Renewal Academic Grant Regulations).
25. The University may choose not to grant an Entrance Academic Grant in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools for awards by application, where complete applications have not been received.
26. The University may remove specific Entrance Academic Grants from the University Calendar, may revise the terms and stated value and/or suspend the granting of Entrance Academic Grants (e.g. donor funds).
27. Entrance Academic Grants supported by donor funds may have additional eligibility requirements.

In-Course Academic Grants

In-Course and Renewal Academic Grant Regulations

1. In-Course Academic Grants are monetary awards allocated on the basis of academic standing, and in some cases other forms of earned merit, and demonstrated financial need.
2. In-Course Academic Grants are available to full-time and part-time students enrolled in their first baccalaureate degree program who are not in their graduating term.
3. In-Course Academic Grants requiring full-time status are available to students enrolled full-time or equivalent in both the fall and winter terms.
4. In-Course Academic Grants will require either a minimum Cumulative Grade Point Average of 8.0 calculated on at least 18 graded units or a Fall-Winter Average of 9.5 calculated on the basis of graded units in at least a full-time OSAP eligible course load per term in the prior academic year.
5. In-Course Academic Grants first consider available averages, units upon which averages are calculated, program level and enrolled units in the ranking of academic standing.
6. In-Course Academic Grants may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements including, but not limited to, submitting an application, participating in an interview, performing an audition or developing a portfolio.
7. To be considered for an In-Course Academic Grant by application, students must submit a complete application by the specified deadline date.
8. In-Course Academic Grant applications which meet eligibility criteria are forwarded to a selection committee for review and ranking.
9. In-Course Academic Grants that are automatically assessed are allocated on the basis of an eligible course load and financial need as determined by a completed full-time OSAP application for the current academic year. In-Course Academic Grants by application may use a full-time OSAP application or a standard University need profile.
10. The greater calculated financial need is used to break any tie.
11. Some In-Course Academic Grants are renewable.
12. Entrance, Indigenous Student Entrance and In-Course Academic Grant renewals may be based on a minimum Cumulative Grade Point Average of 8.0, or a minimum Fall-Winter Average of 9.5 from the prior academic year based on their full-time OSAP eligible course load or equivalent. An OSAP application for the current year is not required to renew an Entrance or In-Course Academic Grant.
13. Students may receive a maximum of one In-Course Academic Grant or renewal of a prior year Entrance, Indigenous Student Entrance or In-Course Academic Grant.
14. Students must be enrolled in at least the full-time OSAP eligible course load or equivalent used to determine their eligibility to have an In-Course Academic Grant payment processed. Students must be enrolled in the fall term in a full-time OSAP eligible course load or equivalent to have the renewal of a prior year Entrance or In-Course Academic Grant payment processed.
15. All In-Course Academic Grants and Academic Grant renewal payments are disbursed through the McMaster Student Account and are applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support.
16. In-Course Academic Grants are typically disbursed no later than the end of December. Academic Grant renewal payments are typically disbursed no later than the end of September.
17. In-Course Academic Grant recipients will have their awards noted on their University transcript. Academic Grant renewals are not noted on transcripts.

18. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture or adjustment in the value of the In-Course Academic Grant or Entrance or In-Course Academic Grant renewal. Students are advised to consult with the Office of the Registrar, prior to making any changes to their program of study or course load.
19. Students withdrawing from courses without failure by default in the Winter term will forfeit their Academic Grant renewal.
20. Students who forfeit their Academic Grant will have their grant cancelled and their transcript notation removed if forfeited in first year of payment only. Students must return the Academic Grant funding to their McMaster Student Account.
21. Forfeiture of a renewable Academic Grant also cancels all future instalments of the Academic Grant.
22. Students wishing to defer the benefits of an Academic Grant renewal to the next academic year should make the request in writing to the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support. Approval is not automatic and deferments are not normally granted for more than one academic year.
23. Students holding renewable Academic Grants who choose to accelerate their program and to complete their degree earlier than normal by completing Spring/Summer courses and who wish to employ the benefits of their renewable Academic Grant to defray the tuition and compulsory fees for those courses should make the request in writing to the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support.
24. The University may choose not to grant an In-Course Academic Grant in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools for awards by application, where complete applications have not been received.
25. The University may remove specific In-Course Academic Grants from the University Calendar, may revise the terms and stated value and/or suspend the granting of In-Course Academic Grants (e.g. donor funds).
26. In-Course Academic Grants supported by donor funds may have additional eligibility and renewal requirements.

Indigenous Student Entrance Academic Grants

Indigenous Student Entrance Academic Grant Regulations

1. Indigenous Student Entrance Academic Grants are monetary awards allocated on the basis of academic standing, and in some cases other forms of earned merit, and demonstrated financial need.
2. Indigenous Student Entrance Academic Grants are available to students entering Level 1 of their first baccalaureate degree program whether direct from high school or an alternate pathway including, but not limited to, college, an Indigenous post-secondary institution or other University.
3. Indigenous Student Entrance Academic Grants are available to students who are Canadian Citizens or Permanent Residents of Canada, and those who self-identify as First Nations, Metis, or Inuit, regardless of status under the Indian Act or where they completed their high school education.
4. Indigenous Student Entrance Academic Grants are available to full-time and part-time students entering Level 1 of their first baccalaureate degree program.
5. Indigenous Student Entrance Academic Grants first consider one or more McMaster University calculated admission and scholarship averages (e.g. final admission average).
6. Students must achieve the minimum final admission average required for their program to be eligible for an Indigenous Student Entrance Academic Grant.
7. Averages for Indigenous Student Entrance Academic Grants are calculated using the course grades that form the basis for admission to the Level 1 program. Final grades for courses completed after June 30th in the year of admission application will not be considered in assessing eligibility for Entrance Academic Grants.
8. Indigenous Student Entrance Academic Grants requiring full-time status are available to students enrolled full-time or equivalent in both the fall and winter.
9. Indigenous Student Entrance Academic Grants may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements including, but not limited to, submitting an application, participating in an interview, performing an audition or developing a portfolio.
10. To be considered for an Indigenous Student Entrance Academic Grant by application, students must submit a complete application by the specified deadline date.
11. Indigenous Student Entrance Academic Grant applications which meet eligibility criteria are forwarded to a selection committee for review and ranking.
12. Indigenous Student Entrance Academic Grants are allocated on the basis of an eligible course load and financial need as demonstrated through a completed Canadian federal and/or provincial government student aid application (e.g. full-time OSAP) or a completed standard University need profile for the academic year in which the student is entering Level 1 of their program.
13. The greater calculated financial need is used to break any tie.
14. Students may receive a maximum of one Entrance Academic Grant or Indigenous Student Entrance Academic Grant.
15. Students must be enrolled in at least the full-time OSAP eligible course load used to determine their eligibility to have an Indigenous Student Entrance Academic Grant payment processed.
16. All Indigenous Student Entrance Academic Grant payments are disbursed through the McMaster Student Account and are applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support.
17. Indigenous Student Entrance Academic Grants are disbursed September through the end of December.
18. Indigenous Student Entrance Academic Grant recipients will have their awards noted on their University transcript.

19. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture or adjustment in the value of the Indigenous Student Entrance Academic Grant. Students are advised to consult with the Office of the Registrar prior to making any changes to their program of study or course load.
20. Students withdrawing from courses without failure by default in the Winter term will forfeit their Indigenous Student Entrance Academic Grant.
21. Students who forfeit their Indigenous Student Entrance Academic Grant will have their grant cancelled and their transcript notation removed. Students must return the Indigenous Student Entrance Academic Grant funding to their McMaster Student Account.
22. Some Indigenous Student Entrance Academic Grants are renewable (see In-Course and Renewal Academic Grant Regulations).
23. The University may choose not to grant an Indigenous Student Entrance Academic Grant in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools for awards by application, where complete applications have not been received.
24. The University may remove specific Indigenous Student Entrance Academic Grants from the University Calendar, may revise the terms and stated value and/or suspend the granting of Indigenous Student Entrance Academic Grants (e.g. donor funds).
25. Indigenous Student Entrance Academic Grants supported by donor funds may have additional eligibility requirements.

Entrance Awards

Entrance Awards Regulations

Entrance Awards are monetary awards allocated on the basis of academic standing and, in some cases, other forms of earned merit.

1. Entrance Awards are available to students admitted full-time on the basis of high school admission requirements.
2. Entrance Awards are available to students entering Level 1 of their first baccalaureate degree program.
3. Students who have enrolled at any post-secondary institution after graduation from high school are not eligible for Entrance Awards unless:
    i. They are completing a certificate or diploma at McMaster University as a requirement of admission (e.g. the McMaster English Language Diploma),
    and/or
    ii. They have withdrawn from post-secondary studies before attending or before the deadline to drop and add courses in their first term of study.
4. Entrance Awards are available to all domestic and international students.
5. Entrance Awards are available to students who pay fees to McMaster University.
6. Students may receive a maximum of one Entrance Award granted solely on the basis of academic standing (e.g. a McMaster University Entrance Award ~~of Excellence~~ or Achievement Award) and one Entrance Award granted on the basis of an application or other earned merit.
7. Entrance Awards first consider one or more McMaster University calculated admission and scholarship averages (e.g. final admission average).
8. Students must achieve a minimum 80% in the average(s) used to determine Entrance Award eligibility. An admission audition or portfolio score, or equivalent, may be included in the calculation of an average.
9. Averages for Entrance Awards are calculated using the course grades that form the basis for admission to the Level 1 program. Final grades for courses completed after June 30th in the year of admission application will not be considered in assessing eligibility for Entrance Awards.
10. Entrance Awards may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements, including, but not limited to, submitting an application, participating in an interview, performing an audition or developing a portfolio.
11. To be considered for an Entrance Award by application, students must submit a complete application by the specified deadline date.
12. Entrance Award applications which meet eligibility criteria are forwarded to a selection committee for review and ranking.
13. Students must enrol in the fall term to have an Entrance Award payment processed.
14. To be eligible for International Entrance awards, international students must be paying international tuition fees and enrolled in courses full-time during the fall and winter terms. If their tuition fees change to domestic status, they are no longer eligible for international student entrance awards.
15. All Entrance Award payments are disbursed through the McMaster Student Account and are applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support.
16. Entrance Awards are typically disbursed no later than the end of September.
17. Entrance Award recipients will have their awards noted on their University transcript.

18. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture or adjustment in the value of the award. Students are advised to consult with the Office of the Registrar prior to making any changes to their program of study or course load.
19. Students withdrawing from courses on or before *the last day for withdrawing from courses without failure by default* in the Fall term will forfeit their Entrance Award.
20. Students who forfeit their Entrance Award will have their award cancelled and their transcript notation removed. Students must return the Entrance Award funding to their McMaster Student Account.
21. Some Entrance Awards are renewable (see In-Course Award and Renewals Regulations).
22. Students wishing to defer the benefits of an Entrance Award to the following academic year should apply to the Office of the Registrar, Admissions, for deferral of both admission and stated scholarship value. Approval of applications for deferral is not automatic, and deferrals are not normally granted for more than one academic year.
23. The University may choose not to grant an Entrance Award in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools for awards by application, where complete applications have not been received.
24. Deferred award eligibility and value will be determined by the regulations from the academic year the award was originally offered.
25. The University may remove specific Entrance Awards from the University Calendar, may revise the terms and stated value, and/or suspend the granting of Entrance Awards (e.g. donor funds).
26. Entrance Awards supported by donor funds may have additional eligibility requirements.

Graduating Student Awards

Graduating Student Awards Regulations

1. Graduating Student Awards are monetary and non-monetary awards allocated on the basis of academic standing and, in some cases, other forms of earned merit.
2. Graduating Student Awards are normally available to all full-time and part-time students graduating from their first undergraduate degree program. Graduating Student Awards are not available to second degree students unless the terms of a donor award specify eligibility and the student has not received the award previously.
3. Graduating Student Awards requiring full-time status are available to students enrolled full-time or equivalent in both the fall and winter terms.
4. Graduating Student Awards intended for true part-time students are available to students who have completed at least 50% of all units attempted in their undergraduate degree program at McMaster on a part-time basis.
5. Graduating Student Awards are available to all domestic and international students.
6. Students are considered for all available Graduating Student Awards in the spring following their graduating term.
7. While students typically apply for Graduating Student Awards in AwardSpring, students with degrees conferred at Fall Convocation are only able to apply for Graduating Student Awards by application the following spring using pdf application forms available through the Office of the Registrar at ~~https://registrar.mcmaster.ca/aid-awards/~~.https://registrar.mcmaster.ca/financial-support/.
8. Graduating Student Awards are available to students with a minimum Cumulative Grade Point Average of 8.0 calculated on at least 60 graded units.
9. Available averages, units upon which averages are calculated, program level, and enrolled units may be used to break any ties in an award competition.
10. Graduating Student Awards may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements including, but not limited to, submitting an application.
11. To be considered for a Graduating Student Award by application or by nomination, students must submit a complete application by the specified deadline date.
12. Graduating Student Award applications which meet award eligibility criteria are forwarded to a selection committee for review and ranking.
13. All Graduating Student Award payments are disbursed through the McMaster Student Acco~~unt and are~~ applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, Aid & AwardsStudent Services & Financial Support.
14. Graduating Student Awards are typically disbursed no later than the end of May.
15. Graduating Student Award recipients will have their awards noted on their University transcripts.
16. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture of a Graduating Student Award. Students are advised to consult with the Office of the Registrar prior to making any changes to their program of study.
17. Graduating Student Award recipients who do not have their degree conferred as expected will forfeit their award.
18. Students who forfeit their awards will have their award cancelled and their transcript notation removed. Students must return any non-monetary award to the Office of the Registrar and any award funding to their McMaster Student Account.
19. The University may choose not to grant a Graduating Student Award in the absence of a suitable candidate; may choose to limit the number of recipients where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools where complete applications have not been received.

20. The University may remove specific Graduating Student Awards from the University Calendar, may revise the terms and stated value and/or suspend the granting of Graduating Student Awards (e.g. donor funds).
21. Graduating Student Awards supported by donor funds may have additional eligibility requirements.

In-Course Awards

In-Course and Renewal Award Regulations

1. In-Course Awards are monetary and non-monetary awards allocated on the basis of academic standing and, in some cases, other forms of earned merit. Non-monetary awards such as medals and books as well as monetary awards of nominal value (currently $100 or less) are called prizes.
2. In-Course Awards are available to full-time and part-time students enrolled in an undergraduate degree program (excluding the Physician Assistant and M.D. Programs), at the time of award application and selection, who are returning to McMaster to continue their studies.
3. In-Course Awards requiring full-time status are available to students enrolled full-time or equivalent in both the fall and winter terms.
4. In-Course Awards requiring part-time status are available to students who are not enrolled full-time in the fall and/or winter terms. In addition, true part-time awards are only available to students who have completed at least 50% of all units attempted at McMaster on a part-time basis.
5. In-Course Awards are available to all domestic and international students.
6. In-Course Awards are not available to second degree students unless the terms of a donor award specify eligibility and they have not received the award previously.
7. In-Course Awards are not available to students in their graduating term.
8. In-Course Awards may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements, including, but not limited to, submitting an application.
9. In-Course Awards requiring an application that are determined by Cumulative Grade Point Average require a minimum Cumulative Grade Point Average of 8.0 on at least 18 graded units, while those determined by Fall-Winter Average require a minimum Fall-Winter Average of 9.5 on at least 18 graded units.
10. In-Course Awards adjudicated without need of an application that are determined by Cumulative Grade Point Average require a minimum 8.0 on at least 24 graded units, while those determined by Fall-Winter Average require a minimum 9.5 on at least 24 graded units.
11. For nursing specific In-Course awards, due to the structure of the program, they are open to full-time and part-time course loads with a minimum of 24 Cumulative Units.
12. Available averages, units upon which averages are calculated, program level, and enrolled units, may be used to break any ties in an award competition.
13. To be considered for an In-Course Award by application or by nomination, students must submit a complete application by the specified deadline date.
14. In-Course Award applications which meet award eligibility criteria are forwarded to a selection committee for review and ranking.
15. Some In-Course Awards are renewable.
16. Entrance, Indigenous Entrance, and In-Course Award renewals determined by Cumulative Grade Point Average or Fall-Winter Average require a minimum 8.0 on at least 18 graded units.
17. All In-Course Award payments are disbursed through the McMaster Student Account and applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support.
18. In-Course Awards are typically disbursed no later than the end of September.

19. In-Course Awards will be disbursed if the recipient continues to be enrolled in a McMaster degree program, or a specific McMaster program, when explicitly required by the terms of the award, or the student's record reflects they are on exchange, on letter of permission, or participating in a coop or internship opportunity at McMaster University.
20. In-Course Award recipients will have their awards noted on their University transcripts. Entrance and In-Course renewals are not noted on transcripts.
21. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture of an In-Course Award or Entrance or In-Course Award renewal. Students are advised to consult with the Office of the Registrar prior to making any changes to their program of study or course load.
22. If a student is approved to graduate or transfers to graduate in the fall, after the awarding decision and/or disbursement is made, the student will forfeit the award.
23. Students withdrawing from courses without failure by default will forfeit their In-Course Award or Entrance or In-Course Award renewal.
24. Students who forfeit their In-Course award will have their award cancelled and their transcript notation removed if forfeited in first year of payment only. Students must return the In-Course Award or Entrance or In-Course Award renewal funding to their McMaster Student Account.
25. Forfeiture of a renewable Entrance or In-Course Award also cancels all future instalments of the award.
26. Students wishing to defer the stated value of an In-Course Award or Entrance or In-Course Award renewal to the next academic year should make the request in writing to the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support. Approval is not automatic and deferments are not normally granted for more than one academic year.
27. Students holding renewable Entrance or In-Course Awards who choose to accelerate their program and to complete their degree earlier than normal by completing Spring/Summer courses and who wish to employ the benefits of their renewable Entrance and/or In-Course Awards to defray the tuition and compulsory fees for those courses should make the request in writing to the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support.
28. The University may choose not to grant an In-Course Award in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools where complete applications have not been received.
29. The University may remove specific In-Course Awards from the University Calendar, may revise the terms and stated value and/or suspend the granting of In-Course Awards (e.g. donor funds).
30. In-Course Awards supported by donor funds may have additional eligibility and renewal requirements.

Part-Time In-Course Awards

In-Course and Renewal Award Regulations

1. In-Course Awards are monetary and non-monetary awards allocated on the basis of academic standing and, in some cases, other forms of earned merit. Non-monetary awards such as medals and books as well as monetary awards of nominal value (currently $100 or less) are called prizes.
2. In-Course Awards are available to full-time and part-time students enrolled in an undergraduate degree program (excluding the Physician Assistant and M.D. Programs), at the time of award application and selection, who are returning to McMaster to continue their studies.
3. In-Course Awards requiring full-time status are available to students enrolled full-time or equivalent in both the fall and winter terms.
4. In-Course Awards requiring part-time status are available to students who are not enrolled full-time in the fall and/or winter terms. In addition, true part-time awards are only available to students who have completed at least 50% of all units attempted at McMaster on a part-time basis.
5. In-Course Awards are available to all domestic and international students.
6. In-Course Awards are not available to second degree students unless the terms of a donor award specify eligibility and they have not received the award previously.
7. In-Course Awards are not available to students in their graduating term.
8. In-Course Awards may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements, including, but not limited to, submitting an application.
9. In-Course Awards requiring an application that are determined by Cumulative Grade Point Average require a minimum Cumulative Grade Point Average of 8.0 on at least 18 graded units, while those determined by Fall-Winter Average require a minimum Fall-Winter Average of 9.5 on at least 18 graded units.
10. In-Course Awards adjudicated without need of an application that are determined by Cumulative Grade Point Average require a minimum 8.0 on at least 24 graded units, while those determined by Fall-Winter Average require a minimum 9.5 on at least 24 graded units.
11. For nursing specific In-Course awards, due to the structure of the program, they are open to full-time and part-time course loads with a minimum of 24 Cumulative Units.
12. Available averages, units upon which averages are calculated, program level, and enrolled units, may be used to break any ties in an award competition.
13. To be considered for an In-Course Award by application or by nomination, students must submit a complete application by the specified deadline date.
14. In-Course Award applications which meet award eligibility criteria are forwarded to a selection committee for review and ranking.
15. Some In-Course Awards are renewable.
16. Entrance, Indigenous Entrance, and In-Course Award renewals determined by Cumulative Grade Point Average or Fall-Winter Average require a minimum 8.0 on at least 18 graded units.
17. All In-Course Award payments are disbursed through the McMaster Student Account and applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support.
18. In-Course Awards are typically disbursed no later than the end of September.

19. In-Course Awards will be disbursed if the recipient continues to be enrolled in a McMaster degree program, or a specific McMaster program, when explicitly required by the terms of the award, or the student's record reflects they are on exchange, on letter of permission, or participating in a coop or internship opportunity at McMaster University.
20. In-Course Award recipients will have their awards noted on their University transcripts. Entrance and In-Course renewals are not noted on transcripts.
21. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture of an In-Course Award or Entrance or In-Course Award renewal. Students are advised to consult with the Office of the Registrar prior to making any changes to their program of study or course load.
22. If a student is approved to graduate or transfers to graduate in the fall, after the awarding decision and/or disbursement is made, the student will forfeit the award.
23. Students withdrawing from courses without failure by default will forfeit their In-Course Award or Entrance or In-Course Award renewal.
24. Students who forfeit their In-Course award will have their award cancelled and their transcript notation removed if forfeited in first year of payment only. Students must return the In-Course Award or Entrance or In-Course Award renewal funding to their McMaster Student Account.
25. Forfeiture of a renewable Entrance or In-Course Award also cancels all future instalments of the award.
26. Students wishing to defer the stated value of an In-Course Award or Entrance or In-Course Award renewal to the next academic year should make the request in writing to the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support. Approval is not automatic and deferments are not normally granted for more than one academic year.
27. Students holding renewable Entrance or In-Course Awards who choose to accelerate their program and to complete their degree earlier than normal by completing Spring/Summer courses and who wish to employ the benefits of their renewable Entrance and/or In-Course Awards to defray the tuition and compulsory fees for those courses should make the request in writing to the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support.
28. The University may choose not to grant an In-Course Award in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools where complete applications have not been received.
29. The University may remove specific In-Course Awards from the University Calendar, may revise the terms and stated value and/or suspend the granting of In-Course Awards (e.g. donor funds).
30. In-Course Awards supported by donor funds may have additional eligibility and renewal requirements.

In Course Awards-Second Degree Eligible

In-Course and Renewal Award Regulations

1. In-Course Awards are monetary and non-monetary awards allocated on the basis of academic standing and, in some cases, other forms of earned merit. Non-monetary awards such as medals and books as well as monetary awards of nominal value (currently $100 or less) are called prizes.
2. In-Course Awards are available to full-time and part-time students enrolled in an undergraduate degree program (excluding the Physician Assistant and M.D. Programs), at the time of award application and selection, who are returning to McMaster to continue their studies.
3. In-Course Awards requiring full-time status are available to students enrolled full-time or equivalent in both the fall and winter terms.
4. In-Course Awards requiring part-time status are available to students who are not enrolled full-time in the fall and/or winter terms. In addition, true part-time awards are only available to students who have completed at least 50% of all units attempted at McMaster on a part-time basis.
5. In-Course Awards are available to all domestic and international students.
6. In-Course Awards are not available to second degree students unless the terms of a donor award specify eligibility and they have not received the award previously.
7. In-Course Awards are not available to students in their graduating term.
8. In-Course Awards may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements, including, but not limited to, submitting an application.
9. In-Course Awards requiring an application that are determined by Cumulative Grade Point Average require a minimum Cumulative Grade Point Average of 8.0 on at least 18 graded units, while those determined by Fall-Winter Average require a minimum Fall-Winter Average of 9.5 on at least 18 graded units.
10. In-Course Awards adjudicated without need of an application that are determined by Cumulative Grade Point Average require a minimum 8.0 on at least 24 graded units, while those determined by Fall-Winter Average require a minimum 9.5 on at least 24 graded units.
11. For nursing specific In-Course awards, due to the structure of the program, they are open to full-time and part-time course loads with a minimum of 24 Cumulative Units.
12. Available averages, units upon which averages are calculated, program level, and enrolled units, may be used to break any ties in an award competition.
13. To be considered for an In-Course Award by application or by nomination, students must submit a complete application by the specified deadline date.
14. In-Course Award applications which meet award eligibility criteria are forwarded to a selection committee for review and ranking.
15. Some In-Course Awards are renewable.
16. Entrance, Indigenous Entrance, and In-Course Award renewals determined by Cumulative Grade Point Average or Fall-Winter Average require a minimum 8.0 on at least 18 graded units.
17. All In-Course Award payments are disbursed through the McMaster Student Account and applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support.
18. In-Course Awards are typically disbursed no later than the end of September.

19. In-Course Awards will be disbursed if the recipient continues to be enrolled in a McMaster degree program, or a specific McMaster program, when explicitly required by the terms of the award, or the student's record reflects they are on exchange, on letter of permission, or participating in a coop or internship opportunity at McMaster University.
20. In-Course Award recipients will have their awards noted on their University transcripts. Entrance and In-Course renewals are not noted on transcripts.
21. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture of an In-Course Award or Entrance or In-Course Award renewal. Students are advised to consult with the Office of the Registrar prior to making any changes to their program of study or course load.
22. If a student is approved to graduate or transfers to graduate in the fall, after the awarding decision and/or disbursement is made, the student will forfeit the award.
23. Students withdrawing from courses without failure by default will forfeit their In-Course Award or Entrance or In-Course Award renewal.
24. Students who forfeit their In-Course award will have their award cancelled and their transcript notation removed if forfeited in first year of payment only. Students must return the In-Course Award or Entrance or In-Course Award renewal funding to their McMaster Student Account.
25. Forfeiture of a renewable Entrance or In-Course Award also cancels all future instalments of the award.
26. Students wishing to defer the stated value of an In-Course Award or Entrance or In-Course Award renewal to the next academic year should make the request in writing to the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support. Approval is not automatic and deferments are not normally granted for more than one academic year.
27. Students holding renewable Entrance or In-Course Awards who choose to accelerate their program and to complete their degree earlier than normal by completing Spring/Summer courses and who wish to employ the benefits of their renewable Entrance and/or In-Course Awards to defray the tuition and compulsory fees for those courses should make the request in writing to the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support.
28. The University may choose not to grant an In-Course Award in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools where complete applications have not been received.
29. The University may remove specific In-Course Awards from the University Calendar, may revise the terms and stated value and/or suspend the granting of In-Course Awards (e.g. donor funds).
30. In-Course Awards supported by donor funds may have additional eligibility and renewal requirements.

Travel and Exchange Awards

Travel and Exchange Award Regulations

1. Travel and Exchange Awards are monetary awards allocated on the basis of academic standing and, in some cases, other forms of earned merit.
2. Travel and Exchange Awards are available to full-time and part-time students enrolled in Level 2 or above of their first undergraduate degree program, at the time of award application and selection, who are returning to McMaster to continue their studies.
3. Travel and Exchange Awards requiring full-time status are available to students enrolled full-time or equivalent in both the fall and winter terms.
4. Travel and Exchange Awards are available to all domestic and international students.
5. Travel and Exchange Awards are not available to second degree students.
6. Travel and Exchange Awards are not available to students in their graduating term.
7. Students are limited to one Travel and Exchange Award per application cycle.
8. Travel and Exchange Awards are available to students with a minimum Cumulative Grade Point Average of 7.0 on a minimum of 18 graded units.
9. Available averages, units upon which averages are calculated, program level, and enrolled units may be used to break any ties in an award competition.
10. Exchange Awards are available to students participating in an approved formal exchange program during the academic year immediately following the application deadline.
11. Travel Awards are available to students travelling to earn academic credit, pursue experiential learning opportunities, complete research or projects, participate in relief efforts, volunteer or work. Some Travel Awards may be for travel within Canada, while others may support the student outside Canada or internationally. Travel Award recipients must travel during the summer, fall and/or winter terms immediately following the application deadline.
12. Travel and Exchange Awards may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements including, but not limited to, submitting an application.
13. To be considered for a Travel and Exchange Award by application, students must submit a complete application by the specified deadline date.
14. Travel and Exchange Award applications which meet award eligibility criteria are forwarded to a selection committee for review and ranking.
15. All Travel and Exchange Award payments are disbursed through the McMaster Student Account and applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support.
16. Travel and Exchange Awards are typically disbursed no later than the end of April.
17. Travel and Exchange Award recipients will have their awards noted on their University transcripts.
18. It is the responsibility of Travel and Exchange Award recipients to make all travel and exchange arrangements. Recipients are required to assess travel risks, have a plan of action in place for emergencies, and ensure they have proper medical and other insurance in place prior to departure.
19. Travel and Exchange Awards will not be issued for travel when University advisories and/or official global travel advisories have been issued to avoid non-essential travel outside Canada and to areas deemed as 'do not travel areas' per Global Affairs Canada.

20. Travel and Exchange Award recipients may be required to complete a risk assessment and/or safety component and/or waiver prior to departure as dictated by other University policies. Those participating in exchange opportunities must attend mandatory Exchange Pre-Departure Orientation sessions and complete Terms for Participation Forms, Liability Waivers, and Statement of Responsibilities Forms.
21. Travel and Exchange Award recipients are asked to submit, and consent to the publication of, a report of their travel or exchange experience when they return to their studies at McMaster. Reports are submitted to the Office of the Registrar. Student submitted reports are included in the annual reports made to the Undergraduate Council Awards Committee, Undergraduate Council and Senate, and are shared with donors.
22. Travel and Exchange Awards allocated to students who do not travel or participate in their formal exchange as indicated on their application will forfeit their award.
23. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture of a Travel and Exchange Award. Students are advised to consult with the Office of the Registrar prior to making any changes to their program of study or course load.
24. Students who forfeit their award will have their award cancelled and their transcript notation removed. Students must return the Travel and Exchange Award funding to their McMaster Student Account.
25. The University may choose not to grant a Travel and Exchange Award in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools where complete applications have not been received.
26. The University may remove specific Travel and Exchange Awards from the University Calendar, may revise the terms and stated value and/or suspend the granting of Travel and Exchange Awards.
27. Travel and Exchange Awards supported by donor funds may have additional eligibility requirements.

Exchange Bursaries

Exchange Bursary Regulations

1. Exchange Bursaries are non-repayable grants intended to assist students who otherwise would not be able to participate in exchange opportunities due to financial hardship.
2. Exchange Bursaries are allocated on the basis of demonstrated financial need, which may also include a minimum expectation of academic standing or other earned merit for students approved for exchange.
3. Exchange Bursaries are available to full-time and part-time students enrolled in Level 2 or above of their first undergraduate degree program, at the time of bursary application and selection, who are returning to McMaster to continue their studies.
4. Exchange Bursaries requiring full-time status are available to students enrolled in a full-time OSAP eligible course load or equivalent at the time of bursary application and selection.
5. Exchange Bursaries are only available to students who are Canadian Citizens, Permanent Residents, Convention Refugees and Protected Persons of Canada.
6. Exchange Bursaries are allocated on the basis of financial need, as demonstrated through a completed Canadian federal and/or provincial government student aid application (e.g. full-time OSAP) or completed standard University need profiles and an Exchange Bursary Application for the academic year in which the student is being considered.
7. Exchange Bursaries are allocated according to financial need, with higher bursary amounts assigned to students demonstrating higher levels of financial need. Bursary amounts are set by the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support.
8. Exchange Bursary funds are limited.
9. Students are limited to one Exchange Bursary in their first undergraduate degree program.
10. The greater demonstrated financial need is used to break any tie.
11. Exchange Bursaries may consider one or more McMaster University calculated averages (e.g. Cumulative Grade Point Average).
12. Exchange Bursaries may specify a minimum average requirement.
13. Exchange Bursaries may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements including, but not limited to, submitting an application.
14. To be considered for an Exchange Bursary by application, students must submit a completed application by the specified deadline date.
15. Exchange Bursary applications which meet eligibility criteria are forwarded to a selection committee for review and ranking.
16. Students must be enrolled in at least the course load used to determine their eligibility for the Exchange Bursary to have the Exchange Bursary payment processed.
17. All Exchange Bursary payments are disbursed through the McMaster Student Account and are applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support.
18. Exchange Bursaries are typically disbursed no later than the end of May.
19. Exchange Bursaries are available to students participating in an approved formal exchange program during the academic year immediately following the application deadline.
20. It is the responsibility of Exchange Bursary recipients to make all exchange arrangements. Recipients are required to assess travel risks, have a plan of action in place for emergencies, and ensure they have proper medical and other insurance in place prior to departure.

21. Exchange Bursaries will not be issued for travel when University advisories and/or official global travel advisories have been issued to avoid non-essential travel outside Canada and to areas deemed as 'do not travel areas' per Global Affairs Canada.
22. Exchange Bursary recipients may be required to complete a risk assessment and/or safety component and/or waiver prior to departure as dictated by other University policies and must attend mandatory Exchange Pre-Departure Orientation sessions and complete Terms for Participation Forms, Liability Waivers, and Statement of Responsibilities Forms.
23. Students who do not participate in their formal exchange as identified on their application will forfeit their bursary. Exchange bursaries are granted for a specific period of travel; deferrals are not normally granted. Students deferring exchange plans to another academic year should reapply in the next cycle.
24. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture of an Exchange Bursary. Students are advised to consult with the Office of the Registrar prior to making any changes to their program of study or course load.
25. Students who forfeit their Exchange Bursary must return the full bursary amount to their McMaster Student Account.
26. The University may choose not to grant an Exchange Bursary in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools for bursaries by application where complete applications have not been received.
27. The University may remove specific Exchange Bursaries from the University Calendar, may revise the terms and stated value and/or suspend the granting of Exchange Bursaries.
28. Exchange Bursaries supported by donor funds may have additional eligibility requirements.

Emergency Bursaries

Emergency Bursary Regulations

1. An Emergency Bursary, grocery store gift cards and meal cards are non-repayable grants that may be available to enrolled students who find themselves in extreme circumstances or are experiencing unexpected financial hardship.
2. Students with emergency needs must meet with a representative from the Office of the Registrar, during drop-in counselling hours to discuss their financial circumstances. Indigenous students may choose to meet with representatives in Indigenous Student Services to discuss their financial circumstances. Other referral networks exist on campus to support students in crisis, such as Security Services, Indigenous Student Services and Student Support and Case Management.
3. Students are required to complete a bursary application.
4. Students may be required to submit supporting documentation to confirm financial need and/or extreme circumstances, as determined by the Office of the Registrar, ~~Aid & Awards~~Student Services & Financial Support.
5. All Emergency Bursary payments are disbursed through the McMaster Student Account.
6. The University may remove specific Emergency Bursaries from the University Calendar, may revise the terms and stated value and/or suspend the granting of Emergency Bursaries (e.g. donor funds).
7. Emergency Bursaries supported by donor funds may have additional eligibility requirements.

McMaster University | Office of the Registrar

Student Services & Financial Support

Gilmour Hall, Room #120
1280 Main Street West,
Hamilton, ON L8S 4L8
registrar.mcmaster.ca

TO: Undergraduate Council
FROM: Undergraduate Council Awards Committee
DATE: March 24, 2026

PROPOSED NEW AWARDS FOR APPROVAL

Incourse Awards

The Dr. Gary Kugler Scholarship for Nuclear Education
Established in 2025 by the friends and family of Dr. Kugler.
Requirements: To be awarded to undergraduate students enrolled in either the Faculty of Engineering or the Faculty of Science who attain high averages and demonstrate an interest in nuclear studies through course work, and/or participation in clubs, teams or societies.
Typically available: 1 x $2,000

PROPOSED NEW BURSARIES FOR APPROVAL

Entrance Bursaries

The Gio Entrance Bursary
Established in 2026 by two grateful Mac graduates (1998) in honour of the incredible friendships, learning, and growth experienced at Mac.
Requirements: To be granted to undergraduate students entering Level 1 in any Arts & Science, Humanities or Engineering programs who demonstrate financial need. Preference will be given to students who self-identify as equity-deserving.

CHANGES TO AWARD TERMS FOR APPROVAL

Travel & Exchange Awards

The D.M. Davies Prize
Established in 1984 by friends, colleagues and former students in recognition of Professor Douglas Davies for his outstanding contribution to the Department of Biology during 34 years of service.
Requirements: To be awarded to ~~a student~~ undergraduate students enrolled in Level 2 or above of an Honours program in Biology, ~~and~~ who attain high averages. ~~, , in the judgment of the Department of Biology, attains attain a grade of at least an A- in BIOLOGY 2F03 and who registers register in BIOLOGY 3R03 or BIOLOGY 4J03 (Field Biology) in the following summer session.~~ Completion of BIOLOGY 3RF0 and departmental permission in either BIOLOGY 3R03 or BIOLOGY 4JO3 (Field Biology) is required.

The Gabriele Erasmi Travel Scholarship to Italy
Established in 2003 by the Dante Alighieri Society of Hamilton, the Department of Linguistics and Languages, the Julian-Dalmatians of Hamilton, and friends, in honour of Dr. Gabriele Erasmi, distinguished Faculty member of the Department of Linguistics and Languages.
Requirements: To be awarded to ~~an outstanding student who has completed~~ undergraduate students enrolled in Level 2 or above of a Humanities program. The purpose of the scholarship is to assist with the expenses of travel and study in Italy for academic credit at McMaster University. The applicant must submit a plan of study for approval.

CHANGES TO BURSARY TERMS FOR APPROVAL

Incourse Bursaries

The William David Broadhead Memorial Bursary
Established in 2003 by family in memory of William David Broadhead (Class of ~~'39~~ 1939) under the McMaster Student Opportunity Fund II initiative.
Requirements: To be granted to ~~a student~~ undergraduate students in the Faculty of Humanities who demonstrate~~s~~ financial need. Preference will be given to ~~a student~~ students enrolled in a program in the Department of English and Cultural Studies.

The Helen Caldwell Bursary
Established in 2000 by Helen Caldwell (Class of 1942, Faculty of Humanities).
Requirements: To be granted to undergraduate students enrolled in ~~any program~~ Gender Studies courses who demonstrate financial need. Preference will be given to students enrolled in ~~a Gender Studies program or~~ any ~~other~~ program in the Faculty of Humanities.

The Eleanor Turner Carment Bursary
Established in 1997 by Eleanor Turner Carment under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to ~~a student~~ undergraduate students enrolled in Gender Studies courses who demonstrate~~s~~ financial need. Preference will be given to ~~a student~~ students enrolled in ~~a Women's Studies program~~ any program in the Faculty of Humanities.

The Terry Seawright Bursary
Established in 1996 by Terry Seawright, ~~L~~ lecturer in the ~~Faculty of Business~~ DeGroote School of Business.
Requirements: To be granted to ~~a student~~ undergraduate students in the ~~Commerce program~~ DeGroote School of Business who demonstrate~~s~~ financial need. Preference will be given to ~~the student~~ students who ~~has~~ have completed ~~COMMERCE 2MA3~~ an Introduction to Marketing course and attained a grade of at least B.

CHANGES TO DEPARTMENT NAME (Included in all terms of the McMaster Work Programs)

Office of the Registrar, Aid & Awards → Office of the Registrar, Student Services & Financial Support

1. The McMaster Fall/Winter Work Program
2. The R. Ross Craig Memorial Fund Work Program
3. The Hamlin Family Foundation Work Program
4. The Sally Horsfall Work Program
5. The Humanities Communications Centre Work Endowment
6. The McMaster Summer Work Program

ACADEMIC GRANTS to be removed from the Undergraduate Calendar

1. The Julie Patel Foundation Academic Grant (20007528)

McMaster University | University Secretariat

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Report to the Undergraduate Council
from the
Joint Committee on Certificates, Diplomas and Microcredentials

FOR APPROVAL

1. New Certificate of Completion in Transcranial Magnetic Stimulation (TMS)

At its meeting on March 3, 2026, the Joint Committee on Certificates, Diplomas and Microcredentials reviewed and approved a new Certificate of Completion in Transcranial Magnetic Stimulation (TMS), as recommended by the Faculty of Science.

It is recommended,

that the Undergraduate Council approve, for recommendation to the University Planning Committee and the Senate, the *Certificate of Completion in Transcranial Magnetic Stimulation (TMS),* as recommended by the Faculty of Science and as circulated.

2. Revisions to Concurrent Certificate Programs

At the same meeting, the Joint Committee on Certificates, Diplomas and Microcredentials reviewed and approved revisions to the Concurrent Certificate in Human Anatomy (CCHA), as recommended by the Faculty of Health Sciences.

It is recommended,

that the Undergraduate Council approve the revisions to the *Concurrent Certificate in Human Anatomy (CCHA)* recommended by the Faculty of Health Sciences for inclusion in the *2026–2027 Undergraduate Calendar*, as circulated.

Undergraduate Council
For Approval
March 24, 2026

McMaster University

SCIENCE

Undergraduate Submission Certificates, Diplomas & Microcredentials for the 2026-27 Undergraduate Calendar

Presented to the Faculty of Science General Faculty
February 26, 2026

1. NEW PROGRAMS

1.1. **Department of Kinesiology, Certificate of Completion Program Proposal**

Department & Program Information	
Program:	Faculty of Science
Course Name:	Certificate of Completion in Transcranial Magnetic Stimulation (TMS)
Credential:	Non-Academic Certificate of Completion
Name of Representative:	Aimee Nelson
Effective Date:	May 2026
Date of Submission:	January 30, 2026
Program Information:	
Program Overview	The TMS Certification Course offered via Neuro-Mod and accredited through McMaster University provides an in-depth exploration of transcranial magnetic stimulation (TMS) and repetitive TMS (rTMS). Designed for technicians, researchers, and clinicians, this comprehensive three-day program combines theoretical knowledge with hands-on training in the latest neuromodulation techniques. Participants will gain an understanding of the physics that underpins TMS, explore its various clinical and research applications, and learn the technical skills needed to perform safe and effective rTMS procedures. The course covers essential topics such as motor hotspot identification, motor threshold determination, neuronavigation, and patient safety protocols. Additionally, it will explore both on-label (e.g., drug-resistant depression) and off-label (e.g., chronic pain) uses of rTMS, as well as advanced research techniques like paired-pulse TMS and TMS-EEG integration.
Learning Objectives	1. **Understand the theoretical principles** of TMS and repetitive TMS, including device operation, pulse characteristics, and physiological effects. 2. **Develop hands-on skills** in TMS techniques, including but not limited to motor threshold determination, motor mapping, and repetitive stimulation procedures. 3. **Apply clinical knowledge** for rTMS in both on-label and off-label applications, such as depression, chronic pain, and neurological disorders. 4. **Learn safety protocols** for rTMS, including contraindications, patient screening, and seizure management. 5. **Explore advanced research applications** of rTMS, such as the use of TMS in conjunction with EEG and other modalities.

	6. **Implement and manage rTMS protocols** in clinical practice, following Health Canada guidelines and adapting off-label protocols.
Meeting Learning Objectives	By the end of the course, participants will have acquired the theoretical understanding and practical experience needed to achieve each of the learning objectives, making them proficient in the use of rTMS across clinical, research, and technical domains. They will receive TMS certification. The course is conducted in small groups of up to 20 participants with formal teaching sessions and hands-on practical exposure. This course is ideal for healthcare professionals, technicians, researchers and their trainees, looking to expand their expertise in neuromodulation and TMS technology and receive TMS certification. The learning objectives will be met through lecture material provided in advance of the course via a pre-recorded online module (6 hours), in-person lectures (12 hours), in-person hands-on training (9 hours) and in-person review and examination (3 hours).
Program Admission Requirements	This course is ideal for healthcare professionals, technicians, researchers and their trainees, looking to expand their expertise in neuromodulation and TMS technology and receive TMS certification. At minimum, participants must have a secondary-school diploma.
Program Pre-requisites	There are no program pre-requisites.
Course Completion Requirements	The TMS certification course will take place over three-days. The course concludes with an evaluation examination.
Course Delivery Format	Hands-on training will be conducted in the Human Neurophysiology and Imaging lab at McMaster University using Magstim Ltd equipment, with live demonstrations available for both in-person and virtual attendees. Participants will leave the course equipped with the practical skills and knowledge required to implement rTMS in both clinical and research environments, making them eligible for certification in rTMS procedures. Importantly, the hands-on skills learned in this course are transferable to all other TMS equipment.

Student Evaluations (Grading Process)	Theoretical assessment: Multiple choice exam, minimum of 80% to pass, participants will have the option to re-do the exam twice if needed until a pass is achieved. This will performed electronically. The value of 80% is intended to replicate the TMS course offered by Harvard University that requires 80% signifies a high level of competency which is a requirement for this type of advanced course. Skill assessment: Five skills will be graded on a 1 to 5 scale, and a total score of 20 is required. Participants will have the option to re-do the skills assessment twice if needed. This must be performed in-person.
Course Evaluation	Post-course completion survey provided electronically to attending participants.
Course Instruction	The course will be instructed by Neuro-Mod Inc. in a partnership with the Faculty of Science at McMaster University. All instructors will have a minimum of a Master's level degree with specialization in TMS delivery and methods.

Course Details: Certificate of Completion in Transcranial Magnetic Stimulation (TMS)

Participants will gain an understanding of the physics that underpins TMS, explore its various clinical and research applications, and learn the technical skills needed to perform safe and effective rTMS procedures. The course covers essential topics such as motor hotspot identification, motor threshold determination, neuronavigation, and participant and patient safety protocols. Additionally, it will explore both on-label (e.g., drug-resistant depression) and off-label (e.g., chronic pain) uses of rTMS, as well as advanced research techniques like paired-pulse TMS and TMS-EEG integration.

Hands-on training will be conducted in the Human Neurophysiology and Imaging lab at McMaster University using Magstim Ltd equipment, with live demonstrations available for both in-person and virtual attendees. Participants will leave the course equipped with the practical skills and knowledge required to implement rTMS in both clinical and research environments. Importantly, the hands-on skills learned in this course are transferable to all other TMS equipment. Upon successful completion participants will receive a Certificate of Completion.

The course is conducted in small groups of up to 20 participants every four months with formal teaching sessions and hands-on practical exposure. This course is ideal for healthcare professionals, technicians, researchers and their trainees, looking to expand their expertise in neuromodulation and TMS technology and receive TMS certification. This course is open to Canadian and international participants. The course concludes with a theoretical and skills assessment evaluation examination and certification of completion.

Program:	Faculty of Science
Course Name:	Certificate of Completion in Transcranial Magnetic Stimulation (TMS)
Credential:	Non-Academic Certificate of Completion

Course Objectives:

1. **Understand the theoretical principles** of TMS and repetitive TMS, including device operation, pulse characteristics, and physiological effects.
2. **Develop hands-on skills** in TMS techniques, including but not limited to motor threshold determination, motor mapping, and repetitive stimulation procedures.

3. **Apply clinical knowledge** for rTMS in both on-label and off-label applications, such as depression, chronic pain, and neurological disorders.
4. **Learn safety protocols** for rTMS, including contraindications, patient screening, and seizure management.
5. **Explore advanced research applications** of rTMS, such as the use of TMS in conjunction with EEG and other modalities.
6. **Implement and manage rTMS protocols** in clinical practice, following Health Canada guidelines and adapting off-label protocols.

Learning Outcomes:
Upon completing this course, participants will be able to:

1. **Describe the physics and neurophysiological principles** underlying TMS and repetitive TMS.
2. **Perform key rTMS procedures**, including motor hotspot identification, determining motor thresholds, and using neuronavigation to find and track cortical targets.
3. **Set up and operate rTMS equipment** safely and effectively for clinical or research use.
4. **Assess patient suitability** for rTMS treatment, considering contraindications and health risks.
5. **Implement clinical and research protocols** for rTMS therapy in various neurological and psychiatric conditions.
6. **Critically evaluate scientific evidence** related to rTMS applications and apply it to clinical practice.
7. **Manage long-term rTMS therapy**, including treatment longevity, tapering, and maintenance protocols.

This structure will ensure participants leave with both theoretical knowledge and practical expertise to operate rTMS and TMS in diverse settings.

Statement of Contribution to Learning Objectives

The **TMS Certification Course** is carefully designed to contribute to the learning objectives through a structured blend of theoretical instruction and practical, hands-on experience. Each component of the course is aligned with specific learning objectives to ensure that participants not only understand the scientific and clinical principles behind rTMS but also develop the necessary technical skills to implement these techniques in real-world settings.

1. **Understanding rTMS Principles**: The theoretical modules, such as "rTMS Essentials: Theory and Practice" and "Advanced TMS Concepts," introduce participants to the fundamental concepts of TMS technology, including electromagnetic pulse characteristics, physiological effects, and neurophysiological mechanisms. This foundation directly supports the objective of understanding the core principles of TMS and rTMS.
2. **Developing Technical Skills**: The hands-on training sessions, conducted using Magstim Ltd equipment, ensure that participants can confidently operate rTMS technology. Activities such as

motor hotspot identification, motor threshold determination, and neuronavigation address the objective of developing key technical skills required for rTMS procedures.

3. **Clinical Application**: Modules on clinical rTMS use, including patient candidacy assessment and implementing rTMS treatment protocols, provide participants with the knowledge to apply rTMS in clinical settings. This directly contributes to the objective of applying clinical knowledge for rTMS in conditions like depression, pain, and other neurological disorders.
4. **Ensuring Safety**: The inclusion of safety protocols and seizure management within the course ensures participants are trained to screen patients, mitigate risks, and follow health guidelines, fulfilling the objective of understanding and implementing safety protocols for rTMS.
5. **Research Applications and Critical Evaluation**: Advanced sessions on paired-pulse paradigms, TMS-EEG integration, and the evaluation of scientific evidence help participants explore and contribute to ongoing rTMS research. These sessions are key in achieving the objective of understanding research applications and critically evaluating the use of rTMS in advancing the field of neuromodulation.
6. **Implementing rTMS Protocols**: The final hands-on session focuses on operationalizing rTMS therapy, guiding participants through Health Canada-approved and off-label rTMS treatment protocols. This ensures that participants are prepared to implement and manage rTMS protocols, and identify patient candidates, addressing the learning objective of ensuring practical competence in the clinical use of rTMS.

By the end of the course, participants will have acquired the theoretical understanding and practical experience needed to achieve each of the learning objectives, making them proficient in the use of rTMS across clinical, research, and technical domains. They will receive TMS certification.

TMS Certification Course Outline (30 hours in total)

The rTMS certification course will involve the following modules and take place over 2, 12 hour days plus 6 hours of virtual lectures in advance of attending the in-person course.

<u>Day 1 (8:00 am- 12:00pm): rTMS Essentials: Theory and Practice (lecture)</u>

- Welcome and introductory remarks
- How TMS works
  - The TMS device
  - The TMS coil
- Characteristics of the electromagnetic pulse and physical principles
- Introduction to single pulses and repetitive TMS
- Health and safety concerns
  - TMS side effects and risk management

- Repetitive TMS safety guidelines
- Contraindication to TMS in research and clinic

(12:00 pm – 4:00pm): Advanced concepts of TMS (lecture)

- TMS physics and physiology, targeting, dosing and physiological effects
- State-dependent interactions of TMS
- TMS and EEG
- The placebo effects & statistical approaches to incorporate placebo effects
- The future of TMS

(4:00 pm- 9:00pm): TMS neurophysiology procedures (hands on)

During this part of the courses, students will engage hands with TMS equipment to learn and practice the skills of this module and get feedback on technique directly from course instructors. All hands-on training will be delivered using Magstim Ltd equipment. Importantly, the theory and technical skills learned in this course are relevant for other TMS manufacturers.

- Screening and safety checks
- Skin preparation and applying electromyography electrodes
- Using neuronavigation
- Calibrating the coil and participant
- How to hold and position the TMS coil
- Finding motor hotspot
- Determining resting and active motor thresholds
- TMS stimulation targets (motor cortex and frontal cortex)

Day 2 (8:00 am- 11:00 am): clinical use of rTMS (lecture)

- Setting up a rTMS clinic
- Clinical applications for rTMS (on label- drug resistant depression)
- Clinical application for rTMS (off label use- Pain, OCD, PTSD, Addiction, Concussion, Motor rehabilitation
- Assessing patient candidacy
- Evaluating research evidence to inform clinical practice

(11:00 am – 1:00 pm): Operationalization of rTMS therapy (lecture)

- Health Canada approved rTMS treatment protocols and delivery
  - iTBS & accelerated protocols
- Off-label rTMS treatment protocols and practical procedures
- Longevity for TMS therapy
- Maintenance and tapering period protocols

(1:00 pm – 5 pm): Repetitive TMS and paired pulse TMS (hands on)

- Creating a stimulus response curve
- Assessing cortical silent period
- Motor mapping
- Paired-pulse TMS circuits and conditioning paradigms (SAI, LAI, SICI, LICI, SIHI, LIHI)
- Repetitive TMS and evaluating mechanisms in cortical plasticity
- Accelerated protocols
- Protocols specific to depression, OCD, dementia, pain and other on and off-label conditions.

(5:00 pm- 8:00pm): Review, Q&A and multiple choice test

Course evaluation

1. Written assessment (50 multiple choice questions encompassing all topics covered over the three-day course)
2. Skills assessment (30 minute assessment testing fundamental TMS practical skills)

FACULTY OF HEALTH SCIENCES

UNDERGRADUATE CERTIFICATE REPORT TO UNDERGRADUATE COUNCIL

FOR THE 2026-2027 UNDERGRADUATE CALENDAR

Date:
October 2025

APPROVED BY THE HEALTH SCIENCES EDUCATION COUNCIL OCTOBER 2025

APPROVED BY THE FACULTY OF HEALTH SCIENCES EXECUTIVE COUNCIL October 2025

FACULTY OF HEALTH SCIENCES

REPORT TO THE CERTIFICATES, DIPLOMAS AND MICROCREDENTIALS COMMITTEE OF THE UNDERGRADUATE COUNCIL

SUMMARY OF CURRICULUM CHANGES FOR 2026-2027

This report highlights substantive changes being proposed. For a complete review of all changes, please refer to the Faculty of Health Sciences Curriculum Report for changes to the 2026-2027 Undergraduate Calendar, found at: 2026-2027 FHS Academic Calendar - Final Draft.pdf

1. Revised Certificates
   - Concurrent Certificate in Human Anatomy (CCHA)

Concurrent Certificate in Human Anatomy (CCHA)

Faculty of Health Sciences

The Concurrent Certificate in Human Anatomy (CCHA) is administered by the Honours Health Sciences Program. Michael G. DeGroote Centre for Learning and Discovery, Room 3300, ext. 22815. https://hhsp.healthsci.mcmaster.ca

The Concurrent Certificate in Human Anatomy (CCHA) is designed to provide students with an opportunity to develop an academic focus in human anatomy in health and disease. This certificate recognizes students' acquisition of core knowledge through coursework in anatomical science disciplines to discuss, understand, and promote human health and well-being. Courses for the CCHA are available through the Faculty of Health Science, Faculty of Science, and Faculty of Social Sciences.

Certificate Requirements

Any student in an undergraduate program at McMaster may declare the CCHA at the time of graduation provided that they satisfy the following requirements.

Requirements:

Completion of 18 units with 6 units from Course List A and 12 units from Course List B.

Course List A:

Foundational anatomy courses

6 units

from

· HTHSCI 2F03 and 2FF3 or
· HTHSCI 2FA3 and 2FB3 or
· HTHSCI 2L03 and 2LL3 or
· HTHSCI 1D06 or HTHSCI 1D03 and 1DD3 or
· HTHSCI 1H06 or
· KINESIOL 1A03 and 1AA3 or
· KINESIOL 1Y03 and 1YY3 or
· KINESIOL 2X03 and 2XX3 or
· KINESIOL 2Y03 and 2YY3

Course List B:

Specialized anatomy courses

12 units from

· ANTHROP 2FF3 – Human Skeletal Biology and Bioarchaeology
· ANTHROP 3PP3 – Paleopathology
· ANTHROP 4R03 – Advanced Bioarchaeology and Skeletal Biology
· BIOLOGY 3XL3 – Comparative Vertebrate Anatomy & Physiology
· HTHSCI 3DA3 – Decolonizing and Conceptualizing Anatomy Through Arts Practice
· HTHSCI 3DB3 – ~~Developmental Biology~~ Development and Congenital Disease
· HTHSCI 3EV3 – Evolutionary Medicine: The clinical legacy of 7 million years of being human
· HTHSCI 3F03 – Inquiry: Anatomy & Physiology
· HTHSCI 3RB3 – Human Reproductive Anatomy & Physiology
· HTHSCI 4G03 – Pathoanatomy

· HTHSCI 4K03 – Human Pathophysiology
· HTHSCI 4PF6 – Education Practicum in Anatomy & Physiology
· HTHSCI 4SM3 – Skeletal Muscle in Health and Disease
· KINESIOL 2E03 – Musculoskeletal Anatomy
· KINESIOL 3K03 – Sports Injuries
· KINESIOL 4J03 – Functional Anatomy
· LIFESCI 3AA3 – Human Pathophysiology
· LINGUIST 3F03 – Anatomy and Physiology for Speech, Language and Hearing
· MOLBIOL 3M03 – Fundamental Concepts of Development
· PNB 2XB3 – Neuroanatomy & Neurophysiology
· PNB 3A03 – Neuroimaging

Note:
Transfer credits or substitutions may be considered for credit toward the CCHA by submitting a request to the Assistant Dean – Honours Health Sciences Program.

Rationale: Undergraduate students interested in careers in health research and health professions come from a diverse background of undergraduate programs with varying development of knowledge in human anatomy. The Concurrent Certificate in Human Anatomy recognizes students who have developed an area of focus in human anatomy, which serves to broaden their fundamental understanding of the human body and enhances their effectiveness as health practitioners, researchers, and policymakers. The certificate fosters interdisciplinary learning across faculties and supports robust enrollment in these courses.

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Report to the Undergraduate Council
from the
Curriculum & Admissions Committee

FOR APPROVAL

1. Addenda to Curriculum Revisions for the 2026-2027 Undergraduate Calendar

At its meeting on March 3, 2026, the Curriculum and Admissions Committee approved, for recommendation to Undergraduate Council, addenda to curriculum revisions contained in the following reports for inclusion in the *2026-2027 Undergraduate Calendar.* All minor curriculum addenda will be encompassed by the omnibus motion.

a. Office of the Registrar

- Computer Science program requirements updated. Removal of two science courses. Effective September 2027.
- Inclusion of Engineering I tracks in admission categories for Engineering I and iBioMed I.
- Addition of Admission Category “Visiting Student (Observer)”.

b. Faculty of Engineering

- Minor revisions only

c. Faculty of Humanities

- Minor revisions only

d. Faculty of Science

- Minor revisions only

Office of the Registrar

It is now recommended,

that the Undergraduate Council approve, for recommendation to the Senate, the revisions to Admission Requirements and related calendar housekeeping items, as proposed by the Office of the Registrar for inclusion in the *2026–2027 Undergraduate Calendar*, as circulated.

Faculty of Engineering

All curriculum addenda are included in the omnibus motion.

Faculty of Humanities

All curriculum addenda are included in the omnibus motion.

Faculty of Science

All curriculum addenda are included in the omnibus motion.

Omnibus Motion

It is recommended,

that the Undergraduate Council approve the curriculum addenda proposed by the Faculties of Engineering, Humanities and Science for inclusion in the *2026-2027 Undergraduate Calendar*, as circulated.

Undergraduate Council
For Approval
March 24, 2026

Office of the Registrar:

Undergraduate Curriculum Report

to

Undergraduate Council Curriculum & Admissions

for the 2026 – 2027 Undergraduate Calendar

February 2026

Revisions to the Undergraduate Calendar 2026-2027
Summary and Revision Justifications
Office of the Registrar, February 2026

Admission Requirements

- Computer Science program requirements updated. Removal of two science courses. Effective September 2027.
- Inclusion of Engineering I tracks in admission categories for Engineering I and iBioMed I
- Addition of Admission Category “Visiting Student (Observer)”, and administrative edits for bulleted list headings as a result of this addition.
    - Visiting Student Observers are individuals who are currently registered in an undergraduate degree program at another 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, an applicant must satisfy the general requirements of the university and the specific subject requirements for the program to which they 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 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 is calculated using the best six Grade 12 U and/or M grades, including all required subjects. **McMaster calculates averages to two decimal points and does not round up averages.** 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 under *Admission Requirements*.

Conditional Admission

Conditional admission may be granted annually to qualified applicants with strong academic standing. **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.

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

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

1. The minimum final average required was not met; OR
2. The OSSD was not awarded; OR
3. Six Grade 12 U and/or M courses including all required subjects were not completed; OR
4. The applicant did not successfully accept the offer of admission at the Ontario Universities' Application Centre (OUAC) by the response deadline indicated on the offer letter; OR
5. Conditions stipulated on the conditional offer of admission were not met; OR
6. A post-secondary institution was attended prior to beginning your studies at McMaster; OR
7. The 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

Secondary school applicants who receive a conditional offer of admission, are required to achieve an overall average (calculated to two decimal points) on six (6) final grades including all program specific required courses. This information is indicated on conditional offers of admission.

If an applicant's final average falls below this level (or equivalent), the offer of admission will be rescinded/revoked, and registration will be cancelled.

The required minimum final average varies from year to year and by program. This average is clearly stated in the offer letter.

Supplementary Application Forms and Extenuating Circumstances

Certain Level I programs including Arts & Science 1, Automation Systems Engineering Technology 1 (co-op), Automotive & Vehicle Engineering Technology 1 (co-op), Honours Health Sciences 1, Biotechnology 1 (co-op),

Computer Science 1 (regular and co-op), Engineering 1 (regular and co-op), Integrated Biomedical Engineering & Health Sciences 1 ~~(iBioMed)~~ (regular and co-op), Integrated Business and Humanities (IBH), Honours Integrated Science, Midwifery, Nursing and Leadership & Civic Studies 1 have **mandatory online supplementary application forms or online assessments** which must be completed by specific deadline dates. See *Application and Documentation Deadlines*, for specific deadline dates. Applicants to Business 1 may elect to complete an optional supplemental form prior to ~~February 1~~ April 17.

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 provide information to the Office of the Registrar, **Admissions** explaining the nature of their extenuating circumstances. The Request for Special Consideration form can be found at http://future.mcmaster.ca under Step 3. ~~https://admissions.mcmaster.ca/portal/extenuatingcircumstances.~~ The form is open from November 1 to May 1. 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 completed their OSSD and have final grades in six Grade 12 U and/or M courses. Applicants who fulfill these requirements by the end of February, may be granted a **final admission offer**.

The University reserves the right to withdraw an offer of final admission due to any of the following:

1. Failure to accept an offer of admission at the Ontario Universities' Application Centre (OUAC) by the response deadline indicated on the offer letter; OR
2. Attendance at a post-secondary institution prior to beginning studies at McMaster; OR
3. An 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 are to be submitted by September 1 of the application year, outlining the reasons for the request.~~ Deferrals will be considered only after the applicant has accepted the offer of admission and all conditions outlined in the offer of admission letter have been met. If a deferral is granted, it is conditional upon the student not attending a secondary or post-secondary institution during the deferral period. For more information, including important deadlines and a list of programs that do

not accept deferral requests, please refer to: https://registrar.mcmaster.ca/admission-deferrals/. ~~https://registrar.mcmaster.ca/events/admission-deferrals/~~

Subject Requirements for Specific Level I Programs

McMaster University offers the following Level I programs:

Arts & Science I, Automation Systems 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, Honours Health Sciences, Humanities I, Honours Integrated Science (Level I), Honours Kinesiology (Level I), Integrated Arts 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, Nursing I, and Social Sciences I, and Leadership & Civic Studies I.

ARTS & SCIENCE I

Admission to Arts & Science I is by selection. Applicants must complete a **mandatory supplementary application** which must be submitted at ~~(~~https://artsci.mcmaster.ca/prospective-students/supplementary-application/~~)~~ by the deadline as specified each year. See *Application and Documentation Deadlines* for specific deadline dates. A minimum overall average of 88% 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 SYSTEMS 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 Systems 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** 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

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

Applicants to Business I may elect to complete an optional supplemental form prior to ~~February 3~~ April 17 to provide the program with more information about themselves.

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

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** 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

COMPUTER SCIENCE I, COMPUTER SCIENCE I CO-OP*

***Effective September 2027**

Admission to Computer Science I (regular and co-op) is by selection. A minimum average of 90% is required for application consideration. Applicants must complete a **mandatory on-line assessment** 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. Completion of four additional U or M courses to total six courses

~~ECONOMICS 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~~

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** 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

ENGINEERING I, ENGINEERING I CO-OP*

***Effective September 2027**

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** by the deadline as specified each year. See *Application and Documentation Deadlines*, for specific deadline dates. Applicants may apply to one of the following direct entry programs at the Ontario University Application Centre.

Engineering I – Chemical Engineering Track

Engineering I – Chemical Engineering and Bioengineering Track

Engineering I – Civil Engineering Track

Engineering I – Computer Engineering Track

Engineering I – Electrical Engineering Track

Engineering I – Engineering Physics Track

Engineering I – Materials Engineering Track

Engineering I – Mechanical Engineering Track

Engineering I – Mechatronics Engineering Track

Engineering I – Nuclear Engineering Track

Engineering I – Software Engineering Track

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

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 ECONOMICS I (Effective September 2026)

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

HONOURS HEALTH AND SOCIETY I

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

Applicants will be selected based on both their academic qualifications and their scores on the **mandatory on-line Supplementary Application (due early February); details at** https://hhsp.healthsci.mcmaster.ca/future-students/supplementary-application/**.** A minimum overall average of 90% or higher is required for consideration. The 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; non-technology 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 five additional U or M courses to total six courses

The Faculty of Humanities strongly recommends 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 the Cognitive Science of Language program.

INTEGRATED ARTS I (iArts)

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

iArts is 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 creative submission** to the School of the Arts. To learn more about the mandatory creative submission please visit, https://sota.humanities.mcmaster.ca/undergraduate-programs/iarts/apply-now/.
For questions, please contact sota@mcmaster.ca.

HONOURS INTEGRATED SCIENCE (Level I)

Candidates are required to complete a mandatory **Supplementary Application Form** which must be submitted electronically at **http://science.mcmaster.ca/sis/undergraduate/isci/isci-admission-requirements.html#admission-review-process**. The information provided in the supplementary application is considered during the selection process. Only applicants with high academic standing will be selected. ~~Successful candidates must present a minimum average in the high 80's.~~ To be considered, applicants must have an overall average in the high 80s or higher.

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

INTEGRATED BIOMEDICAL ENGINEERING AND HEALTH SCIENCES (~~IBEHS~~ IBioMed) I /
INTEGRATED BIOMEDICAL ENGINEERING AND HEALTH SCIENCES (~~IBEHS~~ IBioMed) I CO-OP

Admission to Integrated Biomedical Engineering and Health Sciences 1 (regular and co-op) is by selection. ~~A minimum average of 90% or higher is required for application consideration.~~ To be considered, applicants must have an overall average of 90% or higher. Applicants must complete a **mandatory on-line assessment** 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 BIOMEDICAL ENGINEERING AND HEALTH SCIENCES (iBioMed) I /
INTEGRATED BIOMEDICAL ENGINEERING AND HEALTH SCIENCES (iBioMed) I CO-OP*
***Effective September 2027**

Admission to Integrated Biomedical Engineering and Health Sciences 1 (regular and co-op) is by selection. To be considered, applicants must have an overall average of 90% or higher.

Applicants must complete a **mandatory on-line assessment** as specified each year. See *Application and Documentation Deadlines*, for specific deadline dates. Applicants may apply to one of the following direct entry programs at the Ontario University Application Centre:

Integrated Biomedical Engineering and Health Sciences I – Chemical and Biomedical Engineering Track
Integrated Biomedical Engineering and Health Sciences I – Civil and Biomedical Engineering Track
Integrated Biomedical Engineering and Health Sciences I – Electrical and Biomedical Engineering Track
Integrated Biomedical Engineering and Health Sciences I – Engineering Physics and Biomedical Engineering Track
Integrated Biomedical Engineering and Health Sciences I – Health, Engineering Science and Entrepreneurship Track
Integrated Biomedical Engineering and Health Sciences i – Materials and Biomedical Engineering Track
Integrated Biomedical Engineering and Health Sciences I – Mechanical and Biomedical Engineering Track
Integrated Biomedical Engineering and Health Sciences I – Mechatronics and Biomedical Engineering Track
Integrated Biomedical Engineering and Health Sciences I – Software and Biomedical Engineering Track

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** ~~by February 3 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. Completion of four additional U and M courses 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

Completion of three additional Grade 12 U or M courses to total six courses. Introductory Kinesiology U is strongly recommended.

LEADERSHIP & CIVIC STUDIES I

Admission to Leadership & Civic Studies I offered by Wilson College of Leadership and Civic Engagement is by selection. ~~A minimum average in the mid-80s or higher is required for application considerations.~~ To be considered, applicants must have an overall average in the mid 80s or higher. Applicants must complete a **mandatory supplemental application** as specified each year. See *Application and Documentation Deadlines* for specific dates.

The following are minimum Grade 12 U and M requirements:

1. English U
2. Completion of five additional U or M courses, to a total of six (6) courses

LIFE 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. 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

HONOURS 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

Space in the Midwifery program is 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 January 15**. 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

Students must obtain a minimum grade of 85% in each of the three required courses listed in points 1, 2, and 3 above AND a minimum overall average of 85% on grade 12 U or M courses including the required courses.

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 has been completed with a minimum grade of at least 85%.

Applicants with Prior College Diploma Studies
Applicants from a Pre-Health Sciences Pathway to Advanced Diplomas and Degrees

Applicants who have successfully completed a Pre-Health Sciences Pathway certificate or are registered in the program with a minimum average of 85% will be considered for admission. Applicants who are currently registered and will receive their certificate before August in the intake year for which they applied may receive a conditional offer of admission based upon interim grades. The offer of admission will be withdrawn if the applicant does not complete the full program by August 1 of the intake year for which they applied or does not meet the required prerequisite or admission criteria.

Applicants from the pre-health program need the following minimum requirements:

i. Program equivalent of Biology - 85% minimum
ii. Program equivalent of Chemistry - 85% minimum
iii. Program equivalent of English - 85% minimum
iv. Overall average 85%

Applicants from a Registered Practical Nursing (RPN) Program

Applicants who have a diploma in practical nursing from an Ontario College or equivalent with a minimum overall average of 85% or higher will be considered for admission. Applicants who are currently registered in a practical nursing program and will receive their certificate before August in the intake year for which they applied may receive a conditional offer of admission based upon interim grades. The offer of admission will be withdrawn if the applicant does not complete the full program by August 1 of the intake year for which they applied or does not meet the required prerequisite or admission criteria.

Applicants from the RPN program need the following minimum requirements:

i. Program equivalent of Biology - 85% minimum
ii. Program equivalent of Chemistry - 85% minimum
iii. Program equivalent of English - 85% minimum
iv. Overall average 85%

Applicant from other College Programs

Any other college applicants need the following minimum requirements.

- College courses in the required subject areas of:
  i. Biology - two semesters or 6 units
  ii. Science - two semesters or 6 units of Biology, Biochemistry, Chemistry, Kinesiology, or Physics (a total of 12 units of Biology will be acceptable)
  iii. English - two semesters or 6 units
  iv. Overall average of 85%.

- Minimum of 85% in each of the required courses.

The offer of admission will be withdrawn if the applicant does not complete the minimum requirements by August 1 of the intake year for which they applied or does not meet the required prerequisite or admission criteria. Overall average from most recent 42 units of college coursework must be a minimum of 85%.

Applicants with Prior/Current University Studies

The following are the minimum course and grade requirements for applicants who are currently attending or have attended university in the past:

Prerequisite Requirements

- Grade 12 U courses from Ontario high school, equivalent out-of-province high school or CEGEP curricula, or 6 units (1.00 credit) from university courses in the following three (3) required subject areas of:
- Biology - 3 units
- Science (Biology, Biochemistry, Chemistry, Kinesiology, or Physics) - an additional 3 units (a total of 6 units of Biology will be acceptable)
- English - 3 units
- Minimum of 75% in each of the three required courses
- Overall average from most recent 42 units or 14.00 credits of undergraduate coursework must be a minimum of 75%

All prerequisites must be complete at the time of application. If an applicant has obtained less than 18 units of university credit and has been out of high school or college for more than two years at the time of application, it is required that the applicant complete at least 18 units of university to be eligible for consideration.

Identity and Admission Survey

All applicants to Midwifery must complete a mandatory Identity and Admission Survey as part of the application to the Midwifery Education Program. The survey must be completed and submitted along with the other requirements and documents by the February 1 deadline.

MUSIC I

Admission to the Music I program is temporarily suspended as of September 2024. Prospective applicants with an interest in pursuing a degree in Music are encouraged to apply to Humanities I. Interested applicants can take relevant courses within this program to work towards obtaining a Bachelor of Arts in Music or Combined Honours Bachelor of Arts in Music and another subject.

Currently on pause:

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 past 100 years
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://www.humanities.mcmaster.ca/programs-and-courses/undergraduate-programs/.

Auditions take place between February and April. Audition arrangements are to be made with the School of the Arts at **sota@mcmaster.ca.**

NURSING I

NURSING CONSORTIUM (MOHAWK)

All applicants for the two sites apply to the OUAC (Ontario Universities' Application Centre), selecting ~~McMaster University BScN and the specific site(s) of interest.~~ Nursing I (B.Sc.N.) McMaster or Nursing I (B.Sc.N.) - Mohawk.

Students interested in a McMaster (B.Sc.N.) Nursing degree have **two location options: McMaster University or Mohawk College**. Each of the two sites offers the four-year program which uses the problem-based learning and small group educational model. For more information about the Mohawk site refer to the B.Sc.N. (A) Stream in the School of Nursing, *Faculty of Health Sciences* portion of the Calendar. For full application instructions see the *School of Nursing* and *Application Procedures* sections as well as https://nursing.mcmaster.ca/programs/undergraduate.

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, all applicants to the B.Sc.N. Program are required to complete a mandatory, online computer-based assessment called Casper, as a component of the selection process, on the dates specified each year (October-February) on https://acuityinsights.app/.

Note: Indigenous (First Nations, Inuit and Métis) applicants are encouraged to consider an application through the Facilitated Indigenous Admission Program (FIAP). Those who have been endorsed through FIAP will be exempt from completing the Casper assessment.

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. Completion of two additional U or M courses to total six courses

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 is required. 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.

SOCIAL SCIENCES I

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

Advanced Functions U and Calculus and Vectors U are 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.

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 is also required. Please refer to **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.

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 **upload interim/midyear/in-progress 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 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 final transcripts confirming graduation directly to the Admissions Office.**

~~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: https://future.mcmaster.ca/.~~

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 five acceptable Grade 12 academic courses (or equivalent), including one of English Studies 12, English 12, or English 12 First Peoples.

Manitoba

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

New Brunswick

Grade 12 high school diploma with five acceptable Grade 12 academic courses numbered 120, 121, or 122, including one of English 121, English 122, or English as a Second Language 22411.

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 or advanced courses, including English 12.

Prince Edward Island

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

Québec

~~Grade 12 Diploma with six acceptable Grade 12 academic courses in the 600 series including English~~. Completion of six Grade 12 Quebec High School academic courses equivalent to Ontario curriculum requirements, including: English 12.

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. At the discretion of the Faculty, advanced credit of up to 18 units of study may 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 https://future.mcmaster.ca/.

D. Visiting Student (Observer)

Visiting Student Observers are individuals who are currently registered in an undergraduate degree program at another university.

VSO students are to have made arrangements through their home university and an undergraduate program at McMaster. While they are visiting observers, students will not be enrolled in a degree program at McMaster. They are not part of any official exchange agreement although there may be an agreement between McMaster program and their home institution.

Visiting Student Observers typically aim to gain practical experience by shadowing and observing professionals/academics to learn about the profession and/or research.

Applicants must have permission from both the Undergraduate Program at McMaster and from their home institution and/or any affiliated clinical setting, if applicable.

Department Chair approval is required. Once approval is obtained, student observers will apply through the admissions team in the Office of the Registrar.

Visiting Students (Observers) participating in real or simulated clinical settings must have their credentials approved by the applicable clinical observership site. Observers in a clinical setting will have zero patient contact and no clinical activity, including but not limited to:

- taking a medical history,
- conducting physical examinations,
- diagnosing or treating patient's condition,
- ordering, preparing or administering drugs,
- documenting on patients' health records, either in electronic or hard copy format,
- having independent access to health records, either in electronic or hard copy format,
- performing or assisting in surgical procedures, or diagnostic patient interventions,
- obtaining consent,
- interacting directly with patient/SDM,
- providing health care advice.

Due to processing timelines, it is recommended to submit applications at least six months prior to arrival.

~~D.~~E. Visiting Student (Researcher)

Visiting Students are individuals who are currently registered in an undergraduate degree program at another university, and who have made arrangements through their home university and an undergraduate program at McMaster, or with an individual researcher to spend time at McMaster as part of their degree program. While they are visiting students, they will not be enrolled in a degree program at McMaster. They are not part of any official exchange agreement although there may be an agreement between the McMaster program and their home institution.

Applicants must have permission from both the potential supervisor at McMaster and from their home institution. ~~The McMaster faculty member must submit a form (available online through the Office of International Affairs, the Internation and Exchange Student Experience Office or the Office of the Registrar).~~ Department Chair approval is required. Once approval is obtained, ~~this is complete,~~ students will apply through the admissions team in the Office of the Registrar.

~~E~~. F. Advanced Placement (AP) Courses/Examinations

Applicants who have completed AP courses will be considered for admission to a Level I program. At the discretion of the Faculty, applicants who have completed A.P. exams through the College Board in acceptable courses and achieve a minimum grade of 4 may be considered for up to 18 units of advanced credit upon request, after acceptance of the offer and receipt of official results. 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/.

~~F.~~ G. Other International Secondary School Qualifications

~~Admission requirements for applicants from the more common international educational systems are noted below.~~ For all other education systems, please visit our website for country-specific requirements. Required subjects are the same as required for Ontario and other Canadian students: https://future.mcmaster.ca/.

Applicants must upload high school transcripts as part of the application process. Applicants may be asked to submit course outlines to determine course equivalency. 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. Applicants are considered for admission on an individual basis, and you will not be allowed to attend the University until all conditions specified in the admission offer have been fulfilled.

McMaster University may require students presenting admission documents from schools outside of North America, to have those documents authenticated via WES Canada https://www.wes.org/ca/. This requirement, if applicable, will be specified in the 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 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. Possession of minimum grades does not guarantee admission. For complete requirements for American Curriculum applicants, please visit our website: https://future.mcmaster.ca/.~~

~~General Requirements~~

- ~~Graduation from an academic or college-preparatory program at a U.S. high school that is accredited or state-approved, or from an internationally located school that holds U.S. regional accreditation.~~
- ~~Four full years of English (Academic level only; ESL not accepted) including Grade 12 (Senior) English.~~
- ~~Applicants to all programs except Humanities I, Social Sciences I, and Leadership & Civic Studies I (Wilson College) must complete at least three years of Mathematics to the Grade 12 (Senior) level.~~
- ~~Applicants are not required to take either SAT or ACT but may submit results if it strengthens their application. The SAT institution code is 0936 and ACT institution code is 5326.~~
- ~~Most homeschooling curricula, irrespective of their claimed accreditation, might not be viewed as meeting the specified subject prerequisites outlined below. As a result, McMaster University might not consider them sufficient to fulfill our admission criteria. Applicants must meet all listed requirements.~~

- McMaster does not apply weighting to AP or honours courses when calculating admission averages. All GPA calculations are based on unweighted grades.
- Admission averages are calculated using your best five academic Grade 12/AP courses including the mandatory prerequisite courses for the selected program as specified below under “Required Courses”.
- Applicants who have not completed at least four full years of academic English in an English medium school must present satisfactory evidence of English Language Proficiency.

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/english-proficiency/.

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 – Advanced Placement (AP) Biology; or two full credits/years in Biology, with at least one credit at the Grade 11 or 12 level.
- Calculus – 4 years of high school Mathematics including Pre-Calculus and Grade 12 Calculus or AP Calculus AB/BC (or equivalent).
- Chemistry – Advanced Placement (AP) Chemistry; or two full credits/years in Chemistry, with at least one credit at the Grade 11 or 12 level.
- Physics – Advanced Placement (AP) Physics; or two full credits/years in Physics, with at least one credit at the Grade 11 or 12 level.

Upon request, students presenting AP courses may be required to submit official AP Examination results directly from the College Board, with minimum scores of 3, as a condition of admission. For applicants who sit an AP exam without taking the official AP class, a minimum AP exam score of 4 or 5 may be used in lieu of the corresponding science/math course requirement. No more than one such ‘challenge’ exam will be accepted to meet program-specific requirements.

Results of an equivalent **AP challenge examination** will be accepted in lieu of ONE of the science/math prerequisites. A minimum score of 4 or 5 is required for AP challenge exams.

Upon request, students presenting AP courses to fulfill program requirements (or requisites) may be required to present official AP Examinations results with minimum results of '3' via the College Board to finalize their admission.

For claimed course 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.

SAT/ACT results (if submitted), will be considered if they benefit the student and strengthen their application. Students who do not submit a score will not be penalized. The institutional code for SAT/AP is 0936. The institutional code for ACT is 5326.

For SAT/ACT admission requirements, please visit https://future.mcmaster.ca/ for updated information as it becomes available.

- Detailed school profile including grading scale may be requested.
- 2nd quartile results can be used for consideration for a conditional offer of admission provided at least 2 of the 5 required courses have been completed with grades presented.
- Grade 9, 10, 11 and Grade 12 2nd quartile results are required for an admission review.
- SAT results must be sent directly from the College Board.

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

Applicants presenting the General Certificate of Education (British Patterned Education) require a minimum of five G.C.E. subjects, **at least** three 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. English or English as a Second Language is acceptable at the GCSE/IGCSE O-level or GCE A (A2) level for all programs, except for programs within the Faculty of Humanities and Wilson College's Leadership & Civic Studies I (MWC) program, which require either GCSE/IGCSE O-level English or GCE A (A2) level English.

Applicants may be eligible for up to 12 units of advanced credit which will be determined on a case by case basis, at the discretion of the Faculty.

Applicants presenting less than three Advanced (A) Levels, but have completed at least 2 Advanced (A) Level courses and four or more AS Level courses, will be considered on an individual basis and are encouraged to apply.

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

Other Countries or Educational Systems

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

~~G.~~ H. 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 and required admission average on official transcripts from accredited schools. 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.
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.

~~H.~~ I. 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.

Having attended a post-secondary institution after high school graduation disqualifies applicants from being 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

McMaster programs have enrollment limits and admission is by selection. Achievement of the minimum admission requirements does not guarantee admission. Admission will be considered on a case by case basis and is not guaranteed.

Transfer applicants will normally receive credit for courses in which a grade of at least a C- (as per the McMaster grading scale) has been achieved. Assessment of courses for transfer credit is subject to the guidelines of the individual Faculties.

Transfer students 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. The Admissions Committee may request 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

McMaster programs have enrollment limits and admission is by selection. Achievement of the minimum admission requirements does not guarantee admission. Admission will be considered on a case by case basis and is not guaranteed.

For information regarding the amount of available transfer credits when transferring from a College of Applied Arts and Technology and to view the minimum admission requirements, please visit https://future.mcmaster.ca/college-transfer-student/.

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), Honours Health Sciences, B.Sc. (Honours) in Integrated Science (ISCI), Honours B.Sc. Kinesiology, Integrated Biomedical Engineering and Health Sciences, ~~and~~ Integrated Business and Humanities, Combined Honours B.Arts Leadership and Civic Studies and another subject, and Social Psychology cannot be done as second degree programs. B.Arts Sc. (Honours) can only be completed as a second degree by students who have completed a B.Arts Sc. at McMaster. 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 for admission 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. To be eligible to take courses as a Continuing Student applicants will need to be completing or have completed an undergraduate university degree with a minimum GPA of a C average, with no failures in the final year of study, (or 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

Graduates of a McMaster undergraduate degree program who wish to become a Continuing Student 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 in courses.

Graduates from Other Universities

Continuing Students with a non-McMaster degree, must apply for admission through OUAC. In subsequent academic terms, students will only be required to enrol.

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

E. From Six Nations Polytechnic

McMaster University, along with five 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 indigsc@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

Applicants 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 must meet one of the admissions criteria outlined in the sections above.~~ If applicants do not meet admission ~~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/**.

B. Mature Students (Admission)

Applicants who do not qualify for admission under one of the above categories, may be assessed for eligibility as a mature student, provided the following criteria are presented:

1. The applicant has not attended secondary school or college on a full-time basis for at least two years.
2. The applicant has 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:

- **Business I:** requires satisfactory completion of Grade 12 Calculus and Vectors U (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 Grade 12 U Advanced Functions U and Calculus and Vectors U (or equivalent) as specified under the heading *Subject Requirements For Specific Level I Programs*.
- **Midwifery I does not offer mature admission directly to the program.** However, applicants 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, applicants 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. Presenting the minimum admission requirements does not guarantee an offer of admission. Contact the School of Nursing for more details.
- **Honours Economics I:** requires satisfactory standing in Grade 12 U Advanced Functions U and Calculus and Vectors U (or equivalent) as specified under the heading *Subject Requirements for Specific Level I Programs.*

The following programs do not admit under the category of Mature Students: Arts & Science I, Automation Systems Engineering Technology I (B.Tech.), Automotive and Vehicle Technology I (B.Tech.), Biotechnology I (B.Tech.), Computer Science I, Engineering I, Honours 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, ~~and~~ Nursing I, and Leadership and Civic Studies I.

Mature students may register for up to 18 units of course work (normally Level I courses) during the Fall/Winter session with no more than nine units per term (three courses). Within the first 18 units, mature students will be limited to taking three units (one course) per term of the Spring/Summer session.

Upon completion of 18 units, academic performance is 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)

Students currently attending another university, may apply to take McMaster courses and receive credit at their home institution. Please note, not all courses are available for credit outside McMaster and all are subject to enrollment limits. Applicants must adhere to McMaster application deadlines.

Applications are made through the Ontario Universities' Application Centre (OUAC). ~~The~~ A **Letter of Permission and an official transcript are required.** Transcripts are reviewed to ensure prerequisites courses have been completed. **Approval of a Visiting Student application does not guarantee your enrollment in a course**.

Subsequent requests to take courses on a Letter of Permission do not require another application; however an updated Letter of Permission and updated official transcript must be sent to the Office of the Associate Dean of the Faculty offering the course at McMaster. If interested in registering in courses offered by more than one Faculty, approval from each Office of the Associate Dean must be obtained.

D. Graduates of McMaster Certificate/Diploma Programs

Applicants who have completed certificate or diploma programs from McMaster may be granted advanced credit up to maximum specified by Undergraduate Council. Faculties review the subject matter of both the certificate and degree programs. Credit granted will normally be applied against elective courses. For more information regarding advanced credit, please refer to the *Certificate and Diploma Programs* section of this Calendar.

E. Post-Degree Students

University graduates or persons with professional qualifications who wish to take one or more graduate courses but not proceed to an advanced degree, may apply to McMaster as a post-degree student. To enroll as a post-degree student, apply to the appropriate department(s) 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 uncertain about taking degree courses, registering as a listener in a degree course may be of interest. Listeners attend all classes, but do not complete any of the essays, tests or other formal requirements and do not receive a grade or credit. 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 https://registrar.mcmaster.ca/fees/ 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

Outstanding Grade 12 students who wish to enroll in a university-level course while completing Grade 12 U and M courses in their final year of study, may apply for the Enrichment Program. For more information contact the Office of the Registrar, https://future.mcmaster.ca/contact-us/.

H. Former McMaster Degree Students (Returning Students)

Readmission

Former McMaster students 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 wish to return to studies, must apply for Readmission. Students from the School of Nursing or the Physician Assistants program must apply for Readmission regardless of time elapsed following voluntary withdrawal.

Those enrolled (have a record of course enrolment) within the last five years and who left the university in good academic standing (and have not attended another university or completed a college diploma elsewhere), do not require an application for readmission. Students will be permitted to enrol in their previous program or another program for which they qualify. Students must contact the Office of the Registrar directly to request registration access prior to enrollment.

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, well-qualified graduates of a three-year program where the college work is appropriate to the chosen university program, may receive up to 30 units of transfer credit. Graduates of two-year programs will be reviewed for transfer credit 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 the academic record warrants special consideration.

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

1. 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. The applicant's secondary school record.

Each case will be considered on its own merits for the program desired. Further information is available at https://registrar.mcmaster.ca/build-degree/college-transfer/. Requirements may be subject to change.

C. Advanced Credit

Subject to the discretion of the Faculty, advanced credit may be granted for a completed: 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.). Advanced credit may shorten the degree program length at McMaster.

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

Applicants 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, 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/below 50%. 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

Applicants asked to meet the English Language Proficiency requirement, 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. Acceptable tests of English Language Proficiency and minimum score requirements are specified on our web site https://future.mcmaster.ca/english-proficiency/. It is the applicant's responsibility to make all arrangements regarding the writing of the English Language Proficiency tests and to have the official score report submitted to the Office of the Registrar, Admissions in a timely manner.

At the discretion of the university, applicants may be exempt from this requirement if meeting one of the following requirements:

i. Attended, 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 immediately prior to your anticipated start date at McMaster, **OR**
ii. Attended, full-time academic studies (non-ESL), at an accredited English medium Secondary School (High School) or Post-Secondary College for at least four years,* immediately prior to the anticipated start date at McMaster **OR**

iii. Attended full-time academic studies (non-ESL), at an accredited English medium University for at least one year, immediately prior to the anticipated start date at McMaster **OR**

iv. Resided in an English-speaking country for at least four years immediately prior to anticipated start date at 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: https://mdprogram.mcmaster.ca/.

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. Questions regarding the collection and use of this information may be directed to the University Registrar, University Hall, Room 209, Student Records, Gilmour Hall, Room 108, or the University Secretary, Gilmour Hall, Room 210, McMaster University.

STEP Certificate

Summer Transition through English Prep (STEP) Certificate

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

Email: macstep@mcmaster.ca
Web: https://meld.humanities.mcmaster.ca/step/

The Summer Transition through English Prep (STEP) program is an intensive ~~six~~ seven-week academic English bridging program designed for English-Language Learners who wish to pursue their undergraduate

studies at McMaster University and almost meet the university's language proficiency requirements. During the STEP program, students will develop the academic English skills necessary for a successful transition in September, into their first-year undergraduate program.

Acceptance into the STEP program includes a conditional offer of admission from an undergraduate program. Following the successful completion of the STEP certificate, students move on to their undergraduate studies at McMaster University.

Please visit https://meld.humanities.mcmaster.ca/step/ for more information or email macstep@mcmaster.ca.

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

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 the student was given conditional admission and will have completed 6 units of degree credit courses in Linguistics, and 6 units of degree credit courses in Language and Culture (piloted for 4 years as of September 2026), that may be applied as electives to that program. In exceptional circumstances, MELD will consider transfers from other McMaster programs.

Please visit https://meld.humanities.mcmaster.ca/diploma/ for more information or email meld@mcmaster.ca.

Fall Term

(September - December)
• LANGCUL 1X03 - Language, Communication, and Context (degree credit course)
• LINGUIST 1E03 - Introduction to English Linguistics I (degree credit course)

• MELD 1M00 - Mentorship Lab 1
• MELD 1Q03 - Critical and Analytic Reading
• MELD 1QQ3 - Grammar, Structure and University Writing
• MELD 1R03 - Aural Communication and Academic Culture
• MELD 1RR3 - Oral Communication for Academic and Social Interactions

Winter Term

(January - April)
• LANGCUL 1XX3 – Language, Communication, and Culture (degree credit course)
• LINGUIST 1EE3 - Introduction to English Linguistics II (degree credit course)
• MELD 1MM0 - Mentorship Lab 2
• MELD 1S03 - Critical Reading, Research and Academic Vocabulary
• MELD 1SS3 - Academic Writing, Reporting and Research 14
• MELD 1T03 - Cross-Cultural Perspectives on Language and Language Learning
• MELD 1TT3 - Oral Communication for Academic Discourse

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 six-week summer certificate program for current or prospective graduate students from any institution who are looking to improve their English-language skills. The MERGE program offers over 200 hours of language training; 35 hours per week. 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.

The MERGE program goes beyond essential training in speaking, listening, reading, and writing. It has been designed to support the integration of these skills as applied to real world contexts students will encounter during graduate school and beyond. ~~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

~~Each of the program's six weeks will be divided into modules that will focus on a different set of skills. These modules will approach the development of these skills from the point of view of both cultural understanding and practical implementation, with an emphasis on teaching and practising the language skills needed to be successful in each domain.~~

The program is organized according to modules, one per week, that focus on different sets of skills. Skills are developed form the point of view of cultural understanding and practical implementation, emphasizing the language skills needed to be successful in each domain. The six modules are:

- **Module 1 - General social interactions:** conventions and strategies for everyday social encounters students face
- **Module 2 - Academic feedback and critique:** the role of critique in academia along with tools for both giving and receiving feedback or peer review
- **Module 3 - Academic reasoning:** identifying, synthesizing, and presenting perspectives through academic debate and literature review. ~~understanding, and summarizing arguments and evaluating supporting evidence in both reading and listening~~
- **Module 4 - Academic interactions:** navigating relationships with supervisors, teams, and other faculty in person, through email, at conferences, and in seminars
- **Module 5 - Teaching:** principles of effective teaching including developing lessons, interacting with students, and grading ~~**Career preparation:** best practices for CVs/resumes, job interviews, elevator pitches, and online brand building~~
- **Module 6 - Career preparation:** best practices for CVs/resumes, job interviews, elevator pitches, and online brand building ~~**Teaching:** principles of effective teaching including developing lessons, interacting with students, and grading~~

FACULTY OF ENGINEERING

UNDERGRADUATE CURRICULUM REPORT

TO UNDERGRADUATE COUNCIL

FOR THE 2026 - 27 CALENDAR

Second-Addendum approved on February 23, 2026 Faculty Meeting

FACULTY OF ENGINEERING
REPORT TO SENATE
SUMMARY OF MAJOR CURRICULUM CHANGES FOR 2026-27

This report highlights substantive changes being proposed. For a complete review of all changes, please refer to the Faculty of Engineering Curriculum Report for changes to **2026 – 27 Engineering Undergraduate Curriculum Report.docx** on MacDrive:
https://macdrive.mcmaster.ca/d/b571b887a4934eb2bffc/

NEW PROGRAMS

PROGRAM CLOSURES

None

MAJOR REVISIONS

None

FACULTY OF ENGINEERING
REPORT TO UNDERGRADUATE COUNCIL
SUMMARY OF CURRICULUM CHANGES FOR 2024-25

This report highlights substantive changes being proposed. For a complete review of all changes, please refer to the Faculty of Engineering Curriculum Report for changes to the 2026 - 27 Undergraduate Calendar, found at: **https://macdrive.mcmaster.ca/d/b571b887a4934eb2bffc/**

Computer Science Admission Requirements:

Remove the two Grade 12 science prerequisites currently required for admission to the Computer Science (CS) program. This proposed change is intended to align McMaster's requirements more closely with those of peer institutions. This change will also be helpful as we navigate ongoing uncertainty in the CS admissions landscape.
The table below shows McMaster's current prerequisites alongside those of our peers. The proposal is starting in Fall 2026/27, admission requirements for CS be only ENG4U and MCV4U; remove the requirement "two of SBI, SCH, SPH, ICS, TEJ or SES".

School	Requirements
McMaster	ENG4U MCV4U Two of SBI, SCH, SPH, ICS, TEJ or SES
U of T	ENG4U MCV4U
Waterloo	ENG4U MHF4U MCV4U One other 4 U courses
Queens	ENG4U MHF4U MCV4U
Western	ENG4U MHF4U MCV4U One of MDM, SBI, SCH, SPH, ICS or SES
UBC	ENG4U MHF4U One of SBI, SCH, SPH,
Ottawa	ENG4U or FRA4U MHF4U MCV4U

Note that MHF4U (advanced functions) is a prerequisite for MC4VU (Calculus and Vectors), so it is implicit that applicants must complete both courses. By listing only ENG4U (English) and MC4VU, those two courses, along with the next four highest Grade 12 U/M courses, are used to calculate the admission average. If MHF4U were also listed explicitly, it would be included in the admission average.

Direct Entry: Engineering I – Nuclear Engineering Track

Rationale:
Direct Entry for Engineering I was approved in the 2025–26 Faculty of Engineering Addendum at Undergraduate Admissions & Curriculum Committee and Undergraduate Council in January/February 2026. The actual calendar copy changes for 2026–27 were approved in November 2025.
The Engineering I – Nuclear Engineering Track was deliberately left out at that time because it was expected to be approved as part of the January 2026 changes alongside the new Nuclear Engineering program. The omission of the first-year Engineering I – Nuclear Engineering Track was an oversight; however, it was approved (as highlighted in green below).

Calendar document 13-Courses-Faculty-Owned-Eng-Doc:

Engineering I

Admission to Level II Programs

All ~~Level I~~ Engineering I students who wish to be reviewed for admission to a Level II ~~program in the Faculty of Engineering for the following Fall/Winter term must~~ submit an Application of Admission to Level II ~~through MOSAIC by the~~ ~~University~~ stated deadline (typically April of Level I). Students rank up to twelve program choices. Rank ordering must be done very carefully because once admitted to a program, no further consideration is given to lower ranked choices.
Admission to Level II ~~Engineering programs requires completion of all 31 units of required Engineering I~~ courses before the start of the Level II program. Students must maintain a minimum Cumulative Grade Point Average (CGPA) of 4.0. All Level II programs are limited enrollment and entry into a Level II ~~program is competitive. The admission into each Level II~~ program is determined by the Cumulative Grade Point Average (CGPA) and order of ranked programs. All McMaster University courses completed (including electives and upper year courses) are calculated into Cumulative Grade Point Average (CGPA) up to the time of Level II ~~program admission review. Grades earned in a Spring and/or~~ Summer term, (after program admission review) will not change student Level II ~~program eligibility. A student in Engineering I~~ with a Cumulative Grade Point Average (CGPA) less than 4.0 can no longer continue in the Faculty of Engineering.
Students must follow the program requirements of the Academic Calendar year in effect when they enter Level II. Admission to an Engineering and Management Program (B.Eng.Mgt~~.~~) is competitive and will be based on Cumulative Grade Point Average (CGPA). Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0 (63%). ~~Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.~~Admission to the Engineering and Society Program (B.Eng.Society) is competitive and will be based on Cumulative Grade Point Average (CGPA).

Effective Fall 2027

Engineering I programs include the Discovery Track and the Direct Entry Tracks listed below. Discovery Track differs from the others in that it enables students to experience first-year Engineering before deciding which Level II program to pursue.

Engineering 1 – Discovery Track

All Engineering I – Discovery Track students who wish to be reviewed for admission to a Level II program in the Faculty of Engineering for the following Fall/Winter term must submit an Application of Admission to Level II through MOSAIC by the University stated deadline (typically April of Level I). Students rank up to twelve program choices. Rank ordering must be done very carefully because once admitted to a program, no further consideration is given to lower ranked choices.
Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses before the start of the Level II program. Students must maintain a minimum Cumulative Grade Point Average (CGPA) of 4.0. All Level II programs are limited enrollment and entry into a Level II program is competitive. The admission into each Level II program is determined by the Cumulative Grade Point Average (CGPA) and order of ranked programs. All McMaster University courses completed (including electives and upper year courses) are calculated into Cumulative Grade Point Average (CGPA) up to the time of Level II program admission review. Grades earned in a Spring and/or Summer term, (after program admission review) will not change student Level I program eligibility. A student in Engineering I with a Cumulative Grade Point Average (CGPA) less than 4.0 can no longer continue in the Faculty of Engineering.
Students must follow the program requirements of the Academic Calendar year in effect when they enter Level II.

Students must submit an Application of Admission to the Engineering and Management Program (B.Eng.Mgt) through MOSAIC by the University stated deadline. Admission is competitive and will be based on Cumulative Grade Point Average (CGPA).

Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0 (63%).

Students must submit an Application of Admission to the Engineering and Society Program (B.Eng.Society) through MOSAIC by the University stated deadline (typically April of Level I). Admission to the Engineering and Society Program (B.Eng.Society) is competitive and will be based on Cumulative Grade Point Average (CGPA).

Students must follow the program requirements of the Calendar in effect when they enter Level II

Engineering 1 Direct Entry Tracks:

Engineering I – Chemical Engineering Track

Engineering I – Chemical Engineering and Bioengineering Track

Engineering I – Civil Engineering Track

Engineering I – Computer Engineering Track

Engineering I – Electrical Engineering Track

Engineering I – Engineering Physics Track

Engineering I – Materials Engineering Track

Engineering I – Mechanical Engineering Track

Engineering I – Mechatronics Engineering Track

Engineering I – Nuclear Engineering Track

Engineering I – Software Engineering Track

To be eligible for any Level II Engineering program, a student requires an overall Cumulative Grade Point Average (CGPA) of 4.0 or above and must have completed all 31 units of required Engineering I courses before the start of the Level II program. Students are only eligible to progress to the Level II program that corresponds with their current Level I track.

Students must follow the program requirements of the Academic Calendar year in effect when they enter Level II.

Admission to the Engineering and Management program is competitive and will be based on Cumulative Grade Point Average (CGPA). Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0 (63%). Admission to the Engineering and Society program is competitive and will be based on Cumulative Grade Point Average (CGPA).

Students must follow the program requirements of the Calendar in effect when they enter Level II.

EFFECTIVE FALL 2027

Engineering I – Discovery Track / Engineering I – Discovery Track Co-Op

37 units total

Requirements

3 units

CHEM 1E03 - General Chemistry for Engineering I

13 units

ENGINEER 1P13 A/B - Integrated Cornerstone Design Projects in Engineering

9 units

MATH 1ZA3 - Engineering Mathematics I
MATH 1ZB3 - Engineering Mathematics II-A
MATH 1ZC3 - Engineering Mathematics II-B

6 units

PHYSICS 1D03 - Introductory Mechanics
PHYSICS 1E03 - Waves, Electricity and Magnetic Fields

6 units

approved complementary studies electives.
(See *Elective Courses Available To Level I Students* in *Degrees, Programs and Courses*.)

2 courses

WHMIS 1A00 - Introduction to Health and Safety
ENGINEER 1EE0 - Introduction to Career Planning & Employment

Engineering I – Chemical Engineering Track / Engineering I – Chemical Engineering Track Co-Op

37 units total

Requirements

3 units

CHEM 1E03 - General Chemistry for Engineering I

13 units

ENGINEER 1P13 A/B - Integrated Cornerstone Design Projects in Engineering

9 units

MATH 1ZA3 - Engineering Mathematics I
MATH 1ZB3 - Engineering Mathematics II-A
MATH 1ZC3 - Engineering Mathematics II-B

6 units

PHYSICS 1D03 - Introductory Mechanics
PHYSICS 1E03 - Waves, Electricity and Magnetic Fields

6 units

approved complementary studies electives.

(See *Elective Courses Available To Level I Students* in *Degrees, Programs and Courses*.)

2 courses

from

WHMIS 1A00 - Introduction to Health and Safety
ENGINEER 1EE0 - Introduction to Career Planning & Employment

Engineering I – Chemical Engineering and Bioengineering Track / Engineering I – Chemical Engineering and Bioengineering Track Co-Op

37 units total

Requirements

3 units

CHEM 1E03 - General Chemistry for Engineering I

13 units

ENGINEER 1P13 A/B - Integrated Cornerstone Design Projects in Engineering

9 units

MATH 1ZA3 - Engineering Mathematics I
MATH 1ZB3 - Engineering Mathematics II-A
MATH 1ZC3 - Engineering Mathematics II-B

6 units

PHYSICS 1D03 - Introductory Mechanics
PHYSICS 1E03 - Waves, Electricity and Magnetic Fields

6 units

approved complementary studies electives.
(See *Elective Courses Available To Level I Students* in *Degrees, Programs and Courses*.)

2 courses

from

WHMIS 1A00 - Introduction to Health and Safety
ENGINEER 1EE0 - Introduction to Career Planning & Employment

Engineering I – Civil Engineering Track / Engineering I – Civil Engineering Track Co-Op

37 units total

Requirements

3 units

CHEM 1E03 - General Chemistry for Engineering I

13 units

ENGINEER 1P13 A/B - Integrated Cornerstone Design Projects in Engineering

9 units

MATH 1ZA3 - Engineering Mathematics I
MATH 1ZB3 - Engineering Mathematics II-A
MATH 1ZC3 - Engineering Mathematics II-B

6 units

PHYSICS 1D03 - Introductory Mechanics
PHYSICS 1E03 - Waves, Electricity and Magnetic Fields

6 units

approved complementary studies electives.
(See *Elective Courses Available To Level I Students* in *Degrees, Programs and Courses*.)

2 courses

from

WHMIS 1A00 - Introduction to Health and Safety
ENGINEER 1EE0 - Introduction to Career Planning & Employment

Engineering I – Computer Engineering Track / Engineering I – Computer Engineering Track Co-Op

37 units total

Requirements

3 units

CHEM 1E03 - General Chemistry for Engineering I

13 units

ENGINEER 1P13 A/B - Integrated Cornerstone Design Projects in Engineering

9 units

MATH 1ZA3 - Engineering Mathematics I
MATH 1ZB3 - Engineering Mathematics II-A
MATH 1ZC3 - Engineering Mathematics II-B

6 units

PHYSICS 1D03 - Introductory Mechanics
PHYSICS 1E03 - Waves, Electricity and Magnetic Fields

6 units

approved complementary studies electives.
(See *Elective Courses Available To Level I Students* in *Degrees, Programs and Courses*.)

2 courses

from

WHMIS 1A00 - Introduction to Health and Safety
ENGINEER 1EE0 - Introduction to Career Planning & Employment

Engineering I – Electrical Engineering Track / Engineering I – Electrical Engineering Track Co-Op

37 units total

Requirements

3 units

CHEM 1E03 - General Chemistry for Engineering I

13 units

ENGINEER 1P13 A/B - Integrated Cornerstone Design Projects in Engineering

9 units

MATH 1ZA3 - Engineering Mathematics I
MATH 1ZB3 - Engineering Mathematics II-A
MATH 1ZC3 - Engineering Mathematics II-B

6 units

PHYSICS 1D03 - Introductory Mechanics
PHYSICS 1E03 - Waves, Electricity and Magnetic Fields

6 units

approved complementary studies electives.
(See *Elective Courses Available To Level I Students* in *Degrees, Programs and Courses*.)

2 courses

from

WHMIS 1A00 - Introduction to Health and Safety
ENGINEER 1EE0 - Introduction to Career Planning & Employment

Engineering I – Engineering Physics Track / Engineering I – Engineering Physics Track Co-Op

37 units total

Requirements

3 units

CHEM 1E03 - General Chemistry for Engineering I

13 units

ENGINEER 1P13 A/B - Integrated Cornerstone Design Projects in Engineering

9 units

MATH 1ZA3 - Engineering Mathematics I
MATH 1ZB3 - Engineering Mathematics II-A
MATH 1ZC3 - Engineering Mathematics II-B

6 units

PHYSICS 1D03 - Introductory Mechanics
PHYSICS 1E03 - Waves, Electricity and Magnetic Fields

6 units

approved complementary studies electives.
(See *Elective Courses Available To Level I Students* in *Degrees, Programs and Courses*.)

2 courses

from

WHMIS 1A00 - Introduction to Health and Safety
ENGINEER 1EE0 - Introduction to Career Planning & Employment

Engineering I – Materials Engineering Track / Engineering I – Materials Engineering Track Co-Op

37 units total

Requirements

3 units

CHEM 1E03 - General Chemistry for Engineering I

13 units

ENGINEER 1P13 A/B - Integrated Cornerstone Design Projects in Engineering

9 units

MATH 1ZA3 - Engineering Mathematics I
MATH 1ZB3 - Engineering Mathematics II-A
MATH 1ZC3 - Engineering Mathematics II-B

6 units

PHYSICS 1D03 - Introductory Mechanics
PHYSICS 1E03 - Waves, Electricity and Magnetic Fields

6 units

approved complementary studies electives.
(See *Elective Courses Available To Level I Students* in *Degrees, Programs and Courses*.)

2 courses

from

WHMIS 1A00 - Introduction to Health and Safety
ENGINEER 1EE0 - Introduction to Career Planning & Employment

Engineering I – Mechanical Engineering Track / Engineering I – Mechanical Engineering Track Co-Op

37 units total

Requirements

3 units

CHEM 1E03 - General Chemistry for Engineering I

13 units

ENGINEER 1P13 A/B - Integrated Cornerstone Design Projects in Engineering

9 units

MATH 1ZA3 - Engineering Mathematics I
MATH 1ZB3 - Engineering Mathematics II-A
MATH 1ZC3 - Engineering Mathematics II-B

6 units

PHYSICS 1D03 - Introductory Mechanics
PHYSICS 1E03 - Waves, Electricity and Magnetic Fields

6 units

approved complementary studies electives.
(See *Elective Courses Available To Level I Students* in *Degrees, Programs and Courses*.)

2 courses

from

WHMIS 1A00 - Introduction to Health and Safety
ENGINEER 1EE0 - Introduction to Career Planning & Employment

Engineering I – Mechatronics Engineering Track / Engineering I – Mechatronics Engineering Track Co-Op

37 units total

Requirements

3 units

CHEM 1E03 - General Chemistry for Engineering I

13 units

ENGINEER 1P13 A/B - Integrated Cornerstone Design Projects in Engineering

9 units

MATH 1ZA3 - Engineering Mathematics I
MATH 1ZB3 - Engineering Mathematics II-A
MATH 1ZC3 - Engineering Mathematics II-B

6 units

PHYSICS 1D03 - Introductory Mechanics
PHYSICS 1E03 - Waves, Electricity and Magnetic Fields

6 units

approved complementary studies electives.
(See *Elective Courses Available To Level I Students* in *Degrees, Programs and Courses*.)

2 courses

from

WHMIS 1A00 - Introduction to Health and Safety
ENGINEER 1EE0 - Introduction to Career Planning & Employment

Engineering I – Nuclear Engineering Track / Engineering I – Nuclear Engineering Track Co-Op

37 units total

Requirements

3 units

CHEM 1E03 - General Chemistry for Engineering I

13 units

ENGINEER 1P13 A/B - Integrated Cornerstone Design Projects in Engineering

9 units

MATH 1ZA3 - Engineering Mathematics I
MATH 1ZB3 - Engineering Mathematics II-A
MATH 1ZC3 - Engineering Mathematics II-B

6 units

PHYSICS 1D03 - Introductory Mechanics
PHYSICS 1E03 - Waves, Electricity and Magnetic Fields

6 units

approved complementary studies electives.
(See *Elective Courses Available To Level I Students* in *Degrees, Programs and Courses*.)

2 courses

from

WHMIS 1A00 - Introduction to Health and Safety
ENGINEER 1EE0 - Introduction to Career Planning & Employment

Engineering I – Software Engineering Track / Engineering I – Software Engineering Track Co-Op

37 units total

Requirements

3 units

CHEM 1E03 - General Chemistry for Engineering I

13 units

ENGINEER 1P13 A/B - Integrated Cornerstone Design Projects in Engineering

9 units

MATH 1ZA3 - Engineering Mathematics I
MATH 1ZB3 - Engineering Mathematics II-A
MATH 1ZC3 - Engineering Mathematics II-B

6 units

PHYSICS 1D03 - Introductory Mechanics
PHYSICS 1E03 - Waves, Electricity and Magnetic Fields

6 units

approved complementary studies electives.
(See *Elective Courses Available To Level I Students* in *Degrees, Programs and Courses*.)

2 courses

from

WHMIS 1A00 - Introduction to Health and Safety
ENGINEER 1EE0 - Introduction to Career Planning & Employment

FACULTY OF HUMANITIES

UNDERGRADUATE CURRICULUM REPORT

TO UNDERGRADUATE COUNCIL

FOR THE 2026-27 CALENDAR

MARCH 2026

As of February 24, 2026

FACULTY OF HUMANITIES

CURRICULUM REVISIONS FOR 2026-27

Addendum

For a complete review of all changes, please refer to the December 2025 Faculty of Humanities Report to Undergraduate Council for changes to the 2026-2027 Undergraduate Calendar, found at https://www.humanities.mcmaster.ca/about-the-faculty-of-humanities/faculty-meetings/

1.0 NEW PROGRAMS, MINORS OR CONCURRENT CERTIFICATES: N/A

2.0 REVISIONS TO EXISTING PROGRAMS, MINORS OR CONCURRENT CERTIFICATES

2.1 Combined Honours in Global Peace and Social Justice and Another Subject (B.A.)

Global Peace and Social Justice is an interdisciplinary program where students investigate systems of social inequity and injustice at the local, national, and global levels. Students in the program develop research skills and practical knowledge to understand the root causes and perpetuation of social conflict, violence, and oppression in politics and culture. They learn strategies for reimagining and making transformative change in order to build peaceful, equitable, and just communities. The program offers many opportunities for community-based learning through our experiential learning courses and public-engagement events.

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 including a grade of at least C in PEACEST 1A03, PEACJUST 1A03, PEACJUST 1VM3, GENDRST 1A03, ~~WORKLABR 1A03~~ or, if not taken, three units acceptable to the Global Peace and Social Justice program.

Notes

1. It is possible, but not necessary, to emphasize particular areas or sample from our thematically structured lists. These include: Course List 1: Health & Environment; Course List 2: Human Rights; Course List 3: Race, Gender & Sexuality; Course List 4: Social Activism.
2. Students must be aware that some courses in the Course Lists have their own disciplinary prerequisites. Given the multidisciplinary nature of the Global Peace and Social Justice Program, with its different approaches and expectations, it is the responsibility of students in the Global Peace and Social Justice Program to meet other Faculties', departments' and programs' requirements.
3. The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Course Lists

Course List 1: Health & Environment

- ENGLISH 2Z03 - Reading Environmental Humanities
- ENGLISH 3NH3 - Narratives of Health
- HISTORY 3CH3 - Climate History
- INDIGST 4A03 - Indigenous Climate Justice
- PEACJUST 2E03
- PEACJUST 2HC3 - The History of Childhood (In)Justice in Canada
- PEACJUST 2XX3 - Social & Structural Determinants of Health

- PEACJUST 3B03 - Peace-Building and Health Initiatives
- PEACJUST 3C03 - Researching Global Peace and Social Justice
- PEACJUST 3D03 - Globalization and Peace
- PEACJUST 3P03 - Practicum: Practical Peace Building
- PEACJUST 4FC3 ~~- Community Engaged Experiential Learning~~
- PEACJUST 4G03 - Peace Through Health: Praxis
- PEACJUST 4GH3 - Social Justice Perspectives on Gender and Health
- PEACJUST 4J03
- PEACJUST 4L03 - Peace, Environment and Health
- PEACJUST 4ST3 - Special Topics Seminar
- PHILOS 2TT3 - Ethical Issues in Communication
- PHILOS 4V03 - Multidisciplinary Workshop in Applied Ethics and Policy

Course List 2: Human Rights

- HISTORY 2J03 - Africa up to 1800
- HISTORY 2JJ3 - Africa since 1800
- HISTORY 3KK3 - The Vietnam War
- INDIGST 2F03 - Indigenous Education in Canada
- INDIGST 2G03 - Indigenous Perspectives on Peace and Conflict
- INDIGST 3K03
- INDIGST 4G03 - Indigenous Genocide
- PEACJUST 2A03
- PEACJUST 2B03
- PEACJUST 2E03
- PEACJUST 2G03 - Beyond Borders: Race, Gender & Coloniality in Migration
- PEACJUST 2GW3 - A History of Global War
- PEACJUST 2M03 - Being, Belonging, and Migration: In pursuit of rights and justice
- PEACJUST 3C03 - Researching Global Peace and Social Justice
- PEACJUST 3P03 - Practicum: Practical Peace Building
- PEACJUST 3XX3 - Human Rights in History

- PEACJUST 3Y03 - Special Topics in Peace and Justice
- PEACJUST 4FC3 ~~- Community Engaged Experiential Learning~~
- PEACJUST 4GG3 - Nation and Genocide in the Modern World
- PEACJUST 4RR3 - Truth and Reconciliation After Atrocity
- PEACJUST 4ST3 - Special Topics Seminar
- PHILOS 2G03 - Social and Political Issues
- PHILOS 3P03
- PHILOS 3Q03 - Philosophy of Law
- POLSCI 3KK3 - Genocide: Sociological and Political Perspectives
- POLSCI 3Q03 - The Causes of War
- POLSCI 3Y03 - Democratization and Human Rights
- SOCIOL 3KK3 - Genocide: Sociological and Political Perspectives

Course List 3: Race, Gender & Sexuality

- CMST 3PM3 - Public Memory, Media, and African Diaspora Studies
- CMST 3WC3 - World Cinemas: Critical Media Approaches
- ENGLISH 3A03 - Critical Race Studies
- GENDRST 2AA3 - Feminist Thought
- GENDRST 4A03
- HISTORY 2CS3 - The History of Slavery in the Americas
- HISTORY 2J03 - Africa up to 1800
- HISTORY 2JJ3 - Africa since 1800
- HISTORY 3KK3 - The Vietnam War
- INDIGST 2F03 - Indigenous Education in Canada
- PEACJUST 2E03
- PEACJUST 2LS3 - Language and Society
- PEACJUST 3C03 - Researching Global Peace and Social Justice
- PEACJUST 3CY3 - Children, Youth & Media
- PEACJUST 3GG3 - Theories of Decolonization and Resistance
- PEACJUST 3P03 - Practicum: Practical Peace Building
- PEACJUST 3RR3 - Race, Religion and Media

- PEACJUST 3V03 - Global Anglophone Literature and Film
- PEACJUST 3W03 - Contemporary Native Literature in Canada
- PEACJUST 3X03
- PEACJUST 3Y03 - Special Topics in Peace and Justice
- PEACJUST 4FC3 ~~- Community Engaged Experiential Learning~~
- PEACJUST 4GH3 - Social Justice Perspectives on Gender and Health
- PEACJUST 4ST3 - Special Topics Seminar
- PHILOS 3I03 - Philosophy and Feminism
- PHILOS 3T03 - Philosophy and Race
- SCAR 3RC3 - Race, Religion, and Coloniality

Course List 4: Social Activism

- CMST 3DJ3 - Digital Justice
- ENGLISH 2CL3 - Canadian Literature of Dissent and Social Justice
- HISTORY 3JR3 - Justice and Reparations in the Post-slavery World
- HISTORY 3N03 - Poverty, Privilege and Protest in Canadian History
- INDIGST 2G03 - Indigenous Perspectives on Peace and Conflict
- PEACJUST 2A03
- PEACJUST 2C03 - Peace, Justice, and Popular Culture
- PEACJUST 2CS3 - Decolonization and Activism: Creating Social Change
- PEACJUST 2E03
- PEACJUST 3C03 - Researching Global Peace and Social Justice
- PEACJUST 3GG3 - Theories of Decolonization and Resistance
- PEACJUST 3P03 - Practicum: Practical Peace Building
- PEACJUST 3W03 - Contemporary Native Literature in Canada
- PEACJUST 3X03
- PEACJUST 3Y03 - Special Topics in Peace and Justice
- PEACJUST 4FC3 ~~- Community Engaged Experiential Learning~~
- PEACJUST 4ST3 - Special Topics Seminar
- PHILOS 2G03 - Social and Political Issues
- PHILOS 3P03

- THTRFLM 3QA3 - Documentary, Politics, and Social Change

Requirements

Students who entered Combined Honours in Global Peace and Social Justice and Another Subject (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

120 units total (Levels I to IV), of which 48 units may be Level I

30 units

from

- the Level I program completed prior to admission to the program (*see note 3*)

6 units

from

- PEACEST 2BB3
- PEACJUST 2A03
- PEACJUST 2B03
- PEACJUST 2C03 - Peace, Justice, and Popular Culture
- PEACJUST 2CS3 - Decolonization and Activism: Creating Social Change
- PEACJUST 2G03 - Beyond Borders: Race, Gender & Coloniality in Migration
- PEACJUST 2HC3 - The History of Childhood (In)Justice in Canada
- PEACJUST 2M03 - Being, Belonging, and Migration: In pursuit of rights and justice
- PEACJUST 2XX3 - Social & Structural Determinants of Health

3 units

- PEACJUST 3C03 - Researching Global Peace and Social Justice

3 units

from

- GENDRST 4A03
- PEACEST 4A03
- PEACEST 4E03
- PEACEST 4K03
- PEACEST 4PR3
- PEACEST 4M06 A/B
- PEACEST 4MA3
- PEACEST 4MB3
- PEACJUST 4B03 - Independent Research
- PEACJUST 4FC3 ~~- Community Engaged Experiential Learning~~
- PEACJUST 4G03 - Peace Through Health: Praxis
- PEACJUST 4GG3 - Nation and Genocide in the Modern World
- PEACJUST 4GH3 - Social Justice Perspectives on Gender and Health
- PEACJUST 4J03
- PEACJUST 4L03 - Peace, Environment and Health
- PEACJUST 4RR3 - Truth and Reconciliation After Atrocity
- PEACJUST 4ST3 - Special Topics Seminar

24 units

- from *Course Lists 1-4*

3 units

- HUMAN 2CP3 - Humanities Career Planning and Development

3 units

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

  *HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 units

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact

- HUMAN 4W03 A/B S - Applied Humanities II
  *HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

36 units

- Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)

9 units

- Electives to total 120 units

Rationale: *WORKLABR 1A03 was erroneous included as a program entry requirement as WOMANST 1A03 was being phased out. The course is not a requirement of admission.*

3.0 NEW COURSES:

3.1 CMST 2AI3 - Generative Artificial Intelligence: Human and Societal Impacts

3 unit(s)
This course will consider the human and ~~social~~ societal implications of the widespread adoption of generative AI technologies. Areas such as data power and algorithmic bias; AI regulation, intellectual property, authorship and creativity; jobs, work and labour; environmental impacts; activism and social justice will be explored. Through case studies, discussions, and hands-on exercises we will critically assess generative AI technologies.
~~Three hour lecture, online components~~ Online asynchronous delivery and in-person exams; one term.
Prerequisitie(s): Registration in Level II or above

Enrolment Capacity: *600*

Rationale: *The department has requested more explicit language around the course delivery and exams. Other changes include grammatical housekeeping.*

4.0 REVISIONS TO EXISTING COURSES: N/A

5.0 COURSE DELETIONS: N/A

6.0 REVISIONS TO DEPARTMENTAL NOTES: N/A

7.0 COURSES IDENTIFIED AS "AT RISK": N/A

8.0 REVISIONS TO LIST OF FACULTY MEMBERS: N/A

McMaster University

SCIENCE

Undergraduate Curriculum Amendment Report to Undergraduate Council, for the 2026-27 Undergraduate Calendar

Presented to the Faculty of Science General Faculty
February 19, 2026

FACULTY OF SCIENCE REPORT TO SENATE

SUMMARY OF MAJOR CURRICULUM AMENDMENTS FOR 2026-2027

Following, is the summary of substantive curriculum changes being proposed by the Faculty of Science. For a complete review of all changes, refer to the November 13, 2025, Report of the Academic Planning and Policy Committee for changes to the 2026-2027 Undergraduate Calendar, found at:

Science UG Curriculum Changes Report 2026-2027.pdf

1. NEW PROGRAMS

1.1. **Department of Kinesiology, Certificate of Completion Program Proposal**

Department & Program Information	
Program:	Faculty of Science
Course Name:	Certificate of Completion in Transcranial Magnetic Stimulation (TMS)
Credential:	Non-Academic Certificate of Completion
Name of Representative:	Aimee Nelson
Effective Date:	May 2026
Date of Submission:	January 30, 2026
Program Information:	
Program Overview	The TMS Certification Course offered via Neuro-Mod and accredited through McMaster University provides an in-depth exploration of transcranial magnetic stimulation (TMS) and repetitive TMS (rTMS). Designed for technicians, researchers, and clinicians, this comprehensive three-day program combines theoretical knowledge with hands-on training in the latest neuromodulation techniques. Participants will gain an understanding of the physics that underpins TMS, explore its various clinical and research applications, and learn the technical skills needed to perform safe and effective rTMS procedures. The course covers essential topics such as motor hotspot identification, motor threshold determination, neuronavigation, and patient safety protocols. Additionally, it will explore both on-label (e.g., drug-resistant depression) and off-label (e.g., chronic pain) uses of rTMS, as well as advanced research techniques like paired-pulse TMS and TMS-EEG integration.
Learning Objectives	1. **Understand the theoretical principles** of TMS and repetitive TMS, including device operation, pulse characteristics, and physiological effects.

	2. **Develop hands-on skills** in TMS techniques, including but not limited to motor threshold determination, motor mapping, and repetitive stimulation procedures. 3. **Apply clinical knowledge** for rTMS in both on-label and off-label applications, such as depression, chronic pain, and neurological disorders. 4. **Learn safety protocols** for rTMS, including contraindications, patient screening, and seizure management. 5. **Explore advanced research applications** of rTMS, such as the use of TMS in conjunction with EEG and other modalities. 6. **Implement and manage rTMS protocols** in clinical practice, following Health Canada guidelines and adapting off-label protocols.
Meeting Learning Objectives	By the end of the course, participants will have acquired the theoretical understanding and practical experience needed to achieve each of the learning objectives, making them proficient in the use of rTMS across clinical, research, and technical domains. They will receive TMS certification. The course is conducted in small groups of up to 20 participants with formal teaching sessions and hands-on practical exposure. This course is ideal for healthcare professionals, technicians, researchers and their trainees, looking to expand their expertise in neuromodulation and TMS technology and receive TMS certification. The learning objectives will be met through lecture material provided in advance of the course via a pre-recorded online module (6 hours), in-person lectures (12 hours), in-person hands-on training (9 hours) and in-person review and examination (3 hours).
Program Admission Requirements	This course is ideal for healthcare professionals, technicians, researchers and their trainees, looking to expand their expertise in neuromodulation and TMS technology and receive TMS certification. At minimum, participants must have a secondary-school diploma.
Program Pre-requisites	There are no program pre-requisites.

Course Completion Requirements	The TMS certification course will take place over three-days. The course concludes with an evaluation examination.
Course Delivery Format	Hands-on training will be conducted in the Human Neurophysiology and Imaging lab at McMaster University using Magstim Ltd equipment, with live demonstrations available for both in-person and virtual attendees. Participants will leave the course equipped with the practical skills and knowledge required to implement rTMS in both clinical and research environments, making them eligible for certification in rTMS procedures. Importantly, the hands-on skills learned in this course are transferable to all other TMS equipment.
Student Evaluations (Grading Process)	Theoretical assessment: Multiple choice exam, minimum of 80% to pass, participants will have the option to re-do the exam twice if needed until a pass is achieved. This will performed electronically. The value of 80% is intended to replicate the TMS course offered by Harvard University that requires 80% signifies a high level of competency which is a requirement for this type of advanced course. Skill assessment: Five skills will be graded on a 1 to 5 scale, and a total score of 20 is required. Participants will have the option to re-do the skills assessment twice if needed. This must be performed in-person.
Course Evaluation	Post-course completion survey provided electronically to attending participants.
Course Instruction	The course will be instructed by Neuro-Mod Inc. in a partnership with the Faculty of Science at McMaster University. All instructors will have a minimum of a Master's level degree with specialization in TMS delivery and methods.

Course Details: Certificate of Completion in Transcranial Magnetic Stimulation (TMS)

Participants will gain an understanding of the physics that underpins TMS, explore its various clinical and research applications, and learn the technical skills needed to perform safe and effective rTMS procedures. The course covers essential topics such as motor hotspot identification, motor threshold determination, neuronavigation, and participant and patient safety protocols. Additionally, it will explore both on-label (e.g., drug-resistant depression) and off-label (e.g., chronic pain) uses of rTMS, as well as advanced research techniques like paired-pulse TMS and TMS-EEG integration.

Hands-on training will be conducted in the Human Neurophysiology and Imaging lab at McMaster University using Magstim Ltd equipment, with live demonstrations available for both in-person and virtual attendees. Participants will leave the course equipped with the practical skills and knowledge required to implement rTMS in both clinical and research environments. Importantly, the hands-on skills learned in this course are transferable to all other TMS equipment. Upon successful completion participants will receive a Certificate of Completion.

The course is conducted in small groups of up to 20 participants every four months with formal teaching sessions and hands-on practical exposure. This course is ideal for healthcare professionals, technicians, researchers and their trainees, looking to expand their expertise in neuromodulation and TMS technology and receive TMS certification. This course is open to Canadian and international

participants. The course concludes with a theoretical and skills assessment evaluation examination and certification of completion.

Program:	Faculty of Science
Course Name:	Certificate of Completion in Transcranial Magnetic Stimulation (TMS)
Credential:	Non-Academic Certificate of Completion

Course Objectives:

1. **Understand the theoretical principles** of TMS and repetitive TMS, including device operation, pulse characteristics, and physiological effects.
2. **Develop hands-on skills** in TMS techniques, including but not limited to motor threshold determination, motor mapping, and repetitive stimulation procedures.
3. **Apply clinical knowledge** for rTMS in both on-label and off-label applications, such as depression, chronic pain, and neurological disorders.
4. **Learn safety protocols** for rTMS, including contraindications, patient screening, and seizure management.
5. **Explore advanced research applications** of rTMS, such as the use of TMS in conjunction with EEG and other modalities.
6. **Implement and manage rTMS protocols** in clinical practice, following Health Canada guidelines and adapting off-label protocols.

Learning Outcomes:

Upon completing this course, participants will be able to:

1. **Describe the physics and neurophysiological principles** underlying TMS and repetitive TMS.
2. **Perform key rTMS procedures**, including motor hotspot identification, determining motor thresholds, and using neuronavigation to find and track cortical targets.
3. **Set up and operate rTMS equipment** safely and effectively for clinical or research use.
4. **Assess patient suitability** for rTMS treatment, considering contraindications and health risks.
5. **Implement clinical and research protocols** for rTMS therapy in various neurological and psychiatric conditions.
6. **Critically evaluate scientific evidence** related to rTMS applications and apply it to clinical practice.
7. **Manage long-term rTMS therapy**, including treatment longevity, tapering, and maintenance protocols.

This structure will ensure participants leave with both theoretical knowledge and practical expertise to operate rTMS and TMS in diverse settings.

Statement of Contribution to Learning Objectives

The **TMS Certification Course** is carefully designed to contribute to the learning objectives through a structured blend of theoretical instruction and practical, hands-on experience. Each component of the

course is aligned with specific learning objectives to ensure that participants not only understand the scientific and clinical principles behind rTMS but also develop the necessary technical skills to implement these techniques in real-world settings.

1. **Understanding rTMS Principles**: The theoretical modules, such as "rTMS Essentials: Theory and Practice" and "Advanced TMS Concepts," introduce participants to the fundamental concepts of TMS technology, including electromagnetic pulse characteristics, physiological effects, and neurophysiological mechanisms. This foundation directly supports the objective of understanding the core principles of TMS and rTMS.

2. **Developing Technical Skills**: The hands-on training sessions, conducted using Magstim Ltd equipment, ensure that participants can confidently operate rTMS technology. Activities such as motor hotspot identification, motor threshold determination, and neuronavigation address the objective of developing key technical skills required for rTMS procedures.

3. **Clinical Application**: Modules on clinical rTMS use, including patient candidacy assessment and implementing rTMS treatment protocols, provide participants with the knowledge to apply rTMS in clinical settings. This directly contributes to the objective of applying clinical knowledge for rTMS in conditions like depression, pain, and other neurological disorders.

4. **Ensuring Safety**: The inclusion of safety protocols and seizure management within the course ensures participants are trained to screen patients, mitigate risks, and follow health guidelines, fulfilling the objective of understanding and implementing safety protocols for rTMS.

5. **Research Applications and Critical Evaluation**: Advanced sessions on paired-pulse paradigms, TMS-EEG integration, and the evaluation of scientific evidence help participants explore and contribute to ongoing rTMS research. These sessions are key in achieving the objective of understanding research applications and critically evaluating the use of rTMS in advancing the field of neuromodulation.

6. **Implementing rTMS Protocols**: The final hands-on session focuses on operationalizing rTMS therapy, guiding participants through Health Canada-approved and off-label rTMS treatment protocols. This ensures that participants are prepared to implement and manage rTMS protocols, and identify patient candidates, addressing the learning objective of ensuring practical competence in the clinical use of rTMS.

By the end of the course, participants will have acquired the theoretical understanding and practical experience needed to achieve each of the learning objectives, making them proficient in the use of rTMS across clinical, research, and technical domains. They will receive TMS certification.

TMS Certification Course Outline (30 hours in total)

The rTMS certification course will involve the following modules and take place over 2, 12 hour days plus 6 hours of virtual lectures in advance of attending the in-person course.

<u>Day 1 (8:00 am- 12:00pm): rTMS Essentials: Theory and Practice (lecture)</u>

- Welcome and introductory remarks

- How TMS works
  - The TMS device
  - The TMS coil
- Characteristics of the electromagnetic pulse and physical principles
- Introduction to single pulses and repetitive TMS
- Health and safety concerns
  - TMS side effects and risk management
  - Repetitive TMS safety guidelines
  - Contraindication to TMS in research and clinic

(12:00 pm – 4:00pm): Advanced concepts of TMS (lecture)

- TMS physics and physiology, targeting, dosing and physiological effects
- State-dependent interactions of TMS
- TMS and EEG
- The placebo effects & statistical approaches to incorporate placebo effects
- The future of TMS

(4:00 pm- 9:00pm): TMS neurophysiology procedures (hands on)

During this part of the courses, students will engage hands with TMS equipment to learn and practice the skills of this module and get feedback on technique directly from course instructors. All hands-on training will be delivered using Magstim Ltd equipment. Importantly, the theory and technical skills learned in this course are relevant for other TMS manufacturers.

- Screening and safety checks
- Skin preparation and applying electromyography electrodes
- Using neuronavigation
  - Calibrating the coil and participant
- How to hold and position the TMS coil
- Finding motor hotspot
- Determining resting and active motor thresholds
- TMS stimulation targets (motor cortex and frontal cortex)

Day 2 (8:00 am- 11:00 am): clinical use of rTMS (lecture)

- Setting up a rTMS clinic
- Clinical applications for rTMS (on label- drug resistant depression)
- Clinical application for rTMS (off label use- Pain, OCD, PTSD, Addiction, Concussion, Motor rehabilitation
- Assessing patient candidacy
- Evaluating research evidence to inform clinical practice

(11:00 am – 1:00 pm): Operationalization of rTMS therapy (lecture)

- Health Canada approved rTMS treatment protocols and delivery
  - iTBS & accelerated protocols
- Off-label rTMS treatment protocols and practical procedures
- Longevity for TMS therapy
- Maintenance and tapering period protocols

(1:00 pm – 5 pm): Repetitive TMS and paired pulse TMS (hands on)

- Creating a stimulus response curve
- Assessing cortical silent period
- Motor mapping
- Paired-pulse TMS circuits and conditioning paradigms (SAI, LAI, SICI, LICI, SIHI, LIHI)
- Repetitive TMS and evaluating mechanisms in cortical plasticity
- Accelerated protocols
- Protocols specific to depression, OCD, dementia, pain and other on and off-label conditions.

(5:00 pm- 8:00pm): Review, Q&A and multiple choice test

Course evaluation

1. Written assessment (50 multiple choice questions encompassing all topics covered over the three-day course)
2. Skills assessment (30 minute assessment testing fundamental TMS practical skills)

Pricing: Course registration will cost $3,000 CAD + tax per person. Discounted group rates are available for groups of 3 or more students enrolled in the course. Pricing will include light breakfast, lunch and light dinner option.

2. **PROGRAM CLOSURES/MERGERS:**
   None applicable
3. **MAJOR CURRICULUM REVISIONS:**
   None applicable
4. **REVISIONS TO GENERAL ACADEMIC REGULATIONS, FACULTY-LEVEL REGULATIONS, AND ACADEMIC POLICY:**
   None applicable

FACULTY OF SCIENCE
REPORT TO UNDERGRADUATE COUNCIL
SUMMARY OF CURRICULUM AMENDMENTS FOR 2026-2027

Following, is the summary of curriculum amendments being proposed by the Faculty of Science. For a complete review of all changes, refer to the November 13, 2025, Report of the Academic Planning and Policy Committee for changes to the 2026-2027 Undergraduate Calendar, found at:

Science UG Curriculum Changes Report 2026-2027.pdf

Additionally, substantive amendments to existing course capacities and categories are included for information and can be found in the *Changes to Existing Courses* sections of the Departments and Schools.

Amendments as summarized below are captured in this document organized by Department/School.

Department of Chemistry and Chemical Biology

1. CHANGES TO EXISTING COURSES:

1.1. CHEM 2OA3 - Organic Chemistry I

3 unit(s)
An introduction to organic chemistry with emphasis on the reactions of functional groups and an introduction to spectroscopic techniques for structure determination.
Three lectures, one lab (three hours) every other week, one tutorial (one hour) every week; one term
Prerequisite(s): ISCI 1A24 A/B or CHEM 1AA3
Antirequisite(s): CHEM 2OC3, 2OG3, CHEMBIO 2OA3, 2OG3
Students with a grade of less than C- in ISCI 1A24 A/B or CHEM 1AA3 are strongly encouraged to consider CHEM 2E03 before attempting CHEM 2OA3, or as an alternative to CHEM 2OA3.
Registration priority will be given to students for whom this course is a program requirement.
Not open to students registered in Honours Chemical Biology or to students with credit or registration in CHEM 2OC3, 2OG3, CHEMBIO 2OA3, 2OG3.

This course may be offered in-person or online. Students are encouraged to check scheduling information and the course outline to confirm the course offering details.

Justification: The course will be offered in online and in-person formats into the future. We want to signal this possibility to students.

1.2. CHEM 2OB3 - Organic Chemistry II

3 unit(s)
Nucleophilic substitutions at carbonyl centres, aromatic chemistry, carbohydrates, applications of spectroscopic techniques in organic chemistry.
Three lectures, one lab (three hours) every other week; one tutorial (one hour) every week; one term
Prerequisite(s): One of CHEM 2OA3, 2OC3, CHEM 2OG3, CHEMBIO 2OA3, CHEMBIO 2OG3
Registration priority will be given to students for whom this course is a program requirement.
Antirequisite(s): CHEM 2OD3, CHEMBIO 2OB3, CHEMBIO 2OD3
Not open to students registered in Honours Chemical Biology.
Not open to students with credit or registration in BIOCHEM 3CM3.

Justification: It was determined that the content of BIOCHEM 3CM3 overlaps with content in CHEM 2OB3. Student would still be able to complete CHEM 2OB3 and then pursue BIOCHEM 3CM3 in the future but they can not complete the courses in the reverse direction.

School of Earth, Environment & Society

1.0 Changes to Existing Courses:

1.1 ENVSOCTY 3EN3 – Northern Environments & Societies

3 unit(s)
Exploration of the environmental, social, cultural, economic, and political opportunities and challenges that shape the Canadian North. Particular emphasis is placed on diversity and change.
Two lectures (two hours and one hour); one term
Prerequisite(s): One of ENVSOCTY 2EI3, 2EK3, INDIGST 2D03, ANTHROP 2DA3
Cross-list(s): INDIGST 3EN3

Justification: Cross-listed prerequisite added to allow for greatest access to this course for all students.

School of Interdisciplinary Science

1. NEW PROGRAMS:

1.1. Honours Life Sciences – Health Evidence and Science Engagement Specialization (B.Sc.)

Program first available in September 2027.

Admission Note

When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement, but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 units
from

- BIOLOGY 1A01 – Cellular and Molecular Biology – Laboratory Skill Development
- BIOLOGY 1A02 – Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 – Cellular and Molecular Biology
- BIOLOGY 1M03 – Biodiversity, Evolution and Humanity

(See Admission Note above.)

3 units

- CHEM 1A03 – Introductory Chemistry I

3 units
from

- MATH 1A03 – Calculus For Science I
- MATH 1LS3 – Calculus for the Life Sciences I

3 units
from

- PHYSICS 1A03 – Introductory Physics
- PHYSICS 1C03 – Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 – Introductory Physics

3 units
from

- EARTHSC 1G03 – Earth and the Environment
- ENVIRSC 1C03 – Climate, Water and Environment
- PSYCH 1F03 – Survey of Psychology
- PSYCH 1FF3 – Survey of Biological Basis of Psychology
- PSYCH 1X03 – Introduction to Psychology, Neuroscience & Behaviour
- PSYCH 1XX3 – Foundations of Psychology, Neuroscience & Behaviour

6 units
from

- the Science I Course List

Program Notes

1. Registration in an Honours Life Sciences program does not guarantee access to all courses. Some courses have program restrictions. Students are advised to check prerequisites carefully.
2. Students interested in completing a thesis or independent study course should consider completing LIFESCI 3RP3 in Level III.
3. Students interested in graduate school may wish to consider completion of a thesis or independent study course (See LIFESCI 4A03, 4B09 A/B S, 4C12 A/B S, 4D15 A/B S, SCICOMM 4A03).
4. This program does not have a Co-op option.
5. Course planning is extremely important. Students must review and consider the requisites on Level II, III and IV courses when enrolling in the previous Levels.
6. Students in the Honours Life Sciences – Health Evidence and Science Engagement Specialization are excluded from the pre-registration ballot process as LIFESCI 4Z03 is a program requirement and registration is guaranteed.
7. SUSTAIN 3SS3 is only offered in the Spring Term.
8. Thesis and project courses that do not use a LIFESCI or SCICOMM course code may only be used towards elective credit.

Interdisciplinary Topics Course List

Astronomy	ASTRON 2B03
Biochemistry	Levels II, III, IV*
Biology	Levels II, III, IV*
Biophysics	BIOPHYS 2A03, 2S03, 3D03, 3G03
Challenge	CHALLENG 2CC3
Chemistry	CHEM 2BC3, 2E03, 2OA3, 2OB3, 2P03, 3RC3
Chemical Biology	CHEMBIO 2A03, 2P03, 3BM3, 3OA3, 4OA3, 4OB3
Data Science	DATASCI 2G03
Earth Sciences	EARTHSC 2E03, 2GG3, 2G03, 3CC3, 3E03, 3P03, 4G03, 4PA3
English	ENGLISH 3NH3
Environmental Science	ENVIRSC 2B03, 2C03, 2WW3, 3B03
Environment & Society	ENVSOCTY 2EI3, 2GI3, 2HI3, 2LE3, 2OC3, 2RU3, 2RW3, 2TF3, 2TS3, 2UI3, 3EC3, 3EE3, 3ER3, 3GI3, 3GV3, 3HP3, 3LT3, 3RW3, 3SR3, 3TG3, 3UP3, 3UR3, 3UW3, 4HC3, 4HD3, 4HH3
Explore	EXPLORE 3IS3
Health & Aging	HLTHAGE 3D03, 3E03, 3N03
Health Sciences	HTHSCI 2G03, 3DD3, 3DD6 A/B, 3I03, 3K03, 3RS3, 3DM3, 4II3, 4O03
History	HISTORY 3CH3, 3TC3
Inspire	INSPIRE 3MP3
Kinesiology	KINESIOL 2X03, 2XX3, 2Y03, 2YY3
Life Sciences	Levels II, III, IV*
Mathematics	MATH 2UU3, 3MB3
Medical Physics	MEDPHYS 4B03, 4F03, 4U03
Medical Radiation Sciences	MEDRADSC 3X03
Molecular Biology	Levels III, IV*
Neuroscience	NEUROSCI 3J03, 3SN3
Nexus	NEXUS 2A03
Physics	PHYSICS 2G03

Psychology	PSYCH Levels II, III, IV*
Science	Levels II, III*
Science Communication	SCICOMM Levels II, III, IV
	** All Levels II, III, IV courses for which the prerequisites have been met are acceptable.*

Requirements
120 units total (Levels I to IV), of which no more than 48 units may be Level I

Level 1: 30 Units
30 units
(See *Admission* above.)

Levels II-IV: 90 Units

9 units

- LIFESCI 2A03 - Research Methods in Life Sciences
- LIFESCI 2L03 - Living Systems Laboratory
- SCICOMM 2A03 - Foundations in Science Communication

3 units from

- LIFESCI 2DH3 – Determinants of Health & Physical Activity
- LIFESCI 2N03 – Human Nutrition for Life Sciences
- LIFESCI 2X03 – Environmental Change and Human Health

3 units

- BIOLOGY 2C03 – Genetics

3 units

- STATS 2B03 - Statistical Methods

3 units from

- CMTYENGA 2A03 - Foundations of Community Engagement
- ENGLISH 2SL3 - Social Justice, Literature and the Rhetoric of Science and Technology
- PHILOS 2D03 - Bioethics
- SCIENCE 2P03 - Impactful Initiatives in Health

6 units

- LIFESCI 3P03 - Communicating Science for Public Audiences
- LIFESCI 3PP3 - Communicating Science for Professional Audiences

9 units from

- LIFESCI 3G03 - Introduction to Epidemiology
- LIFESCI 3N03 – Human Nutrition Toxicology
- LIFESCI 3Q03 - Global Human Health and Disease
- LIFESCI 3W03 - Genetic and Epigenetic Determinants of Health: Role in Health Disparity
- LIFESCI 3Z03 – Life Sciences Inquiry

3 units

from

- CMTYENGA 3A03 - The Art of Change
- HLTHAGE 3D03 - Perspectives on Disability, Chronic Illness and Aging
- HLTHAGE 3K03 - Social Determinants of Population Health in Canada
- HUMAN 3LM3 - Foundations of Ethical Leadership
- HTHSCI 3AH3 - Indigenous Health
- HTHSCI 3RH3 - Racism and Health
- LIFESCI 3G03 - Introduction to Epidemiology
- LIFESCI 3Q03 - Global Human Health and Disease
- LIFESCI 3W03 - The Genetics of Disparate Health Outcomes
- LIFESCI 3Z03 – Life Sciences Inquiry
- PEACJUST 2A03 - Conflict Transformation: Theory and Practice
- PEACJUST 2CS3 - Decolonization and Activism: Creating Social Change
- PHILOS 3GH3 - Global Health Ethics

3 units
from

- LIFESCI 3LA3 - Introduction to Data Literacy
- LIFESCI 3LX3 - Applied Biostatistics and Scientific Writing

3 – 15 units
from

- CMTYENGA 2MC3 - Design and Creation of Engaged Learning for Community Youth
- CMTYENGA 2MD3 - Community-Based Learning with McMaster Children and Youth University
- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry
- CMTYENGA 4A09 - Semester at CityLAB: Applied Project Experience
- HUMAN 3CL3 – Community Leadership at McMaster
- LIFESCI 3EP3 - Life Sciences Applied Placement
- LIFESCI 3RP3 – Life Sciences Research Practicum
- LIFESCI 3XX3 - Peer Mentoring in the Life Sciences
- LIFESCI 4A03 - Life Sciences Advanced Research Practicum
- LIFESCI 4B09 A/B S - Independent Thesis
- LIFESCI 4C12 A/B S - Independent Thesis
- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4D15 A/B S - Independent Thesis
- LIFESCI 4EP6 A/B S - Life Sciences Advanced Placement
- SCICOMM 4A03 - Independent Project in Science Communication
- SUSTAIN 3S03 - Implementing Sustainable Change
- SUSTAIN 3SS3 - Community Engagement and Prototyping for Sustainability

(See *Program Notes 2, 3 and 7* above.)

3 units

- LIFESCI 4Z03 – Advanced Inquiry in the Life Sciences

(See *Program Note 6* above.)

15 units
from

- *Interdisciplinary Topics Course List*

15-27 units
from

- Electives

Justification: With the closure of the sensory motor systems specialization, and as recommended by IQAP reviewers in our cyclical IQAP review, we are introducing a new specialization for honours life sciences students we feel may be more relevant to current student that can prepare them for careers in global health, public health, and other professional school fields many students are aiming for after completion of their undergraduate degree. It was noted by ADO team that the history courses hadn't been captured for this course list D so these were added back, and some suggested program notes inserted.

Capacity: tentatively 50 given capacity in courses.

2. PROGRAM CLOSURES: n/a

3. CHANGES TO EXISTING PROGRAMS:

3.1. Honours Life Sciences (B.Sc.)

Admission Note
When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.

Admission
Completion of any Level I program with a Grade Point Average of at least 5.0 including:
6 units
from
- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity
  (See *Admission Note* above.)

3 units
- CHEM 1A03 - Introductory Chemistry I

3 units
from
- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

3 units
from
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

3 units
from
- EARTHSC 1G03 - Earth and the Environment
- ENVIRSC 1C03 - Climate, Water and Environment
- PSYCH 1FF3 - Survey of Biological Basis of Psychology
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

6 units
from
- the Science I Course List

Program Notes

1. Registration in an Honours Life Sciences program does not guarantee access to all courses. Some courses have program restrictions. Students should check prerequisites carefully.
2. For students who previously completed LIFESCI 2G03, this course does not substitute for BIOLOGY 2C03 or MOLBIOL 2C03 for prerequisite purposes.
3. Students interested in completing a thesis or independent study course should consider completing LIFESCI 3RP3 in Level III.
4. Students interested in graduate school may wish to consider completion of a thesis or independent study course (See LIFESCI 4A03, 4B09 A/B S, 4C12 A/B S, 4D15 A/B S, SCICOMM 4A03).
5. Level IV Research Seminar topics may change from year to year. Research Seminar topics and descriptions are available on the program web site (https://sis.mcmaster.ca/undergraduate/life-sciences/registered-students/). Honours Life Sciences students must complete at least 3 units from *Course List E*.
6. Students entering Level IV Honours Life Sciences (not including the Sensory Motor Systems Specialization or Health Evidence and Science Engagement Specialization) must complete and submit a ballot, rank ordering their preference for enrolment in Level IV seminar offerings by **the end of March**. Students will be informed of their ballot result by the end of May. Failure to submit a ballot by the stated deadline may compromise enrolment in a preferred seminar. The Life Sciences program pre-registration ballot will include all Level IV Life Sciences research seminar courses. Students fulfilling Course List E through eligible thesis or project courses can opt out of balloting for research seminar course topics.
7. One of LIFESCI 4CM3 or 4U03 is required for students completing the Honours Life Sciences - Origins of Disease Specialization (B.Sc.). Students in the Honours Life Sciences - Origins of Disease Specialization (B.Sc.) will complete the pre-registration ballot process to indicate preference for either LIFESCI 4CM3 or 4U03. Students in this specialization will receive first priority in the pre-registration ballot for one of these courses.
8. LIFESCI 4XX3 is required for the Honours Life Sciences - Sensory Motor Systems Specialization ~~and is not included in the pre-registration ballot~~. While this course is included in the pre-registration ballot, seats will preferentially be given to students in the Honours Life Sciences – Sensory Motor Systems Specialization.
9. Effective September 2027, LIFESCI 4Z03 is required for the Honours Life Sciences - Health Evidence and Science Engagement Specialization. While this course is included in the pre-registration ballot, seats will preferentially be given to students in the Honours Life Sciences – Health Evidence and Science Engagement Specialization.
~~9~~10. Course planning is extremely important. Students must review and consider the requisites on Level II, III and IV courses when enrolling in the previous Levels.
1~~0~~1. Effective September 2025, students in Honours Life Sciences will have the choice to use LIFESCI 4CM3 toward *Course List C* or *Course List E*.
1~~1~~2. Students who entered the program in September 2023 or prior, will have the choice to use LIFESCI 3P03 toward either *Course List A* or *Course List C*.
1~~2~~3. Students who entered the program in September 2023 or prior, may use LIFESCI 3PP3 toward *Course List A*.
1~~3~~4. SUSTAIN 3SS3 is only offered in the Spring Term.
1~~4~~5. Students who entered the program in September 2023 or prior, will have the choice to use LIFESCI 4A03, 4B09 A/B S, 4C12 A/B S, 4D15 A/B S toward *Course List E*.
16. Thesis and project courses that do not use a LIFESCI or SCICOMM course code may only be used towards elective credit.

Course Lists

Course List A - Advanced Topics in Life Sciences

- LIFESCI 3AA3 - Human Pathophysiology
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3BP3 - Modelling Life
- LIFESCI 3E03 - Reproductive Endocrinology

- LIFESCI 3G03 - Introduction to Epidemiology
- LIFESCI 3J03 - Human Biomechanics
- LIFESCI 3K03 - Neural Control of Human Movement
- LIFESCI 3M03 - Cellular Dynamics in Health and Disease
- LIFESCI 3N03 - Human Nutritional Toxicology
- LIFESCI 3Q03 - Global Human Health and Disease
- LIFESCI 3RC3 - Radioisotopes in Medicine
- LIFESCI 3W03 - Genetic and Epigenetic Determinants of Health: Role in Health Disparity
- LIFESCI 3Z03 - Life Sciences Inquiry

Course List B - Laboratory and Data Skills

- BIOLOGY 3B03 - Plant Physiology
- BIOLOGY 3JJ3 - Field Methods In Ecology
- BIOLOGY 3U03 - Animal Physiology - Homeostasis
- ~~BIOLOGY 3VV3~~
- LIFESCI 3L03 - Laboratory Methods in Life Sciences
- LIFESCI 3LA3 - Introduction to Data ~~Science~~ Literacy
- LIFESCI 3LL3 - Living Systems Laboratory Practicum
- LIFESCI 3LX3 - Applied Biostatistics and Scientific Writing
- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3M03 - Fundamental Concepts of Development

Course List C - Experiential Learning

- CMTYENGA 2MC3 - Design and Creation of Engaged Learning for Community Youth
- CMTYENGA 2MD3 - Community-Based Learning with McMaster Children and Youth University
- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry
- CMTYENGA 4A09 - Semester at CityLAB: Applied Project Experience
- EXPLORE 3IS3 - Interdisciplinary Science Field Camp
- HTHSCI 3DM3 - Demystifying Medicine
- HTHSCI 4ID3 - Innovation By Design I
- HTHSCI 4LA3 - Innovation By Design II
- LIFESCI 3EP3 A/B S - Life Sciences Applied Placement
- LIFESCI 3RP3 - Life Sciences Research Practicum
- LIFESCI 3XX3 - Peer Mentoring
- LIFESCI 4A03 - Life Sciences Advanced Research Practicum
- LIFESCI 4B09 A/B S - Independent ~~Project~~ Thesis
- LIFESCI 4C12 A/B S - Independent Thesis
- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4D15 A/B S - Independent Thesis
- LIFESCI 4EP6 A/B S - Life Sciences Advanced Placement
- PSYCH 2NF3 - Clinical Neuropsychology
- SCICOMM 4A03 - Independent Project in Science Communication
- SCIENCE 2A03 - Peer Mentoring in Science
- SCIENCE 3M03
- SUSTAIN 3S03 - Implementing Sustainable Change
- SUSTAIN 3SS3 - Community Engagement and Prototyping for Sustainability

Course List D - Interdisciplinary Topics

Astronomy	ASTRON 2B03
Biochemistry	Levels II, III, IV*
Biology	Levels II, III, IV*
Biophysics	BIOPHYS 2A03, 2S03, 3D03, 3G03

Challenge	CHALLENG 2CC3
Chemistry	CHEM 2BC3, 2E03, 2OA3, 2OB3, 2P03, 3RC3
Chemical Biology	CHEMBIO 2A03, 2P03, 3BM3, 3OA3, 4OA3, 4OB3
Data Science	DATASCI 2G03
Earth Sciences	EARTHSC 2E03, 2GG3, 2G03, 3CC3, 3E03, 3P03, 4G03, 4PA3
English	ENGLISH 3NH3
Environmental Science	ENVIRSC 2B03, 2C03, 2WW3, 3B03
Environment & Society	ENVSOCTY 2EI3, 2GI3, 2HI3, 2LE3, 2OC3, 2RU3, 2RW3, 2TF3, 2TS3, 2UI3, 3EC3, 3EE3, 3ER3, 3GI3, 3GV3, 3HP3, 3LT3, 3RW3, 3SR3, 3TG3, 3UP3, 3UR3, 3UW3, 4HC3, 4HD3, 4H
Explore	EXPLORE 3IS3
Health & Aging	HLTHAGE 3D03, 3E03, 3N03
Health Sciences	HTHSCI 2G03, 3DD3, 3DD6 A/B, 3I03, 3K03, 3RS3, 3DM3, 4II3, 4O03
History	HISTORY 3CH3, 3TC3
Inspire	INSPIRE 3MP3
Kinesiology	KINESIOL 2X03, 2XX3, 2Y03, 2YY3
Life Sciences	Levels II, III, IV*
Mathematics	MATH 2UU3, 3MB3
Medical Physics	MEDPHYS 4B03, 4F03, 4U03
Medical Radiation Sciences	MEDRADSC 3X03
Molecular Biology	Levels III, IV*
Neuroscience	NEUROSCI 3J03, 3SN3
Nexus	NEXUS 2A03
Physics	PHYSICS 2G03
Psychology	PSYCH Levels II, III, IV*
Science	Levels II, III*
Science Communication	SCICOMM Levels II, III, IV
	** All Levels II, III, IV courses for which the prerequisites have been met are acceptable.*

Course List E - Capstone Experience

- LIFESCI 4A03 - Life Sciences Advanced Research Practicum
- LIFESCI 4B09 A/B S - Independent ~~Project~~ Thesis
- LIFESCI 4C12 A/B S - Independent Thesis
- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4D15 A/B S - Independent Thesis
- LIFESCI 4DD3 - Racism & Health Inequities in Science & Health Care
- LIFESCI 4E03 - Science & Storytelling
- LIFESCI 4F03 - Emerging Paradigms in Environmental Change and Health
- LIFESCI 4H03 - Regeneration: What Can We Learn from Animal Models?
- LIFESCI 4I03 - Research Seminar
- LIFESCI 4J03 - Science Communication in the Media
- LIFESCI 4L03 - Our Invisible Body: Microbes and Human Health
- LIFESCI 4M03 - Research Seminar
- LIFESCI 4N03 - Research Seminar
- LIFESCI 4O03 - Research Seminar
- LIFESCI 4P03 - Ancient Scientific Literature
- LIFESCI 4Q03 - Research Seminar

- LIFESCI 4U03 - Mechanisms of Disease
- LIFESCI 4V03
- LIFESCI 4W03 - Advanced Topics in Nutrition
- LIFESCI 4X03 - The Biopsychology of Sex
- LIFESCI 4XX3 - The Synapse
- LIFESCI 4Y03 - Applied Biomechanics
- LIFESCI 4Z03 - Advanced Inquiry in the Life Sciences

Requirements
120 units total (Levels I to IV), of which no more than 48 units may be Level I

Level 1: 30 Units
30 units
(See *Admission* above.)

Levels II-IV: 90 Units
9 units
- LIFESCI 2A03 - Research Methods in Life Sciences
- LIFESCI 2L03 - Living Systems Laboratory
- SCICOMM 2A03 - Foundations in Science Communication

3 units
- STATS 2B03 - Statistical Methods for Science

3 units
- BIOLOGY 2C03 - Genetics

3 units
from
- BIOLOGY 2B03 - Cell Biology
- LIFESCI 2CC3 - Fundamentals of Neuroscience
- LIFESCI 2D03 - Behavioural Processes
- LIFESCI 2N03 - Human Nutrition for Life Sciences
- LIFESCI 2X03 - Environmental Change and Human Health

3 units
from
- LIFESCI 3P03 - Communicating Science for Public Audiences
- LIFESCI 3PP3 - Communicating Science for Professional Audiences

6 units
from
- Course List A - Advanced Topics in the Life Sciences (See *Program Notes ~~1~~12* and *12~~3~~* above.)

3 units
from
- Course List B - Laboratory and Data Skills

3-15 units
from
- Course List C - Experiential Learning (See *Program Notes 3, 4, ~~1~~12* and *12~~3~~* above.)

18 units
from
- Course List D - Interdisciplinary Topics

3 units
from
- Course List E - Capstone Experience (See *Program Notes 5, 6, 7, 8* and *11~~0~~* above.)

24-36 units
- Electives (See *Program Note ~~9~~10* above.)

Course Lists for Students Who Entered in September 2023 or Prior

Course List A - Communication Skills

- ENGLISH 3NH3 - Narratives of Health
- ENVSOCTY 3TG3 - Geographies of Globalization
- ENVSOCTY 3UW3 - Cities of the Developing World
- HISTORY 3CH3 - Climate History
- HISTORY 3TC3 - Science, Technology in World History
- HLTHAGE 3D03 - Perspectives on Disability, Chronic Illness and Aging
- HLTHAGE 3E03 - Ethical Issues in Health and Aging
- HLTHAGE 3N03 - Aging and Mental Health
- LIFESCI 3AA3 - Human Pathophysiology
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3BP3 - Modelling Life
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3G03 - Introduction to Epidemiology
- LIFESCI 3K03 - Neural Control of Human Movement
- LIFESCI 3M03 - Cellular Dynamics in Health and Disease
- LIFESCI 3N03 - Human Nutritional Toxicology
- LIFESCI 3P03 - Communicating Science for Public Audiences
- LIFESCI 3PP3 - Communicating Science for Professional Audiences
- LIFESCI 3Q03 - Global Human Health and Disease
- LIFESCI 3W03 - Genetic and Epigenetic Determinants of Health: Role in Health Disparity
- LIFESCI 3RC3 - Radioisotopes in Medicine
- LIFESCI 3Z03 - Life Sciences Inquiry

Course List B - Laboratory Skills

- BIOLOGY 3B03 - Plant Physiology
- BIOLOGY 3JJ3 - Field Methods In Ecology
- BIOLOGY 3U03 - Animal Physiology - Homeostasis
- BIOLOGY 3VV3
- BIOPHYS 2S03 - Explorations in Medical and Biological Physics
- LIFESCI 3L03 - Laboratory Methods in Life Sciences
- LIFESCI 3LA3 - Introduction to Data ~~Science~~ Literacy
- LIFESCI 3LL3 - Living Systems Laboratory Practicum
- LIFESCI 3LX3 - Applied Biostatistics and Scientific Writing
- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3M03 - Fundamental Concepts of Development

Course List C - Experiential Learning

- CMTYENGA 2MC3 - Design and Creation of Engaged Learning for Community Youth
- CMTYENGA 2MD3 - Community-Based Learning with McMaster Children and Youth University
- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry
- CMTYENGA 4A09 - Semester at CityLAB: Applied Project Experience
- EXPLORE 3IS3 - Interdisciplinary Science Field Camp
- HTHSCI 3DM3 - Demystifying Medicine
- HTHSCI 4ID3 - Innovation By Design I
- HTHSCI 4LA3 - Innovation By Design II
- LIFESCI 3EP3 A/B S - Life Sciences Applied Placement
- LIFESCI 3P03 - Communicating Science for Public Audiences
- LIFESCI 3RP3 - Life Sciences Research Practicum
- LIFESCI 3XX3 - Peer Mentoring
- LIFESCI 4A03 - Life Sciences Advanced Research Practicum
- LIFESCI 4B09 A/B S - Independent ~~Project~~ Thesis

- LIFESCI 4C12 A/B S - Independent Thesis
- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4D15 A/B S - Independent Thesis
- LIFESCI 4EP6 A/B S - Life Sciences Advanced Placement
- PSYCH 2NF3 - Clinical Neuropsychology
- SCICOMM 4A03 - Independent Project in Science Communication
- SCIENCE 2A03 - Peer Mentoring in Science
- SCIENCE 3M03
- SUSTAIN 3S03 - Implementing Sustainable Change
- SUSTAIN 3SS3 - Community Engagement and Prototyping for Sustainability

Course List D - Life Sciences Course List

Astronomy	ASTRON 2B03
Biochemistry	Levels II, III, IV*
Biology	Levels II, III, IV*
Biophysics	BIOPHYS 2A03, 2S03, 3D03, 3G03
Challenge	CHALLENG 2CC3
Chemistry	CHEM 2BC3, 2E03, 2OA3, 2OB3, 2P03, 3RC3
Chemical Biology	CHEMBIO 2A03, 2P03, 3BM3, 3OA3, 4OA3, 4OB3
Data Science	DATASCI 2G03
Earth Sciences	EARTHSC 2E03, 2GG3, 2G03, 3CC3, 3E03, 3P03, 4G03, 4PA3
Environmental Science	ENVIRSC 2B03, 2C03, 2WW3, 3B03,
Environment & Society	ENVSOCTY 2EI3, 2GI3, 2HI3, 2LE3, 2OC3, 2RU3, 2RW3, 2TF3, 2TS3, 2UI3, 3EC3, 3EE3, 3ER3, 3GI3, 3GV3, 3HP3, 3LT3, 3RW3 , 3SR3, 3TG3, 3UP3, 3UR3, 3UW3, 4HC3, 4HD
Explore	EXPLORE 3IS3
Health Sciences	HTHSCI 2G03, 3DD3, 3DD6 A/B, 3I03, 3K03, 3RS3, 3DM3, 4II3, 4O03
History	HISTORY 3CH3, 3TC3
Inspire	INSPIRE 3MP3
Kinesiology	KINESIOL 2X03, 2XX3, 2Y03, 2YY3
Life Sciences	Levels II, III, IV*
Mathematics	MATH 2UU3, 3MB3
Medical Physics	MEDPHYS 4B03, 4F03, 4U03
Medical Radiation Sciences	MEDRADSC 3X03
Molecular Biology	Levels III, IV*
Neuroscience	NEUROSCI 3J03, 3SN3
Nexus	NEXUS 2A03
Physics	PHYSICS 2G03
Psychology	PSYCH Levels II, III, IV*
Science	Levels II, III*
Science Communication	SCICOMM Levels II, III, IV
	** All Levels II, III, IV courses for which the prerequisites have been met are acceptable.*

Course List E - Knowledge Transfer/Seminar Experience

- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4DD3 - Racism & Health Inequities in Science & Health Care
- LIFESCI 4E03 - Science & Storytelling

- LIFESCI 4F03 - Emerging Paradigms in Environmental Change and Health
- LIFESCI 4H03 - Regeneration: What Can We Learn from Animal Models?
- LIFESCI 4I03 - Research Seminar
- LIFESCI 4J03 - Science Communication in the Media
- LIFESCI 4L03 - Our Invisible Body: Microbes and Human Health
- LIFESCI 4M03 - Research Seminar
- LIFESCI 4N03 - Research Seminar
- LIFESCI 4O03 - Research Seminar
- LIFESCI 4P03 - Ancient Scientific Literature
- LIFESCI 4Q03 - Research Seminar
- LIFESCI 4U03 - Mechanisms of Disease
- LIFESCI 4V03
- LIFESCI 4W03 - Advanced Topics in Nutrition
- LIFESCI 4X03 - The Biopsychology of Sex
- LIFESCI 4XX3 - The Synapse
- LIFESCI 4Y03 - Applied Biomechanics
- LIFESCI 4Z03 - Advanced Inquiry in the Life Sciences

Requirements for Students Who Entered in September 2023 or Prior
120 units total (Levels I to IV), of which no more than 48 units may be Level I

Level I: 30 Units
30 units
(See *Admission* above.)

Levels II-IV: 90 Units
9 units
from
- LIFESCI 2A03 - Research Methods in Life Sciences
- LIFESCI 2AA3
- LIFESCI 2L03 - Living Systems Laboratory
- SCICOMM 2A03 - Foundations in Science Communication

3 units
- STATS 2B03 - Statistical Methods for Science

3 units
from
- BIOLOGY 2C03 - Genetics
- LIFESCI 2G03

3 units
from
- BIOLOGY 2B03 - Cell Biology
- LIFESCI 2CC3 - Fundamentals of Neuroscience
- LIFESCI 2D03 - Behavioural Processes
- LIFESCI 2N03 - Human Nutrition for Life Sciences
- LIFESCI 2X03 - Environmental Change and Human Health

6 units
from
- Course List A - Communication Skills (See *Program Notes 1~~0~~2* and *~~1~~13* above.)

3 units
from
- Course List B - Laboratory Skills

3-15 units
from
- Course List C - Experiential Learning (See *Program Notes 1~~0~~2* and *~~1~~13* above.)

18 units
from

- Course List D - Life Sciences Course List

3 units
from

- Course List E - Knowledge Transfer/Seminar Experience (See *Program Notes 5, 6, 7, 8*, *9, 10* and *11* above.)

27-39 units

- Electives (See *Program Note 10* above.)

Justification: Housekeeping changes, removing a course from course list B that has not been offered since 2021-22 and will not impact any in-program students. Adjusting program notes to clarify course availability. The ADO team caught a numbering shift that wasn't captured in first pass for all the program notes throughout, as well as the history courses also disappearing from course list D for this one.

3.2. Honours Life Sciences - Origins of Disease Specialization (B.Sc.)

Admission Note
When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.

Admission
Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement, but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:
6 units
from

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity
  (See *Admission Note* above.)

6 units

- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II

3 units
from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

3 units
from

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

3 units
from

- EARTHSC 1G03 - Earth and the Environment
- ENVIRSC 1C03 - Climate, Water and Environment
- PSYCH 1FF3 - Survey of Biological Basis of Psychology
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

3 units
from

- the Science I Course List

Program Notes

1. Registration in an Honours Life Sciences program does not guarantee access to all courses. Some courses have program restrictions. Students are advised to check prerequisites carefully.
2. Students interested in completing a thesis or independent study course should consider completing LIFESCI 3RP3 in Level III.
3. Students interested in graduate school may wish to consider completion of a thesis or independent study course (See LIFESCI 4A03, 4B09 A/B S, 4C12 A/B S, 4D15 A/B S, SCICOMM 4A03).
4. LIFESCI 2G03 does not substitute for BIOLOGY 2C03 or MOLBIOL 2C03 for prerequisite purposes.
5. This program does not have a Co-op option.
6. Course planning is extremely important. Students must review and consider the requisites on Level II, III and IV courses when enrolling in the previous Levels.
7. One of LIFESCI 4CM3 or 4U03 is required for students completing Honours Life Sciences - Origins of Disease Specialization (B.Sc.). Students in the Honours Life Sciences - Origins of Disease Specialization will complete the pre-registration ballot process to indicate preference for either LIFESCI 4CM3 or 4U03. Students considering admission to graduate studies are strongly encouraged to take LIFESCI 4CM3 .
8. Completion of LIFESCI 2BP3 is strongly recommended prior to registration in LIFESCI 3M03.
9. SUSTAIN 3SS3 is only offered in the Spring Term.
10. ~~Students who entered the program prior to September 2022, can use MOLBIOL 3B03 to satisfy the LIFESCI 3M03 requirement.~~

1~~1~~0. Effective the 2023-24 academic year, the "Life Sciences Course List" has been renamed to be the "Interdisciplinary Topics Course List". Advisement reports may indicate either list name, depending on your year of entry into the program.

11. Thesis and project courses that do not use a LIFESCI or SCICOMM course code may only be used towards elective credit.

Interdisciplinary Topics Course List

Astronomy	ASTRON 2B03
Biochemistry	Levels II, III, IV*
Biology	Levels II, III, IV*
Biophysics	BIOPHYS 2A03, 2S03, 3D03, 3G03
Challenge	CHALLENG 2CC3
Chemistry	CHEM 2BC3, 2E03, 2OB3, 2P03, 3RC3
Chemical Biology	CHEMBIO 2A03, 2P03, 3BM3, 3OA3, 4OA3, 4OB3
Data Science	DATASCI 2G03
Earth Sciences	EARTHSC 2E03, 2GG3, 2G03, 3CC3, 3E03, 3P03, 4G03, 4PA3
English	ENGLISH 3NH3
Environmental Science	ENVIRSC 2B03, 2C03, 2WW3, 3B03
Environment & Society	ENVSOCTY 2EI3, 2GI3, 2HI3, 2LE3, 2OC3, 2RU3, 2RW3, 2TF3, 2TS3 , 2UI3, 3EC3, 3EE3, 3ER3, 3GI3, 3GV3, 3HP3, 3LT3, 3RW3, 3SR3, 3UP3, 3UR3, 3UW3, 4HC3, 4HD3, 4HH3
Explore	EXPLORE 3IS3
Health & Aging	HLTHAGE 3D03, 3E03, 3N03
Health Sciences	HTHSCI 2G03, 3DD3, 3DD6 A/B, 3I03, 3K03, 3RS3, 3DM3, 4II3, 4O03
History	HISTORY 3CH3, 3TC3
Inspire	INSPIRE 3MP3
Kinesiology	KINESIOL 2X03, 2XX3, 2Y03, 2YY3
Life Sciences	Levels II, III, IV*

Mathematics	MATH 2UU3, 3MB3
Medical Physics	MEDPHYS 4B03, 4F03, 4U03
Medical Radiation Sciences	MEDRADSC 3X03
Molecular Biology	Levels III, IV*
Neuroscience	NEUROSCI 3J03, 3SN3
Nexus	NEXUS 2A03
Physics	PHYSICS 2G03
Psychology	PSYCH Levels II, III, IV*
Science	Levels II, III*
Science Communication	SCICOMM Levels II, III, IV

***All Levels II, III, IV courses for which prerequisites have been met are acceptable.**

Requirements
120 units total (Levels I to IV), of which no more than 48 units may be Level I

Level 1: 30 Units
30 units
(See *Admission* above.)

Levels II-IV: 90 Units
9 units
- LIFESCI 2A03 - Research Methods in Life Sciences
- LIFESCI 2L03 - Living Systems Laboratory
- SCICOMM 2A03 - Foundations in Science Communication

3 units
- BIOLOGY 2B03 - Cell Biology

3 units
- STATS 2B03 - Statistical Methods for Science

3 units
- BIOLOGY 2C03 - Genetics

3 units from
- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOPHYS 2S03 - Explorations in Medical and Biological Physics
- KINESIOL 2Y03 - Human Anatomy and Physiology I
- LIFESCI 2BP3 - Biophysics of the Cell and Living Organisms

3 units
- CHEM 2OA3 - Organic Chemistry I

3 units
- LIFESCI 3M03 - Cellular Dynamics in Health and Disease
  (See *Program Note 8* above.)

3 units from
- BIOLOGY 3AA3 - Fundamental Concepts of Pharmacology
- CHEMBIO 3BM3 - Implanted Biomaterials
- LIFESCI 3AA3 - Human Pathophysiology
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3BM3 - Implanted Biomaterials
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3G03 - Introduction to Epidemiology

- LIFESCI 3N03 - Human Nutritional Toxicology
- LIFESCI 3Q03 - Global Human Health and Disease
- LIFESCI 3W03 - Genetic and Epigenetic Determinants of Health: Role in Health Disparity

3 units
from

- BIOLOGY 3U03 - Animal Physiology - Homeostasis
- ~~BIOLOGY 3VV3~~
- LIFESCI 3L03 - Laboratory Methods in Life Sciences
- LIFESCI 3LA3 - Introduction to Data ~~Science~~ Literacy
- LIFESCI 3LL3 - Living Systems Laboratory Practicum
- LIFESCI 3LX3 - Applied Biostatistics and Scientific Writing
- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3M03 - Fundamental Concepts of Development

3 units
from

- LIFESCI 3P03 - Communicating Science for Public Audiences
- LIFESCI 3PP3 - Communicating Science for Professional Audiences

3-15 units
from

- CMTYENGA 2MC3 - Design and Creation of Engaged Learning for Community Youth
- CMTYENGA 2MD3 - Community-Based Learning with McMaster Children and Youth University
- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry
- CMTYENGA 4A09 - Semester at CityLAB: Applied Project Experience
- EXPLORE 3IS3 - Interdisciplinary Science Field Camp
- LIFESCI 3EP3 A/B S - Life Sciences Applied Placement
- LIFESCI 3RP3 - Life Sciences Research Practicum
- LIFESCI 3XX3 - Peer Mentoring
- LIFESCI 4A03 - Life Sciences Advanced Research Practicum
- LIFESCI 4B09 A/B S - Independent ~~Project~~ Thesis
- LIFESCI 4C12 A/B S - Independent Thesis
- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4D15 A/B S - Independent Thesis
- LIFESCI 4EP6 A/B S - Life Sciences Advanced Placement
- SUSTAIN 3S03 - Implementing Sustainable Change
- SUSTAIN 3SS3 - Community Engagement and Prototyping for Sustainability

15 units
from

- *Interdisciplinary Topics Course List*

3 units
from

- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4U03 - Mechanisms of Disease

(See *Program Note 7* above.)

21-33 units

- Electives

Requirements for Students Who Entered in September 2023 or Prior
120 units total (Levels I to IV), of which no more than 48 units may be Level I

Level I: 30 Units
30 units
(See *Admission* above.)

Levels II-IV: 90 Units

6 units

- LIFESCI 2A03 - Research Methods in Life Sciences
- LIFESCI 2L03 - Living Systems Laboratory

3 units

- BIOLOGY 2B03 - Cell Biology

3 units

- STATS 2B03 - Statistical Methods for Science

3 units from

- BIOLOGY 2C03 - Genetics
- LIFESCI 2G03

6 units

- BIOPHYS 2S03 - Explorations in Medical and Biological Physics
- LIFESCI 2BP3 - Biophysics of the Cell and Living Organisms

6 units

- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II

0-3 units

- CHEM 1AA3 - Introductory Chemistry II (if not completed in Level I)
  (See *Program Note 8* above.)

3 units

- LIFESCI 3M03 - Cellular Dynamics in Health and Disease
  (See *Program Note~~s~~ 8 ~~and 10~~* above.)

3 units from

- BIOLOGY 3AA3 - Fundamental Concepts of Pharmacology
- CHEMBIO 3BM3 - Implanted Biomaterials
- LIFESCI 3AA3 - Human Pathophysiology
- LIFESCI 3BM3 - Implanted Biomaterials

3-15 units from

- CMTYENGA 2MC3 - Design and Creation of Engaged Learning for Community Youth
- CMTYENGA 2MD3 - Community-Based Learning with McMaster Children and Youth University
- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry
- CMTYENGA 4A09 - Semester at CityLAB: Applied Project Experience
- EXPLORE 3IS3 - Interdisciplinary Science Field Camp
- LIFESCI 3EP3 A/B S - Life Sciences Applied Placement
- LIFESCI 3N03 - Human Nutritional Toxicology
- LIFESCI 3RP3 - Life Sciences Research Practicum
- LIFESCI 3XX3 - Peer Mentoring
- LIFESCI 4A03 - Life Sciences Advanced Research Practicum
- LIFESCI 4B09 A/B S - Independent ~~Project~~ Thesis
- LIFESCI 4C12 A/B S - Independent Thesis
- LIFESCI 4D15 A/B S - Independent Thesis
- LIFESCI 4EP6 A/B S - Life Sciences Advanced Placement
- PSYCH 2NF3 - Clinical Neuropsychology
- SCIENCE 2A03 - Peer Mentoring in Science
- SCIENCE 3M03
- SUSTAIN 3S03 - Implementing Sustainable Change
- SUSTAIN 3SS3 - Community Engagement and Prototyping for Sustainability

15 units from

- *Interdisciplinary Topics Course List*

3 units
from

- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4U03 - Mechanisms of Disease
  (See *Program Note 7* above.)

21-36 units

- Electives

Justification: Housekeeping. The ADO team flagged a numbering issue with the program notes in this one during cleanup as well.

3.3. Honours Life Sciences Co-op (B.Sc.)

Admission
Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, submission of the on-line application by the stated deadline and completion of Level II Honours Life Sciences with a Grade Point Average of at least 5.0 and completion of the following courses:
9 units

- LIFESCI 2A03 - Research Methods in Life Sciences
- LIFESCI 2L03 - Living Systems Laboratory
- SCICOMM 2A03 - Foundations in Science Communication

3 units

- STATS 2B03 - Statistical Methods for Science

3 units

- BIOLOGY 2C03 - Genetics

3 units
from

- BIOLOGY 2B03 - Cell Biology
- LIFESCI 2CC3 - Fundamentals of Neuroscience
- LIFESCI 2D03 - Behavioural Processes
- LIFESCI 2N03 - Human Nutrition for Life Sciences
- LIFESCI 2X03 - Environmental Change and Human Health

Note:
Information about this program and the selection procedure can be obtained from Science Careers ~~and~~ & Experience Centre ~~Cooperative Education~~ and the Academic Program Advisor.

Program Notes

1. This is a five-level (year) co-op program which includes two eight-month work terms which must be spent in life sciences related placements.
2. Students must be registered full-time and take a full academic workload, as prescribed by Level and Term.
3. Students are required to complete SCIENCE 2C00 prior to the Fall Term of Level III. Students are required to complete SCIENCE 3C00 before the first work placement.
4. Registration in the Honours Life Sciences Co-op program does not guarantee access to all courses. Some courses have program restrictions and students are responsible to read course prerequisites carefully.
5. Students interested in completing a thesis or independent study course should consider completing LIFESCI 3RP3 in Level III.
6. Students interested in graduate school may wish to consider completion of a thesis or independent study course (see LIFESCI 4A03, 4B09 A/B S, 4C12 A/B S, 4D15 A/B S, SCICOMM 4A03).

7. Level IV Research Seminar topics may change from year to year. Research Seminar topics and descriptions are available on the program web site (https://sis.mcmaster.ca/undergraduate/life-sciences/registered-students/).
8. Students entering Level IV or V of Honours Life Sciences Co-op must complete and submit a ballot, rank ordering their preference for enrolment in Level IV seminar offerings by **the end of March**. Students will be informed of their ballot result by the end of May. Failure to submit a ballot by the stated deadline may compromise enrolment in a preferred seminar. The Life Sciences program pre-registration ballot will include all Level IV Life Sciences research seminar courses. Co-op students will have access to the ballot only once during their undergraduate degree. Students fulfilling Course List E through eligible thesis or project courses can opt out of balloting for research seminar course topics.
9. One of LIFESCI 4CM3 or 4U03 is required for students completing the Honours Life Sciences - Origins of Disease Specialization (B.Sc.). Students in this specialization will receive first priority in the pre-registration ballot for one of these courses. Students in the Honours Life Sciences - Origins of Disease Specialization will complete the pre-registrati~~n~~on ballot process to indicate preference for either LIFESCI 4CM3 or 4U03.
10. LIFESCI 4XX3 is required for students completing the Honours Life Sciences - Sensory Motor Systems Specialization (B.Sc.) ~~and is not included in the pre-registration ballot~~. While this course is included in the pre-registration ballot, seats will preferentially be given to students in the Honours Life Sciences – Sensory Motor Systems Specialization.
11. Effective September 2027, LIFESCI 4Z03 is required for the Honours Life Sciences – Health Evidence and Science Engagement Specialization. While this course is included in the pre-registration ballot, seats will preferentially be given to students in the Honours Life Sciences – Sensory Health Evidence and Science Engagement Specialization.

1~~1~~2. Students must complete at least one of EXPLORE 3IS3, LIFESCI 3EP3 A/B S, 3RP3, 3XX3, 4A03, 4B09 A/B S, 4C12 A/B S, 4D15 A/B S, 4EP6 A/B S, SCIENCE 2A03, 3A03, 3WT0.

1~~2~~3. The Co-op option is not available with either the Origins of Disease or Sensory Motor Systems Specializations.

1~~3~~4. Course planning is extremely important. Students must review and consider the requisites on Level II, III and IV courses when enrolling in the previous Levels.

15. Thesis and project courses that do not use a LIFESCI or SCICOMM course code may only be used towards elective credit.

Interdisciplinary Topics Course List

Astronomy	ASTRON 2B03
Biochemistry	Levels II, III, IV*
Biology	Levels II, III, IV*
Biophysics	BIOPHYS 2A03, 2S03, 3D03, 3G03
Challenge	CHALLENG 2CC3
Chemistry	CHEM 2BC3, 2E03, 2OA3, 2OB3, 2P03, 3RC3
Chemical Biology	CHEMBIO 2A03, 2P03, 3BM3, 3OA3, 4OA3, 4OB3
Data Science	DATASCI 2G03
Earth Sciences	EARTHSC 2E03, 2GG3, 2G03, 3CC3, 3E03, 3P03, 4G03, 4PA3
English	ENGLISH 3NH3
Environmental Science	ENVIRSC 2B03, 2C03, 2WW3, 3B03
Environment & Society	ENVSOCTY 2EI3, 2GI3, 2HI3, 2LE3, 2OC3, 2RU3, 2RW3, 2TF3, 2TS3, 2UI3 3UR3, 3UW3, 4HC3, 4HD3, 4HH3
Explore	EXPLORE 3IS3
Health & Aging	HLTHAGE 3D03, 3E03, 3N03
Health Sciences	HTHSCI 2G03, 3DD3, 3DD6 A/B, 3I03, 3K03, 3RS3, 3DM3, 4II3, 4O03
History	HISTORY 3CH3, 3TC3
Inspire	INSPIRE 3MP3
Kinesiology	KINESIOL 2X03, 2XX3, 2Y03, 2YY3
Life Sciences	Levels II, III, IV*
Mathematics	MATH 2UU3, 3MB3
Medical Physics	MEDPHYS 4B03, 4F03, 4U03

Medical Radiation Sciences	MEDRADSC 3X03
Molecular Biology	Levels III, IV*
Neuroscience	NEUROSCI 3J03, 3SN3
Nexus	NEXUS 2A03
Physics	PHYSICS 2G03
Psychology	PSYCH Levels II, III, IV*
Science	Levels II, III*
Science Communication	SCICOMM Levels II, III, IV

*** All Levels II, III, IV courses for which the prerequisites have been met are acceptable.**

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 program

Level II: 30 Units
30 units
- Completion of any Level II Honours Life Sciences program, including:

9 units
from
- LIFESCI 2A03 - Research Methods in Life Sciences
- LIFESCI 2AA3
- LIFESCI 2L03 - Living Systems Laboratory
- SCICOMM 2A03 - Foundations in Science Communication

3 units
- STATS 2B03 - Statistical Methods for Science

3 units
- BIOLOGY 2C03 - Genetics

3 units
from
- BIOLOGY 2B03 - Cell Biology
- LIFESCI 2CC3 - Fundamentals of Neuroscience
- LIFESCI 2D03 - Behavioural Processes
- LIFESCI 2N03 - Human Nutrition for Life Sciences
- LIFESCI 2X03 - Environmental Change and Human Health

1 course
- SCIENCE 2C00 - Skills for Career Success in Science
  (See *Program Note 3* above.)

Level III
Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units:
3 units
from
- LIFESCI 3AA3 - Human Pathophysiology
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3BP3 - Modelling Life
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3G03 - Introduction to Epidemiology

- LIFESCI 3J03 - Human Biomechanics
- LIFESCI 3K03 - Neural Control of Human Movement
- LIFESCI 3M03 - Cellular Dynamics in Health and Disease
- LIFESCI 3N03 - Human Nutritional Toxicology
- LIFESCI 3Q03 - Global Human Health and Disease
- LIFESCI 3RC3 - Radioisotopes in Medicine
- LIFESCI 3W03 - Genetic and Epigenetic Determinants of Health: Role in Health Disparity
- LIFESCI 3Z03 - Life Sciences Inquiry

3 units
from

- LIFESCI 3P03 - Communicating Science for Public Audiences
- LIFESCI 3PP3 - Communicating Science for Professional Audiences

6 units
from

- *Interdisciplinary Topics Course List*

3 units

- Electives

1 course

- SCIENCE 3C00 - Advanced Job Search Skills For Science Co-op Students

Winter Term:
Work Term
1 course

- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term:
Work Term
1 course

- SCIENCE 3WT0 - Science Co-op Work Term

Level IV
Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:
3 units
from

- LIFESCI 3AA3 - Human Pathophysiology
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3BP3 - Modelling Life
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3G03 - Introduction to Epidemiology
- LIFESCI 3J03 - Human Biomechanics
- LIFESCI 3K03 - Neural Control of Human Movement
- LIFESCI 3M03 - Cellular Dynamics in Health and Disease
- LIFESCI 3N03 - Human Nutritional Toxicology
- LIFESCI 3Q03 - Global Human Health and Disease
- LIFESCI 3RC3 - Radioisotopes in Medicine
- LIFESCI 3W03 - Genetic and Epigenetic Determinants of Health: Role in Health Disparity
- LIFESCI 3Z03 - Life Sciences Inquiry

3 units
from

- BIOLOGY 3B03 - Plant Physiology
- BIOLOGY 3JJ3 - Field Methods In Ecology
- BIOLOGY 3U03 - Animal Physiology - Homeostasis

- ~~BIOLOGY 3VV3~~
- LIFESCI 3L03 - Laboratory Methods in Life Sciences
- LIFESCI 3LA3 - Introduction to Data ~~Science~~ Literacy
- LIFESCI 3LL3 - Living Systems Laboratory Practicum
- LIFESCI 3LX3 - Applied Biostatistics and Scientific Writing
- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3M03 - Fundamental Concepts of Development

9 units
from

- *Interdisciplinary Topics Course List*

15 units

- Electives

Spring/Summer Term:
Work Term
1 course

- SCIENCE 4WT0 - Science Co-op Work Term

Level V
Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)

Fall Term:
Work Term
1 course

- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:
3 units
from

- LIFESCI 4A03 - Life Sciences Advanced Research Practicum
- LIFESCI 4B09 A/B S - Independent ~~Project~~ Thesis
- LIFESCI 4C12 A/B S - Independent Thesis
- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4D15 A/B S - Independent Thesis
- LIFESCI 4DD3 - Racism & Health Inequities in Science & Health Care
- LIFESCI 4E03 - Science & Storytelling
- LIFESCI 4F03 - Emerging Paradigms in Environmental Change and Health
- LIFESCI 4H03 - Regeneration: What Can We Learn from Animal Models?
- LIFESCI 4I03 - Research Seminar
- LIFESCI 4J03 - Science Communication in the Media
- LIFESCI 4L03 - Our Invisible Body: Microbes and Human Health
- LIFESCI 4M03 - Research Seminar
- LIFESCI 4N03 - Research Seminar
- LIFESCI 4O03 - Research Seminar
- LIFESCI 4P03 - Ancient Scientific Literature
- LIFESCI 4Q03 - Research Seminar
- LIFESCI 4U03 - Mechanisms of Disease
- LIFESCI 4V03
- LIFESCI 4W03 - Advanced Topics in Nutrition
- LIFESCI 4X03 - The Biopsychology of Sex
- LIFESCI 4XX3 - The Synapse
- LIFESCI 4Y03 - Applied Biomechanics
- LIFESCI 4Z03 - Advanced Inquiry in the Life Sciences

3 units
from

- *Interdisciplinary Topics Course List*

9 units

- Electives

Requirements for Students Who Entered in September 2024 or Prior
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 program

Level II: 30 Units
30 units

- Completion of any Level II Honours Life Sciences program, including:

9 units

- LIFESCI 2A03 - Research Methods in Life Sciences
- LIFESCI 2AA3
- LIFESCI 2L03 - Living Systems Laboratory
- SCICOMM 2A03 - Foundations in Science Communication

3 units

- STATS 2B03 - Statistical Methods for Science

3 units
from

- BIOLOGY 2C03 - Genetics
- LIFESCI 2G03

3 units
from

- BIOLOGY 2B03 - Cell Biology
- LIFESCI 2CC3 - Fundamentals of Neuroscience
- LIFESCI 2D03 - Behavioural Processes
- LIFESCI 2N03 - Human Nutrition for Life Sciences
- LIFESCI 2X03 - Environmental Change and Human Health

1 course

- SCIENCE 2C00 - Skills for Career Success in Science
  (See *Program Note 3* above.)

Level III
Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units:
3 units
from

- LIFESCI 3AA3 - Human Pathophysiology
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3BP3 - Modelling Life
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3G03 - Introduction to Epidemiology
- LIFESCI 3K03 - Neural Control of Human Movement
- LIFESCI 3M03 - Cellular Dynamics in Health and Disease
- LIFESCI 3N03 - Human Nutritional Toxicology
- LIFESCI 3P03 - Communicating Science for Public Audiences

- LIFESCI 3PP3 - Communicating Science for Professional Audiences
- LIFESCI 3Q03 - Global Human Health and Disease
- LIFESCI 3RC3 - Radioisotopes in Medicine
- LIFESCI 3W03 - Genetic and Epigenetic Determinants of Health: Role in Health Disparity
- LIFESCI 3Z03 - Life Sciences Inquiry

6 units
from

- *Interdisciplinary Topics Course List*

6 units

- Electives

1 course

- SCIENCE 3C00 - Advanced Job Search Skills For Science Co-op Students

Winter Term:
Work Term
1 course

- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term:
Work Term
1 course

- SCIENCE 3WT0 - Science Co-op Work Term

Level IV
Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:
3 units
from

- LIFESCI 3AA3 - Human Pathophysiology
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3BP3 - Modelling Life
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3G03 - Introduction to Epidemiology
- LIFESCI 3K03 - Neural Control of Human Movement
- LIFESCI 3M03 - Cellular Dynamics in Health and Disease
- LIFESCI 3N03 - Human Nutritional Toxicology
- LIFESCI 3P03 - Communicating Science for Public Audiences
- LIFESCI 3PP3 - Communicating Science for Professional Audiences
- LIFESCI 3Q03 - Global Human Health and Disease
- LIFESCI 3RC3 - Radioisotopes in Medicine
- LIFESCI 3W03 - Genetic and Epigenetic Determinants of Health: Role in Health Disparity
- LIFESCI 3Z03 - Life Sciences Inquiry

3 units
from

- BIOLOGY 3B03 - Plant Physiology
- BIOLOGY 3JJ3 - Field Methods In Ecology
- BIOLOGY 3U03 - Animal Physiology - Homeostasis
- ~~BIOLOGY 3VV3~~
- BIOPHYS 2S03 - Explorations in Medical and Biological Physics
- LIFESCI 3L03 - Laboratory Methods in Life Sciences
- LIFESCI 3LA3 - Introduction to Data ~~Science~~ Literacy
- LIFESCI 3LL3 - Living Systems Laboratory Practicum
- LIFESCI 3LX3 - Applied Biostatistics and Scientific Writing

- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3M03 - Fundamental Concepts of Development

9 units
from

- *Interdisciplinary Topics Course List*

15 units

- Electives

Spring/Summer Term:
Work Term
1 course

- SCIENCE 4WT0 - Science Co-op Work Term

Level V
Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)

Fall Term:
Work Term
1 course

- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:
3 units
from

- LIFESCI 4A03 - Life Sciences Advanced Research Practicum
- LIFESCI 4B09 A/B S - Independent ~~Project~~ Thesis
- LIFESCI 4C12 A/B S - Independent Thesis
- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4D15 A/B S - Independent Thesis
- LIFESCI 4DD3 - Racism & Health Inequities in Science & Health Care
- LIFESCI 4E03 - Science & Storytelling
- LIFESCI 4F03 - Emerging Paradigms in Environmental Change and Health
- LIFESCI 4H03 - Regeneration: What Can We Learn from Animal Models?
- LIFESCI 4I03 - Research Seminar
- LIFESCI 4J03 - Science Communication in the Media
- LIFESCI 4L03 - Our Invisible Body: Microbes and Human Health
- LIFESCI 4M03 - Research Seminar
- LIFESCI 4N03 - Research Seminar
- LIFESCI 4O03 - Research Seminar
- LIFESCI 4P03 - Ancient Scientific Literature
- LIFESCI 4Q03 - Research Seminar
- LIFESCI 4U03 - Mechanisms of Disease
- LIFESCI 4V03
- LIFESCI 4W03 - Advanced Topics in Nutrition
- LIFESCI 4X03 - The Biopsychology of Sex
- LIFESCI 4XX3 - The Synapse
- LIFESCI 4Y03 - Applied Biomechanics
- LIFESCI 4Z03 - Advanced Inquiry in the Life Sciences
  (See *Program Notes 9, 10 and 11* above.)

3 units
from

- *Interdisciplinary Topics Course List*

9 units

- Electives

Co-op Program Chart

	FALL TERM (September to December)	WINTER TERM (January to April)	SPRING/SUMMER TERM (May to August)
Level III	15 units from Academic Level III + SCIENCE 3C00	Work Term SCIENCE 3WT0	Work Term SCIENCE 3WT0
Level IV	30 units from Academic Levels III and IV		Work Term SCIENCE 4WT0
Level V	Work Term SCIENCE 5WT0	15 units from Academic Level IV	

Justification: Housekeeping changes to remove courses not offered since 2021-22, adjustments to note wording to correct typos/permit students to take all seminar courses. Program note and terminology corrections caught by the ADO team during cleanup.

3.4. Honours Medical Radiation Sciences - Radiation Therapy Specialization (B.M.R.Sc.)

~~**Effective September 2023, the Bachelor of Medical Radiation Sciences - Radiation Therapy Specialization (B.M.R.Sc.) degree has been replaced by an Honours Bachelor of Medical Radiation Sciences - Radiation Therapy Specialization (B.M.R.Sc.) degree. All students previously registered in this program have been transferred to Honours Bachelor of Medical Radiation Sciences - Radiation Therapy Specialization (B.M.R.Sc.) degree program and will graduate with the new degree designation.**~~

Program Notes

1. Students in this program pursue two qualifications simultaneously, and graduates receive the Ontario College Advanced Diploma in Medical Radiation Sciences from Mohawk College and the McMaster Honours Bachelor of Medical Radiation Sciences degree.
2. The timing of the Spring/Summer and the Level III and IV Fall/Winter Terms may not adhere to the *Sessional Dates*, as published in this Calendar.
3. STATS 2B03 is a prerequisite for MEDRADSC 3X03 and should be taken no later than Fall ~~semester~~ Term of ~~I~~Level III.

Admission Note

When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.

Admission

Enrolment in this program is limited and admission is by selection but requires, as a minimum, completion of Level I Honours Medical Radiation Sciences with a Fall-Winter Average (on a minimum of 24 units) of at least 5.0 and a cumulative Grade Point Average of at least 5.0 including:

12 units

- MEDRADSC 1B03 - Introduction to Pathology
- MEDRADSC 1C03 - Introduction to Physics for Medical Radiation Sciences
- MEDRADSC 1E03 - Inquiry in Medical Radiation Sciences
- MEDRADSC 1F03 - Professions in Medical Radiation Sciences

3 units from

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology

- BIOLOGY 1A03 - Cellular and Molecular Biology
  (See *Admission Note* above.)

6 units

- KINESIOL 1Y03 - Human Anatomy and Physiology I
- KINESIOL 1YY3 - Human Anatomy and Physiology II

3 units
from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1MM3 - Applied Calculus

Requirements
150 units total (Levels I to IV), 45 units of clinical practicum are interspersed with 75 units of academic courses in Levels II to IV

Level I: 30 Units
30 units
(See *Admission* above.)

Level II

Fall and Winter Terms: 30 units:
27 units
from

- MEDRADSC 2A03 - Patient Care
- MEDRADSC 2AA3 - Imaging Procedures in Health Care
- MEDRADSC 2D03 - Relational Anatomy I
- MEDRADSC 2RA3 - Relational Anatomy II
- MEDRADSC 2S03 - Clinical Oncology I
- MEDRADSC 2T03 - Clinical Oncology II
- MEDRADSC 2U03 - Radiation Therapy Skills I
- MEDRADSC 2W03 - Physics and Instrumentation for Radiation Therapy
- MEDRADSC 2X03 - Radiobiology and Protection
- ~~MEDRADSC 2Z03~~

3 units

- Electives

Spring/Summer Term: 15 units:
(See *Program Note 2* above.)
15 units

- MEDRADSC 2V15 - Radiation Therapy Clinical Practicum I

Level III

Fall and Winter Terms: 30 units:
21 units
from

- MEDRADSC 3DA3 - Advanced Studies in Computed Tomography
- MEDRADSC 3K03 - Computed Tomography
- MEDRADSC 3LA3 - Radiation Therapy Skills II
- MEDRADSC 3S03 - Treatment Planning I
- MEDRADSC 3V03 - Treatment Planning II
- ~~MEDRADSC 3W03~~
- MEDRADSC 3X03 - Research Methods in Medical Radiation Sciences

- MEDRADSC 3Y03 - Ethics for Medical Radiation Sciences

3 units

- STATS 2B03 - Statistical Methods for Science *(See Program Note 3 above.)*

3 units
from

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

3 units

- Electives

Spring/Summer Term: 15 units:
(See *Program Note 2* above.)
9 units

- MEDRADSC 3AA3 - Interdisciplinary Health Care
- MEDRADSC 3B03 - Quality Management in Medical Radiation Sciences
- ~~MEDRADSC 3BB3~~
- MEDRADSC 3LB3 - Radiation Therapy Skills III

6 units

- Electives

which may include

- MEDRADSC 3DE3 - Introduction to Magnetic Resonance Imaging
- MEDRADSC 3Z06 - Research Project

Level IV

Fall and Winter Terms: 30 units:
30 units

- MEDRADSC 4E15 - Radiation Therapy Clinical Practicum II
- MEDRADSC 4F15 - Radiation Therapy Clinical Practicum III

Program Chart

	FALL TERM (September to December)	**WINTER TERM (January to April)**	**SPRING/SUMMER TERM (May to August)**
Level II	30 units from Academic Level II		Clinical Practicum I
Level III	45 units from Academic Level III		
Level IV	Clinical Practicum II	Clinical Practicum III	

Justification: Housekeeping to remove old courses, added program note to indicate students should be completing STATS 2B03 Fall of level III at latest.

3.5. Honours Medical Radiation Sciences - Radiography Specialization (B.M.R.Sc.)
~~**Effective September 2023, the Bachelor of Medical Radiation Sciences - Radiography Specialization (B.M.R.Sc.) degree has been replaced by an Honours Bachelor of Medical Radiation Sciences - Radiography Specialization (B.M.R.Sc.) degree. All students previously registered in this program have been transferred to Honours Bachelor of Medical Radiation Sciences - Radiography Specialization (B.M.R.Sc.) degree program and will graduate with the new degree designation.**~~

Program Notes

1. Students in this program pursue two qualifications simultaneously, and graduates receive the Ontario College Advanced Diploma in Medical Radiation Sciences from Mohawk College and the McMaster Honours Bachelor of Medical Radiation Sciences degree.

2. The timing of the Spring/Summer and the Level III and IV Fall/Winter Terms may not adhere to the *Sessional Dates*, as published in this Calendar.
3. STATS 2B03 is a prerequisite for MEDRADSC 3X03 and should be taken no later than Fall ~~semester~~ Term of ~~I~~Level III.

Admission Note
When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.

Admission
Enrolment in this program is limited and admission is by selection but requires, as a minimum, completion of Level I Honours Medical Radiation Sciences with a Fall-Winter Average (on a minimum of 24 units) of at least 5.0 and a cumulative Grade Point Average of at least 5.0 including:
12 units

- MEDRADSC 1B03 - Introduction to Pathology
- MEDRADSC 1C03 - Introduction to Physics for Medical Radiation Sciences
- MEDRADSC 1E03 - Inquiry in Medical Radiation Sciences
- MEDRADSC 1F03 - Professions in Medical Radiation Sciences

3 units
from

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
  (See *Admission Note* above.)

6 units

- KINESIOL 1Y03 - Human Anatomy and Physiology I
- KINESIOL 1YY3 - Human Anatomy and Physiology II

3 units
from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1MM3 - Applied Calculus

Requirements
150 units total (Levels I to IV), 45 units of clinical practicum are interspersed with 75 units of academic courses in Levels II to IV

Level I: 30 Units
30 units
(See *Admission* above.)

Level II

Fall and Winter Terms: 30 units:
27 units
from

- MEDRADSC 2A03 - Patient Care
- MEDRADSC 2AA3 - Imaging Procedures in Health Care
- ~~MEDRADSC 2BB3~~
- MEDRADSC 2D03 - Relational Anatomy I
- MEDRADSC 2G03 - Radiographic Skills I
- MEDRADSC 2H03 - Radiographic Skills II
- MEDRADSC 2I03 - Pathology and Procedures I

- MEDRADSC 2RA3 - Relational Anatomy II
- MEDRADSC 2X03 - Radiobiology and Protection
- MEDRADSC 2Y03 - Radiographic Imaging and Instrumentation I

3 units

- Electives

Spring/Summer Term: 15 units:
(See *Program Note 2* above.)
15 units

- MEDRADSC 2J15 - Radiography Clinical Practicum I

Level III

Fall and Winter Terms: 30 units:
21 units

- MEDRADSC 3DA3 - Advanced Studies in Computed Tomography
- MEDRADSC 3G03 - Radiographic Imaging and Instrumentation II
- MEDRADSC 3H03 - Quality Control in Radiography
- MEDRADSC 3J03 - Pathology and Procedures II
- MEDRADSC 3K03 - Computed Tomography
- MEDRADSC 3X03 - Research Methods in Medical Radiation Sciences
- MEDRADSC 3Y03 - Ethics for Medical Radiation Sciences

3 units

- STATS 2B03 - Statistical Methods for Science *(See Program Note 3 above.)*

3 units
from

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

3 units

- Electives

Spring/Summer Term: 15 units:
(See *Program Note 2* above.)
9 units

- MEDRADSC 3AA3 - Interdisciplinary Health Care
- MEDRADSC 3B03 - Quality Management in Medical Radiation Sciences
- MEDRADSC 3L03 - Radiographic Skills III

6 units

- Electives

which may include

- MEDRADSC 3DE3 - Introduction to Magnetic Resonance Imaging
- MEDRADSC 3Z06 - Research Project

Level IV

Fall and Winter Terms: 30 units:
30 units

- MEDRADSC 4A15 - Radiography Clinical Practicum II
- MEDRADSC 4B15 - Radiography Clinical Practicum III

Program Chart

	FALL TERM (September to December)	WINTER TERM (January to April)	SPRING/SUMMER TERM (May to August)
Level II	30 units from Academic Level II		Clinical Practicum I

Level III	45 units from Academic Level III		
Level IV	Clinical Practicum II	Clinical Practicum III	

Justification: Housekeeping to remove old courses, added program note to indicate students should be completing STATS 2B03 Fall of level III at latest. Program note and terminology corrections caught by the ADO team during cleanup.

3.6. Honours Medical Radiation Sciences - Ultrasonography Specialization (B.M.R.Sc.)

~~**Effective September 2023, the Bachelor of Medical Radiation Sciences - Ultrasonography Specialization (B.M.R.Sc.) degree has been replaced by an Honours Bachelor of Medical Radiation Sciences – Ultrasonography Specialization (B.M.R.Sc.) degree. All students previously registered in this program have been transferred to Honours Bachelor of Medical Radiation Sciences – Ultrasonography Specialization (B.M.R.Sc.) degree program and will graduate with the new degree designation.**~~

Program Notes

1. Students in this program pursue two qualifications simultaneously, and graduates receive the Ontario College Advanced Diploma in Medical Radiation Sciences from Mohawk College and the McMaster Honours Bachelor of Medical Radiation Sciences degree.
2. The timing of the Spring/Summer and the Level III and IV Fall/Winter Terms may not adhere to the *Sessional Dates*, as published in this Calendar.
3. STATS 2B03 is a prerequisite for MEDRADSC 3X03 and should be taken no later than Fall ~~semester~~ Term of ~~I~~Level III.

Admission Note

When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.

Admission

Enrolment in this program is limited and admission is by selection but requires, as a minimum, completion of Level I Honours Medical Radiation Sciences with a Fall-Winter Average (on a minimum of 24 units) of at least 5.0 and a cumulative Grade Point Average of at least 5.0 including:

12 units

- MEDRADSC 1B03 - Introduction to Pathology
- MEDRADSC 1C03 - Introduction to Physics for Medical Radiation Sciences
- MEDRADSC 1E03 - Inquiry in Medical Radiation Sciences
- MEDRADSC 1F03 - Professions in Medical Radiation Sciences

3 units from

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
  (See *Admission Note* above.)

6 units

- KINESIOL 1Y03 - Human Anatomy and Physiology I
- KINESIOL 1YY3 - Human Anatomy and Physiology II

3 units from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1MM3 - Applied Calculus

Requirements

150 units total (Levels I to IV), 45 units of clinical practicum are interspersed with 75 units of academic courses in Levels II to IV

Level I: 30 Units
30 units
(See *Admission* above.)

Level II

Fall and Winter Terms: 30 units:
27 units
from
- MEDRADSC 2A03 - Patient Care
- MEDRADSC 2AA3 - Imaging Procedures in Health Care
- ~~MEDRADSC 2BB3~~
- MEDRADSC 2K03 - Applied Sonographic Physics and Instrumentation I
- MEDRADSC 2L03 - Abdominal Ultrasonography I
- MEDRADSC 2M03 - Obstetrical and Gynecologic Ultrasonography I
- MEDRADSC 2N03 - Sonographic Skills I
- MEDRADSC 2O03 - Abdominal Ultrasonography II
- MEDRADSC 2P03 - Obstetrical and Gynecological Ultrasonography II
- MEDRADSC 2Q03 - Sonographic Skills II

3 units
- Electives

Spring/Summer Term: 15 units:
(See *Program Note 2* above.)
15 units
- MEDRADSC 2R15 - Ultrasonography Clinical Practicum I

Level III

Fall and Winter Terms: 30 units:
21 units
- MEDRADSC 3N03 - Vascular Ultrasonography
- MEDRADSC 3O03 - Sonographic Skills III
- MEDRADSC 3P03 - Obstetrical and Gynecologic Ultrasonography III
- MEDRADSC 3Q03 - Applied Sonographic Physics and Instrumentation II
- MEDRADSC 3R03 - Musculoskeletal Ultrasonography
- MEDRADSC 3X03 - Research Methods in Medical Radiation Sciences
- MEDRADSC 3Y03 - Ethics for Medical Radiation Sciences

3 units
- STATS 2B03 - Statistical Methods for Science *(See Program Note 3 above.)*

3 units
from
- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

3 units
- Electives

Spring/Summer Term: 15 units:
(See *Program Note 2* above.)
9 units
- MEDRADSC 3AA3 - Interdisciplinary Health Care

- MEDRADSC 3B03 - Quality Management in Medical Radiation Sciences
- MEDRADSC 3M03 - Abdominal Ultrasonography III

6 units

1. Electives

which may include

- MEDRADSC 3DE3 - Introduction to Magnetic Resonance Imaging
- MEDRADSC 3DJ3 - Pediatric Sonography
- MEDRADSC 3Z06 - Research Project

Level IV

Fall and Winter Terms: 30 units:

30 units

- MEDRADSC 4C15 - Ultrasonography Clinical Practicum II
- MEDRADSC 4D15 - Ultrasonography Clinical Practicum III

Program Chart

	FALL TERM (September to December)	WINTER TERM (January to April)	SPRING/SUMMER TERM (May to August)
Level II	30 units from Academic Level II		Clinical Practicum I
Level III	45 units from Academic Level III		
Level IV	Clinical Practicum II	Clinical Practicum III	

Justification: Housekeeping to remove old courses, added program note to indicate students should be completing STATS 2B03 Fall of level III at latest. Program note and terminology corrections caught by the ADO team during cleanup.

4. NEW CROSS-LIST TO EXISTING COURSES: n/a

5. **CHANGES TO EXISTING COURSES:**

5.1. LIFESCI 3BB3 - Neurobiology of Disease

3 unit(s)

Examination of the cellular, circuit and system level abnormalities that underlie nervous system diseases. Topics may include: addiction, epilepsy, spinal cord injury, neuromuscular diseases and neurodegenerative diseases.

Lectures (three hours), tutorial (one hour); one term

Prerequisite(s): Credit or registration in ~~BIOLOGY 2B03 and one of~~ LIFESCI 2CC3 or PNB 2XB3; or ISCI 2A18 A/B

Completion of BIOLOGY 2B03 is strongly recommended.

Priority will be given to students in an Honours Life Sciences program.

Justification: LIFESCI 3BB3 is a requirement for LIFESCI 4XX3: The Synapse. Since the Sensory Motor Systems Specialization no longer exists, the future of 4XX3 is uncertain. Therefore, we would not keep BIOLOGY 2B03 a prerequisite for 3BB3 for the sake of 4XX3. Change to prerequisites requested from PNB department during cleanup.

Department of Kinesiology

1. **NEW PROGRAMS**

1.1. Certificate of Completion Program Proposal

Department & Program Information	
Program:	Faculty of Science
Course Name:	Certificate of Completion in Transcranial Magnetic Stimulation (TMS)
Credential:	Non-Academic Certificate of Completion
Name of Representative:	Aimee Nelson
Effective Date:	May 2026
Date of Submission:	January 30, 2026
Program Information:	
Program Overview	The TMS Certification Course offered via Neuro-Mod and accredited through McMaster University provides an in-depth exploration of transcranial magnetic stimulation (TMS) and repetitive TMS (rTMS). Designed for technicians, researchers, and clinicians, this comprehensive three-day program combines theoretical knowledge with hands-on training in the latest neuromodulation techniques. Participants will gain an understanding of the physics that underpins TMS, explore its various clinical and research applications, and learn the technical skills needed to perform safe and effective rTMS procedures. The course covers essential topics such as motor hotspot identification, motor threshold determination, neuronavigation, and patient safety protocols. Additionally, it will explore both on-label (e.g., drug-resistant depression) and off-label (e.g., chronic pain) uses of rTMS, as well as advanced research techniques like paired-pulse TMS and TMS-EEG integration.
Learning Objectives	2. **Understand the theoretical principles** of TMS and repetitive TMS, including device operation, pulse characteristics, and physiological effects. 3. **Develop hands-on skills** in TMS techniques, including but not limited to motor threshold determination, motor mapping, and repetitive stimulation procedures. 4. **Apply clinical knowledge** for rTMS in both on-label and off-label applications, such as depression, chronic pain, and neurological disorders. 5. **Learn safety protocols** for rTMS, including contraindications, patient screening, and seizure management. 6. **Explore advanced research applications** of rTMS, such as the use of TMS in conjunction with EEG and other modalities.

	7. **Implement and manage rTMS protocols** in clinical practice, following Health Canada guidelines and adapting off-label protocols.
Meeting Learning Objectives	By the end of the course, participants will have acquired the theoretical understanding and practical experience needed to achieve each of the learning objectives, making them proficient in the use of rTMS across clinical, research, and technical domains. They will receive TMS certification. The course is conducted in small groups of up to 20 participants with formal teaching sessions and hands-on practical exposure. This course is ideal for healthcare professionals, technicians, researchers and their trainees, looking to expand their expertise in neuromodulation and TMS technology and receive TMS certification. The learning objectives will be met through lecture material provided in advance of the course via a pre-recorded online module (6 hours), in-person lectures (12 hours), in-person hands-on training (9 hours) and in-person review and examination (3 hours).
Program Admission Requirements	This course is ideal for healthcare professionals, technicians, researchers and their trainees, looking to expand their expertise in neuromodulation and TMS technology and receive TMS certification. At minimum, participants must have a secondary-school diploma.
Program Pre-requisites	There are no program pre-requisites.
Course Completion Requirements	The TMS certification course will take place over three-days. The course concludes with an evaluation examination.
Course Delivery Format	Hands-on training will be conducted in the Human Neurophysiology and Imaging lab at McMaster University using Magstim Ltd equipment, with live demonstrations available for both in-person and virtual attendees. Participants will leave the course equipped with the practical skills and knowledge required to implement rTMS in both clinical and research environments, making them eligible for certification in rTMS procedures. Importantly, the hands-on skills learned in this course are transferable to all other TMS equipment.

Student Evaluations (Grading Process)	Theoretical assessment: Multiple choice exam, minimum of 80% to pass, participants will have the option to re-do the exam twice if needed until a pass is achieved. This will performed electronically. The value of 80% is intended to replicate the TMS course offered by Harvard University that requires 80% signifies a high level of competency which is a requirement for this type of advanced course. Skill assessment: Five skills will be graded on a 1 to 5 scale, and a total score of 20 is required. Participants will have the option to re-do the skills assessment twice if needed. This must be performed in-person.
Course Evaluation	Post-course completion survey provided electronically to attending participants.
Course Instruction	The course will be instructed by Neuro-Mod Inc. in a partnership with the Faculty of Science at McMaster University. All instructors will have a minimum of a Master's level degree with specialization in TMS delivery and methods.

Course Details: Certificate of Completion in Transcranial Magnetic Stimulation (TMS)

Participants will gain an understanding of the physics that underpins TMS, explore its various clinical and research applications, and learn the technical skills needed to perform safe and effective rTMS procedures. The course covers essential topics such as motor hotspot identification, motor threshold determination, neuronavigation, and participant and patient safety protocols. Additionally, it will explore both on-label (e.g., drug-resistant depression) and off-label (e.g., chronic pain) uses of rTMS, as well as advanced research techniques like paired-pulse TMS and TMS-EEG integration.

Hands-on training will be conducted in the Human Neurophysiology and Imaging lab at McMaster University using Magstim Ltd equipment, with live demonstrations available for both in-person and virtual attendees. Participants will leave the course equipped with the practical skills and knowledge required to implement rTMS in both clinical and research environments. Importantly, the hands-on skills learned in this course are transferable to all other TMS equipment. Upon successful completion participants will receive a Certificate of Completion.

The course is conducted in small groups of up to 20 participants every four months with formal teaching sessions and hands-on practical exposure. This course is ideal for healthcare professionals, technicians, researchers and their trainees, looking to expand their expertise in neuromodulation and TMS technology and receive TMS certification. This course is open to Canadian and international participants. The course concludes with a theoretical and skills assessment evaluation examination and certification of completion.

Program:	Faculty of Science
Course Name:	Certificate of Completion in Transcranial Magnetic Stimulation (TMS)
Credential:	Non-Academic Certificate of Completion

Course Objectives:

2. **Understand the theoretical principles** of TMS and repetitive TMS, including device operation, pulse characteristics, and physiological effects.
3. **Develop hands-on skills** in TMS techniques, including but not limited to motor threshold determination, motor mapping, and repetitive stimulation procedures.

4. **Apply clinical knowledge** for rTMS in both on-label and off-label applications, such as depression, chronic pain, and neurological disorders.
5. **Learn safety protocols** for rTMS, including contraindications, patient screening, and seizure management.
6. **Explore advanced research applications** of rTMS, such as the use of TMS in conjunction with EEG and other modalities.
7. **Implement and manage rTMS protocols** in clinical practice, following Health Canada guidelines and adapting off-label protocols.

Learning Outcomes:
Upon completing this course, participants will be able to:

2. **Describe the physics and neurophysiological principles** underlying TMS and repetitive TMS.
3. **Perform key rTMS procedures**, including motor hotspot identification, determining motor thresholds, and using neuronavigation to find and track cortical targets.
4. **Set up and operate rTMS equipment** safely and effectively for clinical or research use.
5. **Assess patient suitability** for rTMS treatment, considering contraindications and health risks.
6. **Implement clinical and research protocols** for rTMS therapy in various neurological and psychiatric conditions.
7. **Critically evaluate scientific evidence** related to rTMS applications and apply it to clinical practice.
8. **Manage long-term rTMS therapy**, including treatment longevity, tapering, and maintenance protocols.

This structure will ensure participants leave with both theoretical knowledge and practical expertise to operate rTMS and TMS in diverse settings.

Statement of Contribution to Learning Objectives

The **TMS Certification Course** is carefully designed to contribute to the learning objectives through a structured blend of theoretical instruction and practical, hands-on experience. Each component of the course is aligned with specific learning objectives to ensure that participants not only understand the scientific and clinical principles behind rTMS but also develop the necessary technical skills to implement these techniques in real-world settings.

2. **Understanding rTMS Principles**: The theoretical modules, such as "rTMS Essentials: Theory and Practice" and "Advanced TMS Concepts," introduce participants to the fundamental concepts of TMS technology, including electromagnetic pulse characteristics, physiological effects, and neurophysiological mechanisms. This foundation directly supports the objective of understanding the core principles of TMS and rTMS.
3. **Developing Technical Skills**: The hands-on training sessions, conducted using Magstim Ltd equipment, ensure that participants can confidently operate rTMS technology. Activities such as

motor hotspot identification, motor threshold determination, and neuronavigation address the objective of developing key technical skills required for rTMS procedures.

4. **Clinical Application**: Modules on clinical rTMS use, including patient candidacy assessment and implementing rTMS treatment protocols, provide participants with the knowledge to apply rTMS in clinical settings. This directly contributes to the objective of applying clinical knowledge for rTMS in conditions like depression, pain, and other neurological disorders.
5. **Ensuring Safety**: The inclusion of safety protocols and seizure management within the course ensures participants are trained to screen patients, mitigate risks, and follow health guidelines, fulfilling the objective of understanding and implementing safety protocols for rTMS.
6. **Research Applications and Critical Evaluation**: Advanced sessions on paired-pulse paradigms, TMS-EEG integration, and the evaluation of scientific evidence help participants explore and contribute to ongoing rTMS research. These sessions are key in achieving the objective of understanding research applications and critically evaluating the use of rTMS in advancing the field of neuromodulation.
7. **Implementing rTMS Protocols**: The final hands-on session focuses on operationalizing rTMS therapy, guiding participants through Health Canada-approved and off-label rTMS treatment protocols. This ensures that participants are prepared to implement and manage rTMS protocols, and identify patient candidates, addressing the learning objective of ensuring practical competence in the clinical use of rTMS.

By the end of the course, participants will have acquired the theoretical understanding and practical experience needed to achieve each of the learning objectives, making them proficient in the use of rTMS across clinical, research, and technical domains. They will receive TMS certification.

TMS Certification Course Outline (30 hours in total)

The rTMS certification course will involve the following modules and take place over 2, 12 hour days plus 6 hours of virtual lectures in advance of attending the in-person course.

<u>Day 1 (8:00 am- 12:00pm): rTMS Essentials: Theory and Practice (lecture)</u>

- Welcome and introductory remarks
- How TMS works
  - The TMS device
  - The TMS coil
- Characteristics of the electromagnetic pulse and physical principles
- Introduction to single pulses and repetitive TMS
- Health and safety concerns
  - TMS side effects and risk management

- Repetitive TMS safety guidelines
- Contraindication to TMS in research and clinic

(12:00 pm – 4:00pm): Advanced concepts of TMS (lecture)

- TMS physics and physiology, targeting, dosing and physiological effects
- State-dependent interactions of TMS
- TMS and EEG
- The placebo effects & statistical approaches to incorporate placebo effects
- The future of TMS

(4:00 pm- 9:00pm): TMS neurophysiology procedures (hands on)

During this part of the courses, students will engage hands with TMS equipment to learn and practice the skills of this module and get feedback on technique directly from course instructors. All hands-on training will be delivered using Magstim Ltd equipment. Importantly, the theory and technical skills learned in this course are relevant for other TMS manufacturers.

- Screening and safety checks
- Skin preparation and applying electromyography electrodes
- Using neuronavigation
- Calibrating the coil and participant
- How to hold and position the TMS coil
- Finding motor hotspot
- Determining resting and active motor thresholds
- TMS stimulation targets (motor cortex and frontal cortex)

Day 2 (8:00 am- 11:00 am): clinical use of rTMS (lecture)

- Setting up a rTMS clinic
- Clinical applications for rTMS (on label- drug resistant depression)
- Clinical application for rTMS (off label use- Pain, OCD, PTSD, Addiction, Concussion, Motor rehabilitation
- Assessing patient candidacy
- Evaluating research evidence to inform clinical practice

(11:00 am – 1:00 pm): Operationalization of rTMS therapy (lecture)

- Health Canada approved rTMS treatment protocols and delivery
- o iTBS & accelerated protocols
- Off-label rTMS treatment protocols and practical procedures
- Longevity for TMS therapy
- Maintenance and tapering period protocols

(1:00 pm – 5 pm): Repetitive TMS and paired pulse TMS (hands on)

- Creating a stimulus response curve
- Assessing cortical silent period
- Motor mapping
- Paired-pulse TMS circuits and conditioning paradigms (SAI, LAI, SICI, LICI, SIHI, LIHI)
- Repetitive TMS and evaluating mechanisms in cortical plasticity
- Accelerated protocols
- Protocols specific to depression, OCD, dementia, pain and other on and off-label conditions.

(5:00 pm- 8:00pm): Review, Q&A and multiple choice test

Course evaluation

2. Written assessment (50 multiple choice questions encompassing all topics covered over the three-day course)
3. Skills assessment (30 minute assessment testing fundamental TMS practical skills)

Pricing: Course registration will cost $3,000 CAD + tax per person. Discounted group rates are available for groups of 3 or more students enrolled in the course. Pricing will include light breakfast, lunch and light dinner option.

2. CHANGES TO EXISTING COURSES

2.1. KINESIOL 4SS3 - Human Aging: Biological and Lifestyle Influences

3 unit(s)
The interrelationship between biological processes of aging and associated lifestyle factors (e.g. exercise/inactivity) will be explored in various human systems.
Lectures (~~Three~~ ~~three~~ two hours) ~~(lectures)~~ virtual lecture (one hour); one term
Prerequisite(s): Six units from HTHSCI 1D06 A/B, 1H06 A/B, 2F03, 2FF3, 2L03, 2LL3, KINESIOL 1A03, 1AA3, 1Y03, 1YY3, 2X03, 2XX3, 2Y03, 2YY3; and registration in Level III or above
This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program. However, enrolment for such students is limited.

Justification:
Housekeeping - wording updated match other courses. New online anatomy and physiology course options added to prerequisites. Amendment change – Lectures changed to 2 hrs and 1 hr virtual.

Department of Physics and Astronomy

1. CHANGES TO EXISTING COURSES:

1.1. PHYSICS 1CC3 - Modern Physics for the Chemical and Physical Sciences

3 unit(s)
This course is the continuation of PHYSICS 1C03. Topics include simple harmonic motion, waves, interference, electrostatics, magnetostatics and an introduction to quantum physics.
Three lectures, one lab (~~three~~ two hours) every ~~other~~ week; one term
Prerequisite(s): PHYSICS 1A03, 1C03, 1V03
Antirequisite(s): PHYSICS 1AA3
Not open to students with credit or registration in ISCI 1A24 A/B.
Justification: housekeeping – current course format was not reflected accurately

1.2. MEDPHYS 4RA3 - Radiation and Radioisotope Methodology ~~I~~

3 unit(s)
An introduction to radiation detection and radioisotope production with emphasis on principles of gas filled radiation detectors, scintillation detectors and gamma-ray spectrometry.
Two lectures every week, one lab (three hours) every other week
Prerequisite(s): One of ENGPHYS 3D04 (or ENGPHYS 3D03), 3L04, or MEDPHYS 4B03
Antirequisite(s): MEDPHYS 4R06 A/B
Justification: housekeeping – follow up course no longer exists so the I is not necessary and confusing.

1.3. ASTRON 3X03 - Galaxies and Cosmology

3 unit(s)
Stellar populations, star formation and the interstellar medium in galaxies. The Milky Way Galaxy; normal and active galaxies and large scale structure in the universe; observational and theoretical cosmology.
Three lectures, occasional lab periods; one term
Prerequisite(s): Six units from Level II PHYSICS, PHYSICS 1E03, ENGPHYS 2A04, 2H04, 2P04, 2QM3, DATASCI 2G03 (or PHYSICS 2G03).
Alternates with ASTRON 3Y03.
Justification: housekeeping – DATASCI 2G03 should count as a Level 2 Physics course (was previously under PHYSICS 2G03 course code).

Department of Psychology, Neuroscience & Behaviour

1.0 NEW PROGRAMS:

1.1 Honours Psychology, Neuroscience & Behaviour Co-op (B.Sc.)

Program first available in September 2027.

Admission

Enrolment in this program is limited. Admission is by selection, and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, submission of the on-line application by the stated deadline and completion of Level II Honours Psychology, Neuroscience & Behaviour (BSc) with a cumulative Grade Point Average of at least 5.0, including the following:

18 units

- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XF3 - Perspectives in PNB
- PNB 2XT0 - PNB Tutorial

0-3 units
from the following courses, if not completed in Level I

- BIOPHYS 1S03
- CHEM 1A03 - Introductory Chemistry I
- MEDPHYS 1A03 – Physics in Medicine and Biology
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 – Introductory Physics

0-3 units
from the following courses, if not completed in Level I

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

Note:
Information about the program and the selection procedure may be obtained from Science Careers & Experience Centre.

Program Notes**:**

1. This is a five-level (year) co-op program that includes a total of sixteen months of work terms. These work terms can be completed alternating with academic terms (Model A – Alternating) or they can be completed in one block (Model B – Block). These work terms must be spent in psychology, neuroscience or animal behaviour related placements.

2. ~~This is a five-level (year) co-op program that includes a total of sixteen months of work terms. These work terms can be completed alternating with academic terms or they can be completed in one block. These work terms must be spent in psychology, neuroscience or animal behaviour related placements.~~

2. Students must be registered full-time and take a full academic workload, as prescribed by Level and Term.
3. Students are required to complete SCIENCE 2C00 prior to the Fall Term of Level III. Students are required to complete SCIENCE 3C00 before the first work term~~placement~~.
4. Students in the Honours Psychology, Neuroscience & Behaviour program are eligible to complete a library study, independent research, and/or a thesis. Students wishing to complete undergraduate research are expected to (a) find their own research supervisor and (b) complete the appropriate application/permission forms by the deadline specified on the Psychology, Neuroscience & Behaviour website (https://pnb.mcmaster.ca/undergraduate/experiential-opportunities/research-2/).
5. Students interested in graduate school are strongly encouraged to complete a thesis (PNB 4D06 or PNB 4D09). ~~This course must be completed in Level IV of the program~~.
6. The co-op option is not available with either the Mental Health or Music Cognition Specializations.
7. Course planning is extremely important. There are prerequisites for many Level III and IV courses. The prerequisites should be considered when choosing Level II and III courses.
8. Students may count a maximum of 6 units from PNB 3Q03 A/B S, 3QM3 A/B S, 3QQ3 A/B S, 4Q03 A/B S, 4QQ3 A/B S towards the Psychology, Neuroscience & Behaviour Course List.

Capstone Course List

- PNB 4D06 A/B - Senior Thesis
- PNB 4E03 - Topics in Social Diversity
- PNB 4J03 - Inquiry in Psychology, Neuroscience & Behaviour
- PNB 4PN3 - Psychology, Neuroscience & Behaviour in Society
- PNB 4Q03 A/B S - Senior Independent Library Study
- PNB 4QQ3 A/B S - Senior Independent Research
- PNB 4QQ6 A/B - Senior Independent Research
- PNB 4SC6 A/B - Science Communication in the Behavioural Sciences
- PSYCH 4CN3 – Cognitive Neuroscience
- PSYCH 4R03 - Special Topics in Animal Behaviour
- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry **and** CMTYENGA 4A09 - Semester at CityLAB: Applied Project Experience
- SUSTAIN 4S06 A/B - Leadership in Sustainability
- HTHSCI 4D06 A/B S - Senior Project in Engaging the City

Psychology, Neuroscience & Behaviour Course List

- BIOLOGY 3P03 - Cell Physiology
- BIOLOGY 4T03 - Molecular and Cellular Neuroscience
- HTHSCI 4BB3 - Neuroimmunology
- HUMBEHV 3MD3 - Research Methods for Applied Psychology in Human Behaviour
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3K03 - Neural Control of Human Movement
- LINGUIST 2PS3 - Psycholinguistics
- LINGUIST 3C03 - Child Language Acquisition
- LINGUIST 3NL3 - Cognitive Neuroscience of Language
- MUSICCOG 2MP3 - Introduction to Music Cognition
- all Level III and IV MUSICCOG courses
- NEUROSCI 3J03 - Visual Neuroscience

- NEUROSCI 3MN3 - Computational Models in Neuroscience
- NEUROSCI 3SN3 - Neural Circuits
- PNB 2A03 - Python for PNB
- PSYCH 2MP3 - Introduction to Music Cognition
- all Level III and IV PNB courses with no more that 6 units from the following courses:
- PNB 3Q03
- PNB 3QM3
- PNB 3QQ3
- PNB 4Q03
- PNB 4QQ3
- all Level III and IV PSYCH courses

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

Level I: 30 Units

- Completed prior to admission to the program

Level II: 30 Units

- Completion of any Level II Honours Psychology, Neuroscience & Behaviour (BSc) program, including;

18 units

- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XF3 - Perspectives in PNB
- PNB 2XT0 - PNB Tutorial

1 course

- SCIENCE 2C00 – Skills for Career Success in Science

(See Program Note 3 above.)

0-3 units

from the following courses, if not completed in Level I

- BIOPHYS 1S03
- CHEM 1A03 - Introductory Chemistry I
- MEDPHYS 1A03 – Physics in Medicine and Biology
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

0-3 units

from the following courses, if not completed in Level I

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

Level III-V: 60 Units

3 units
- PNB 3XE3 - Inferential Statistics and Research Methods

3 units
from

- NEUROSCI 3MN3 - Computational Models in Neuroscience
- NEUROSCI 3NB3 – Neuroanatomy & Behaviour Lab
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

15 units
from
- the *Psychology, Neuroscience & Behaviour Course List*

9 units
- 6 units from the *Capstone Course List* and 3 units from the *Psychology, Neuroscience & Behaviour Course List*

or
- PNB 4D09 A/B - Senior Honours Thesis

(See *Program Note 4* above.)

30 units
- Electives (See *Program Note 7* above.)

1 course
- SCIENCE 3C00 – Advanced Job Search Skills for Science Co-op Students

(See Program Note 3 above.)

2 Courses
- SCIENCE 3WT0 – Science Co-op Work Term
- SCIENCE 3WT0 – Science Co-op Work Term

1 course
- SCIENCE 4WT0 – Science Co-op Work Term

1 course
- SCIENCE 5WT0 – Science Co-op Work Term

~~Level III~~
~~Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)~~
~~*Fall Term: 15 units:*~~
~~3 units~~
- ~~PNB 3XE3 - Inferential Statistics and Research Methods~~

3 units
from

- NEUROSCI 3MN3 - Computational Models in Neuroscience
- NEUROSCI 3NB3 – Neuroanatomy & Behaviour Lab
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

3 units
from

- the *Psychology, Neuroscience & Behaviour Course List*

6 units

- Electives (See *Program Note 7* above.)

1 course

- SCIENCE 3C00 – Advanced Job Search Skills for Science Co-op Students

Winter Term:
Work Term

1 Course

- SCIENCE 3WT0 – Science Co-op Work Term

Spring/Summer Term:
Work Term

1 Course

- SCIENCE 3WT0 – Science Co-op Work Term

Level IV
Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term).

Fall and Winter Terms: 30 units:

6 units
from

- the *Psychology, Neuroscience & Behaviour Course List*

9 units

- 6 units from the *Capstone Course List* and 3 units from the *Psychology, Neuroscience & Behaviour Course List*
  or
- PNB 4D09 A/B - Senior Honours Thesis
  (See *Program Note 4* above.)

15 units

- Electives (See *Program Note 7* above.)

Spring/Summer Term:
Work Term

~~1 course~~
- ~~SCIENCE 4WT0 – Science Co-op Work Term~~

~~Level V~~
~~Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)~~

~~*Fall Term:*~~
~~Work Term~~
~~1 course~~
- ~~SCIENCE 5WT0 – Science Co-op Work Term~~

~~*Winter Term: 15 units:*~~
~~6 units from~~
- ~~The *Psychology, Neuroscience & Behaviour Course List*~~

~~9 units~~
- ~~Electives (See *Program Note 7* above.)~~

Requirements (Effective September 2028)

120 units total (Levels I to IV), of which no more than 48 units may be Level I

Level I: 30 Units
- Completed prior to admission to the program

Level II: 30 Units
- Completion of any Level II Honours Psychology, Neuroscience & Behaviour (BSc) program, including;

18 units
- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XF3 - Perspectives in PNB
- PNB 2XT0 - PNB Tutorial

1 course
- SCIENCE 2C00 – Skills for Career Success in Science

(See Program Note 3 above.)

0-3 units

from the following courses, if not completed in Level I
- BIOPHYS 1S03
- CHEM 1A03 - Introductory Chemistry I
- MEDPHYS 1A03 – Physics in Medicine and Biology
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

0-3 units
from the following courses, if not completed in Level I

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

Level III-V: 60 Units

3 units

- PNB 3XE3 - Inferential Statistics and Research Methods

3 units
from

- NEUROSCI 3MN3 - Computational Models in Neuroscience
- NEUROSCI 3NB3 – Neuroanatomy & Behaviour Lab
- PNB 3EE3 - Perception Laboratory
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

15 units
from

- the *Psychology, Neuroscience & Behaviour Course List*

9 units

- 6 units from the *Capstone Course List* and 3 units from the *Psychology, Neuroscience & Behaviour Course List*
  or
- PNB 4D09 A/B - Senior Honours Thesis
  (See *Program Note 4* above.)

3 units
from

- PNB 4E03 - Topics in Social Diversity
- PNB 4J03 - Inquiry in Psychology, Neuroscience & Behaviour
- PNB 4PN3 - Psychology, Neuroscience & Behaviour in Society
- PSYCH 4CN3 – Cognitive Neuroscience
- PSYCH 4KK3 – Bayesian Inference
- PSYCH 4MP3 – Neuroscience of Music
- PSYCH 4R03 - Special Topics in Animal Behaviour

27 units

- Electives (See *Program Note 7* above.)

1 course

- SCIENCE 3C00 – Advanced Job Search Skills for Science Co-op Students
  (See Program Note 3 above.)

1 Course

- SCIENCE 3WT0 – Science Co-op Work Term

1 Course

- SCIENCE 3WT0 – Science Co-op Work Term

1 course
- SCIENCE 4WT0 – Science Co-op Work Term

1 course
- SCIENCE 5WT0 – Science Co-op Work Term

0-3 units
from the following courses, if not completed in Level I
- BIOPHYS 1S03
- CHEM 1A03 - Introductory Chemistry I
- MEDPHYS 1A03 – Physics in Medicine and Biology
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

0-3 units
from the following courses, if not completed in Level I
- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

~~1 course~~
- ~~SCIENCE 2C00 – Skills for Career Success in Science~~

~~(See Program Note 3 above.)~~

~~Level III~~
~~Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)~~
~~*Fall Term: 15 units:*~~
~~3 units~~
- ~~PNB 3XE3 - Inferential Statistics and Research Methods~~

~~3 units from~~
- ~~NEUROSCI 3MN3 - Computational Models in Neuroscience~~
- ~~NEUROSCI 3NB3 – Neuroanatomy & Behaviour Lab~~
- ~~PNB 3EE3 - Perception Laboratory~~
- ~~PNB 3L03 - Neurodevelopment & Plasticity Lab~~
- ~~PNB 3MM3 - Cognitive Neuroscience Lab~~
- ~~PNB 3S03 - Animal Behaviour Lab~~
- ~~PNB 3V03 - Human Memory Lab~~

~~3 units from~~
- ~~the *Psychology, Neuroscience & Behaviour Course List*~~

~~6 units~~
- ~~Electives (See *Program Note 7* above.)~~

~~1 course~~
- ~~SCIENCE 3C00 – Advanced Job Search Skills for Science Co-op Students~~

Winter Term:
Work Term

1 Course
- SCIENCE 3WT0 – Science Co-op Work Term

Spring/Summer Term:
Work Term

1 Course
- SCIENCE 3WT0 – Science Co-op Work Term

Level IV
Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term).

Fall and Winter Terms: 30 units:

6 units
from
- the *Psychology, Neuroscience & Behaviour Course List*

9 units
- 6 units from the *Capstone Course List* and 3 units from the *Psychology, Neuroscience & Behaviour Course List*
  or
- PNB 4D09 A/B – Senior Honours Thesis
  (See *Program Note 4* above.)

15 units
- Electives (See *Program Note 7* above.)

Spring/Summer Term:
Work Term

1 course
- SCIENCE 4WT0 – Science Co-op Work Term

Level V
Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)

Fall Term:
Work Term
1 course
- SCIENCE 5WT0 – Science Co-op Work Term

Winter Term: 15 units:
6 units from
- The *Psychology, Neuroscience & Behaviour Course List.*

3 units
from
- PNB 4E03 - Topics in Social Diversity
- PNB 4J03 – Inquiry in Psychology, Neuroscience & Behaviour
- PNB 4PN3 - Psychology, Neuroscience & Behaviour in Society
- PSYCH 4CN3 – Cognitive Neuroscience

- ~~PSYCH 4KK3 – Bayesian Inference~~
- ~~PSYCH 4MP3 – Neuroscience of Music~~
- ~~PSYCH 4R03 - Special Topics in Animal Behaviour~~

~~9 units~~

- ~~Electives (See *Program Note 7* above.)~~

Co-op Program Chart – Model A - Alternating

	FALL TERM (September to December)	WINTER TERM (January to April)	SPRING/SUMMER TERM (May to August)
Level III	15 units from Academic Level III + SCIENCE 3C00	Work Term SCIENCE 3WT0	Work Term SCIENCE 3WT0
Level IV	15 units from Academic Levels III & IV	15 units from Academic Levels III & IV	Work Term SCIENCE 4WT0
Level V	Work Term SCIENCE 5WT0	15 units from Academic Levels III & IV	

Co-op Program Chart – Model B - Block

	FALL TERM (September to December)	WINTER TERM (January to April)	SPRING/SUMMER TERM (May to August)
Level III	15 units from Academic Level III + SCIENCE 3C00	15 units from Academic Levels III & IV	Work Term SCIENCE 3WT0
Level IV	Work Term SCIENCE 3WT0	Work Term SCIENCE 4WT0	Work Term SCIENCE 5WT0
Level V	15 units from Academic Levels III & IV	15 units from Academic Levels III & IV	

~~Co-op Program Chart~~

-	FALL TERM - (September to December)	WINTER TERM - (January to April)	SPRING/SUMMER TERM - (May to August)
Level III	15 units from Academic Level III - + - SCIENCE 3C00	- Work Term - SCIENCE 3WT0	- Work Term - SCIENCE 3WT0
Level IV	15 units from Academic Levels III & IV	15 units from Academic Levels III & IV	Work Term - SCIENCE 4WT0
Level V	Work Term - SCIENCE 5WT0	15 units from Academic Levels III & IV	-

Justification:

New sequence introduced for the program. Advertising this sequence for students to consider when applying to the program in 2027 is important so that they can understand the possibilities for the program. With the new sequence introduced, program requirements have been more clearly represented as levels III-IV instead of each year separated out.

When preparing our 2023 IQAP Self Study, we asked in-program PNB students whether they would have considered enrolling in a PNB coop program, if we had such a program. Most students said yes (88%, 121/138). As the only department in the Faculty of Science without a coop program, we know that we lose prospective students to other programs (and other universities) because we do not offer a coop option. Indeed, our department reps are often asked about coop options at OUF and Fall Preview.

Moreover, diversifying experiential learning opportunities was one goal set out in our department's 2022 Strategic Plan. Coop programs are a good way to support students who want to explore careers outside of medical school and academia.

The coop program will initially start out small (7-10 students) and then expand up to 20 as our pool of employers grows.

Faculty of Science – General Section

1. CHANGES TO EXISTING COURSES:

1.1. SCIENCE 2RP3 A/B S - Research Placement

3 unit(s)
Students will gain practical research experience, as directed by a faculty member, in a wide range of scientific lab/field settings or as part of a faculty member's research program. During this course, the student will learn introductory research skills/techniques and will use these techniques to make a meaningful contribution to the supervisor's research program. Students are expected to commit to approximately 5-10 hours per week (on average) for one term. ~~Students will also be required to attend departmental seminars/colloquia of their interest (3 seminars per term).~~
Students are responsible to arrange a suitable research experience and supervision, and are required to submit an online application, and confirmation of an academic supervisor to the Office of Undergraduate Research thirty days prior to the date classes begin each Term (see the Sessional Dates section of this Calendar). More information and the online application can be found on the Office of Undergraduate Research (OUR) website.
Occasional lecture/tutorial; may be completed over one or two terms
Prerequisite(s): Registration in Level II of any program in the Faculty of Science and permission of the Director, Office of the Undergraduate Research (OUR) or delegate
Not open to students with credit or registration in any Level III or IV department- or program-based applied placement, internship, practicum, thesis or independent study/project course.
This course is administered by the Office of Undergraduate Research (OUR).

Justification: Requirement to attend additional seminars has been removed to facilitate completion of the course. Seminar attendance cannot be well tracked.

1.2. SCIENCE 3RP3 A/B S - Research Practicum

3 unit(s)
Students will conduct research, as directed by a faculty member, in a wide range of scientific lab/field settings. Students will complete an academic component in addition to their research. Serves as excellent preparation for a Level IV Thesis or Independent Study experience.
Students are responsible to arrange a suitable research experience and supervision, and are required to submit an application, including a detailed learning contract and confirmation of an academic supervisor to the ~~Science Career & Cooperative Education office~~ Office of Undergraduate Research thirty days prior to the date classes begin in each Term (see the Sessional Dates section of this Calendar). More information and the application form can be found at ~~https://www.science.mcmaster.ca/scce/experiential-learning/experiential-education.html.~~ https://our.science.mcmaster.ca/opportunities-2/research-based-courses/
Minimum of 6 hours per week is required over the duration of the research experience (scheduling to be arranged by supervisor); Occasional lecture/tutorial; one term
Prerequisite(s): Registration in Level III or above of an Honours program in the Faculty of Science; and permission of the academic supervisor and the Director, ~~Science Career & Cooperative Education~~ Office of Undergraduate Research or delegate. ~~Credit or registration in SCIENCE 2C00 is recommended.~~ *Students with credit or registration in any department- or program-based independent study or research seminar course within the University, who wish to complete more than one opportunity, must demonstrate each experience is substantively distinct for consideration.*

Justification: Addition of occasional lecture to facilitate engagement and connection with students. Removal

of prerequisite no longer required.